CALENDAR

OF

THE UNIVERSITY OF ADELAIDE

FOR THE YEAR

1975

VOLUME II

DETAILS OF COURSES

ADELAIDE:
THE GRIFFIN PRESS, MARION ROAD, NETLEY
1975

ADDRESS FOR CORRESPONDENCE.

Correspondence about courses (and related matters such as admission) should be addressed to The Academic Registrar, The University of Adelaide, Box 498, G.P.O., Adelaide, South Australia 5001.

The University's telephone number is 223 4333.

The University of Adelaide

FOREWORD

The Calendar of the University is published annually in three Volumes, as follows:

VOLUME I

General information, including—

- The University Act
- Staff
- Statutes
- Standing Orders of the Senate
- The Elder Conservatorium of Music
- Institutions, Foundations and Colleges of the University
- Public Lectures and Courses
- Scholarships and Prizes
- Societies Associated with the University

VOLUME II

"Details of Courses", being—

- Regulations, Schedules and Syllabuses of degree and diploma courses
- Rules
- Timetables

VOLUME III

- Annual Report
- Commemoration Addresses
- Bibliography
- Financial Statements
- List of Graduates, Associates and Diploma holders of the University

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These Volumes are normally published as follows:

VOLUME I: In May: price 75c.
VOLUME II: In December of previous year: price 25c.
VOLUME III: In August: price 25c.
Postage extra.



THE ARMS OF THE UNIVERSITY

The heraldic description of the Coat of Arms is as follows:

> Per pale Or and Argent an Open Book proper edged Gold on a Chief Azure five Mullets, one of eight, two of seven, one of six and one of five points of the second, representing the Constellation of the Southern Cross;

and the Motto associated with the Arms is—

Sub cruce lumen

"The light (of learning) under the (Southern) Cross"

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VOLUME II

DEGREE AND DIPLOMA COURSES

(The information in this volume is correct as at 9 November, 1974.)

REGULATIONS, SCHEDULES AND SYLLABUSES

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OF THE DEGREE OF

BACHELOR OF AGRICULTURAL SCIENCE

REGULATIONS

1. There shall be an Ordinary and an Honours degree of Bachelor of Agricultural Science. A candidate may obtain either degree or both.

2. Except in special cases allowed by the Council, every candidate for the degree of Bachelor of Agricultural Science shall after matriculation spend at least four academic years in courses of study for the degree.

*3. To qualify for the degree, whether the Ordinary or the Honours degree, every candidate must do such written, laboratory and other practical work as is required and pass examinations in the subjects prescribed. He must also present evidence to the satisfaction of the Council that he has had the practical experience prescribed.

*4. (a) Schedules defining the course of study, including laboratory and other practical work to be undertaken, the examinations to be passed and the fees to be paid by candidates, shall be drawn up by the Faculty of Agricultural Science and submitted to the Council for approval.

(b) Such schedules shall become effective from the date of approval by the Council or from such other date as the Council may determine, and shall be published in the next edition of the University Calendar.

5. Except by permission of the Faculty of Agricultural Science, a candidate shall not be admitted to the class in any subject for which he has not satisfactorily completed the pre-requisite studies as prescribed in the syllabus for that subject: Provided that the Faculty may grant a candidate who holds an Honours diploma of Roseworthy Agricultural College such exemption from the requirements of this regulation, and on such conditions, as it may determine.

†6. A candidate may be exempted from attendance at practical work in a subject in which he desires to be examined, but only upon grounds approved by the Council.

7. (a) Except in cases approved by the Council, the annual examination in a subject shall be held soon after the completion of the course of instruction in it. Supplementary examinations, when granted, shall be held at such time as may be fixed whether in term or in vacation.

† Amended 21 December, 1967.

* Amended 24 December, 1969.

*(b) A candidate shall enter for examination on a form and by a date prescribed by the Council, but shall not be eligible to present himself for examination unless he has done written and laboratory or other practical work, where required, to the satisfaction of the professors and lecturers concerned.

(c) At the annual examination in a subject, the examiners may take into account the candidate's written or practical work in the subject and his results at terminal or other examinations in it.

†8. (a) A candidate who fails to pass in any subject shall, before presenting himself again for examination, again do practical work in that subject to the satisfaction of the professor and lecturers concerned unless exempted from doing so by the Faculty of Agricultural Science.

(b) A candidate who has twice failed to pass the examination in any subject may not enrol for the subject again except by permission of the Faculty and under such conditions as the Faculty may prescribe. For the purpose of this clause, a candidate who fails to receive permission to sit for or absents himself from the examination in any subject after having attended substantially the full course of instruction in it shall be deemed to have failed to pass the examination.

9. There shall be three classifications of pass at an annual examination in any subject for the Ordinary degree, as follows: Pass with Distinction, Pass with Credit, Pass. The names of the candidates who pass with Distinction or with Credit shall be arranged in order of merit within the classification; the names of other candidates who pass shall be arranged in alphabetical order either in one list or in two divisions as the Council may, on the recommendation of the Faculty, determine. If the list of candidates who pass be published in two divisions, a pass in the higher division may be prescribed in the appropriate syllabus as pre-requisite for admission to another subject. A candidate with a lower division pass who wishes to gain a higher division pass will be allowed to repeat the subject once only.

*10. (a) A candidate for the Honours degree shall spend an additional year in advanced study in one of the subjects listed in the schedule relating to the Honours degree.

(b) The names of candidates who qualify for the Honours degree shall be published in alphabetical order within the following classes and divisions:

First Class
Second Class
  Division A
  Division B
Third Class.

* Amended 21 December, 1967.

† Amended 24 December, 1969.

*11. A candidate who has passed subjects in other faculties or other universities or elsewhere, may on written application to the Academic Registrar be granted such exemption from these regulations and schedules made under them as the Council on the recommendation of the Faculty may determine.

Regulations allowed 28 January, 1965.

* Amended 28 February, 1974.

SCHEDULES

(Made by the Council under Regulation 4.)

NOTE: Syllabuses of subjects for the degree of B.Ag.Sc. are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

1. The Ordinary Degree

1. The subjects of study for the Ordinary degree shall be as follows:

Group A subjects:

Biology I
Chemistry I
Geology I
Mathematics I and IM
Physics I
Zoology I
(See also 3. below)

Group A half-subjects:

General Biology IH
Computing IH
Genetics and Human Variation IH
Geology IH
Macroeconomics IH
Mathematics IH
Microeconomics IH
Physics IM
Plant Biology IH
Statistics IH

Group B subjects:

Agriculture II
Applied Mathematics IIA and IIB
Botany II
Chemistry II
Genetics II
Geology II
Mathematics IIM
Pure Mathematics II
Zoology II

Group B half-subjects:

Macroeconomics IIH
Microeconomics IIH

Group C subjects:

Agricultural Biochemistry I
Agricultural Microbiology
Agriculture III
Animal Physiology and Production I
Biometry I
Crop Physiology
Economics of Natural Resource Use**
Entomology and Plant Pathology
Farm Management†
Farm Prices and Policy††
Mathematical Statistics II
Soil Science I

Group D subjects:

Agricultural Biochemistry II
Agriculture IV
Agronomy
Animal Physiology and Production II
Economics III (see 4. below)
Entomology II
Genetics III
Horticultural Science
Mathematical Statistics III
Plant Breeding
Plant Pathology II
Soil Science II

† Farm Management was offered for the first time in 1974 and thereafter will be offered in alternate years (i.e. even years).

** Economics of Natural Resource Use will be offered for the first time in 1975 and thereafter in alternate years (i.e. odd years).

†† Farm Prices and Policy will be offered for the first time in 1975 and thereafter in alternate years (i.e. odd years).

2. To qualify for the Ordinary degree a candidate shall, subject to the conditions and modifications specified in clause 4, satisfactorily complete the following courses:

(a) Chemistry I and three Group A subjects or their equivalents. These three subjects must include *either* (i) General Biology IH, Plant Biology IH and Zoology I, *or* (ii) Biology I.

(b) Agriculture II and *either* two other subjects from Group B *or* one other subject from Group B and a Group A subject not previously taken or its equivalent.

(c) Agriculture III, Agricultural Microbiology and *either* Biometry I and three other subjects from Group C *or* Mathematical Statistics II and two other subjects from Group C.

(d) Agriculture IV and *either* two other subjects from Group D *or* one other subject from Group D and two subjects from Group C not previously taken.

3. A candidate may present in lieu of not more than one Group A subject, or its equivalent, required under section (a) or (b) of clause 2 above, Engineering I or not more than the equivalent of a first-year subject available in the Faculty of Arts, or Astronomy IH and another half-subject available in either the Faculty of Arts or the Faculty of Science.

4. A candidate wishing to present Economics III towards the degree must take International Economics IIIH and two half-subjects from the following list, one of which must be *either* Macroeconomics IIIH or Microeconomics IIIH†:

Agricultural Economics IIIH,
Economics of Labour IIIH,
Macroeconomics IIIH,
Managerial Economics IIIH,
Microeconomics IIIH†,
Public Finance IIIH.

5. The list of subjects to be presented for the degree must comply with the following conditions:

The following combinations of subjects shall not be presented:

Biology I and *any one of* General Biology IH, Plant Biology IH, Zoology I;

Any *two* of Mathematics I, Mathematics IS, Mathematics IH, Mathematics IM;

Any *two* of Applied Mathematics IIA, Applied Mathematics IIB, Mathematics IIM, Pure Mathematics II;

Computing IH and *either* Applied Mathematics IIB *or* Mathematics IIM;

† Microeconomics IIIH will be offered for the first time in 1975 and may not be presented by candidates who have passed Economics II in 1973 or earlier.

Agricultural Economics I and *either* Macroeconomics IH *or* Microeconomics IH;

Economics III and Mathematical Statistics II;

Physics I and Physics IM;

Farm Prices and Policy and Agricultural Economics IIIH;

Geology I and *any one of* Geology IH, General Geology IH, Physical Geology IH;

Geology IH and *either* General Geology IH *or* Physical Geology IH;

Public Finance IIIH and Economics of Natural Resource Use.

6. A candidate who enrolled for the degree during or before 1971 may continue either under the schedules then in force or under the new schedules.

7. *Candidates from other faculties and institutions*

(a) Candidates from other faculties in the University, or from other tertiary educational institutions, may apply to the Academic Registrar for status in appropriate subjects in the course for the degree of Bachelor of Agricultural Science. Those from within the University will, however, be required to satisfy the examiners in the subjects Agriculture II, Agriculture III and Agriculture IV. Those from other institutions may be granted status in Agriculture II and Agriculture III but only in exceptional circumstances; and they will not be granted status in Agriculture IV.

(b) Extra study, as prescribed by the Head/Chairman of the department concerned, may be required in nominated subjects before the candidate enters the course.

8. *Roseworthy Agricultural College*

A candidate who holds an Honours diploma of Roseworthy Agricultural College may be exempted from taking the subjects in Group C and may be admitted to the subjects in Group D, at the discretion of the Head of the Department concerned and with permission of the Dean of the Faculty.

9. *Practical Experience**

(a) A candidate will be required to complete 16 weeks of practical agricultural experience approved by the Faculty of Agricultural Science before he will be admitted to the degree. The candidate will be required to gain practical experience on properties in at least three different agricultural environments and he should discuss in advance with the Practical Experience Administrator, his plans for practical experience.

* Students who were enrolled in 1972 in the second, third or fourth year of the course may satisfy the requirements relating to practical experience either under this schedule or the previous schedule (see Calendar for 1973, p. 515).

(b) A candidate who holds the diploma of Roseworthy Agricultural College will be exempted from the requirements of practical experience.

NOTE (not forming part of the schedules):

Work required to complete an Adelaide degree.

With special permission of the Faculty, (i) students coming from other universities and wishing to obtain an Adelaide degree, will be required to complete at least the whole of the work of the final year of the course at Adelaide; and (ii) a student who has completed at Adelaide, at least the first three years of the degree, or its equivalent, may be permitted to complete the requirements of the degree at another institution.

II. The Honours Degree

1. A candidate may, subject to approval by the Head/Chairman of the department concerned, proceed to the Honours degree in one of the following disciplines:

Agricultural Biochemistry
Agronomy
Animal Physiology and Production
Animal Husbandry and Nutrition
Biometry
Entomology
Genetics
Horticulture
Plant Breeding
Plant Pathology
Plant Physiology
Soil Science

2. A candidate for the Honours degree in any subject shall not begin Honours work in that subject until he has completed the course of study for the Ordinary degree, all the courses in that subject available for the Ordinary degree, and such other pre-requisite subjects (if any) as may be prescribed in the syllabus.

OF THE DEGREE OF

BACHELOR OF AGRICULTURAL SCIENCE

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Agricultural Science: W.

The second letter identifies the departments or sub-department teaching the subject, as follows:

Agricultural Biochemistry and Soil Science - - - - - - B	Biometry Section - - - - - - Y
Agronomy - - - - - - - A	Entomology - - - - - - - E
Animal Physiology - - - - N	Plant Pathology - - - - - P
	Plant Physiology - - - - - F

The first digit—

0–6: Indicates that the subject may form part of a sequence.

7–9: Indicates that the subject does not form part of a sequence.

The second digit—

1, 2, 3 or 4: Indicates year of subject, e.g. first, second, third or fourth.

(5–8: Not used.)

9: Indicates Final Honours.

H: Indicates a half-subject, two of which count towards the degree as a whole subject.

NOTE: Some subjects listed in the schedules of the degree of B.Ag.Sc. are taught by departments of other faculties. In the syllabus numbers of those subjects the two digits do not necessarily have the significance shown above. For syllabuses of these subjects and half-subjects see the table of subjects at the end of the volume.

AGRICULTURAL BIOCHEMISTRY AND SOIL SCIENCE.

WB03 Agricultural Biochemistry I.

A course of two hours lectures and five hours practical work a week for three terms dealing with the intermediary metabolism of micro-organisms, plants and animals. Topics include enzymology; metabolism of carbohydrates, lipids, protein and nucleic acids; control mechanisms; biochemistry of vitamins and coenzymes and biochemistry of nitrogen and sulphur cycles in nature. Practical work will consist of experiments related to the above topics.

Text-books:

Conn, E. E., and Stumpf, P. K., *Outlines of biochemistry*, 4th ed. (Wiley).

Lehninger, A. L., *Short course in biochemistry* (Worth).

Lehninger, A. L., *Biochemistry* (Worth)—suitable also for Agricultural Biochemistry II.

WB04 Agricultural Biochemistry II.

Pre-requisite subject: A good pass in WB03 Agricultural Biochemistry I. Completion of SC12 Chemistry II would be an advantage.

A course of two hours lectures and ten hours tutorial and practical work a week for three terms dealing with advanced aspects of the intermediary metabolism of micro-organisms, plants and animals. The topics will be considered in three main sections:

1. The Regulation of Cellular Activity.

Molecular mechanisms of enzyme regulation and the control of metabolic pathways.

2. The Biochemical Basis of Growth and Development.

Cell division and the biosynthesis of nucleic acids during the cell cycle. Modulation of protein level in higher organisms.

3. Diversity in Metabolism.

Utilisation of inorganic nitrogen and sulphur compounds in micro-organisms and in plants, specialised pathways related to compounds of physiological importance.

The practical work will consist of experiments related to the above topics, training in the use of stable and radio-active isotopes in biochemistry as well as a short research project.

Text-books:

Lehninger, A. L., *Biochemistry* (Worth).

Yudkin, M., and Offord, R., *Comprehensible biochemistry* (Longman).

A reading list will be given in the lectures.

WB13 Soil Science I.

A course of two hours of lectures and three hours of practical work a week for three terms, dealing with soil formation and composition, and the chemistry and physics of soils in relation to soil fertility. Topics considered include: soil genesis; distribution of the major soil types of the world and Australia; composition of the inorganic and organic fractions of soils; clay mineralogy; chemistry of the plant nutrients in soils; the nitrogen cycle; air and water movements in soils; the physics of irrigation and drainage; soil erosion.

Practical work will consist of a number of field excursions, and laboratory work related to the above topics.

Text-books:

Corbett, J. R., *The living soil* (Martindale Press).

Leeper, G. W., *Introduction to soil science*, 3rd ed. (M.U.P.).

Russell, E. J., *Soil conditions and plant growth*, 9th ed. (Longmans).

Reference books:

Baver, L. D., Gardner, W. H., and Gardner, W. R., *Soil physics*, 4th ed. (Wiley).

Bear, F. E., *Chemistry of the soil*, 2nd ed. (Reinhold).

Clarke, G. R., *Study of the soil in the field*, 5th ed. (O.U.P.).

Cooke, G. W., *The control of soil fertility* (Crosby Lockwood).

Hillel, D., *Soil and water* (Academic Press).

Hudson, N., *Soil conservation* (Batsford).

Stace, H. C. T., and others, *Handbook of Australian soils* (Rellim).

WB14 Soil Science II.

Pre-requisite subject: A good pass in WB13 Soil Science I. Completion of SC12 Chemistry II would be an advantage.

A course of three hours lectures and six hours practical work a week for three terms devoted to fundamental studies of the chemistry and physics of the soil. The major topics considered are: the genesis and composition of clay minerals in different soil types; the reactions of ions and water at the surfaces of colloidal particles, and the influence of these reactions on the physical and chemical properties of soils, particularly the potential and capacity of the soil to provide the major plant nutrients and trace elements; the diffusion of ions in soils and the chemistry of nutrient uptake by plants; the composition of the organic colloids and the kinetics and biochemistry of organic matter transformations; soil organisms; sorption and movement of water in soil and the relation to aeration, structure and other physical properties of the soil; aspects of soil and water management; agricultural soil mechanics.

Practical work will be related to the above topics and will include a research project.

In addition to those books listed for Soil Science I the following are recommended:

Reference books:

Alexander, M., *Introduction to soil microbiology* (Wiley).

Bartholomew, W. V., and Clark, F. E., (eds.), *Soil nitrogen* (American Society of Agronomy).

Black, C. A., *Soil-plant relationships*, 2nd edition (Wiley).

Black, C. A. (ed.), *Methods of soil analysis* (American Society of Agronomy).

Brown, G. (ed.), *X-ray identification and crystal structures of clay minerals* (Mineralogical Society).

Childs, E. C., *An introduction to the physical basis of soil water phenomena* (Wiley).

FAO/UNESCO, *Irrigation, drainage and salinity* (Hutchinson).

Grim, R. E., *Clay mineralogy* (McGraw-Hill).

Jackson, M. L., *Soil chemical analysis* (Constable).

McLaren, A. D., and Peterson, S. H. (eds.), *Soil biochemistry* (Marcel Dekker).

Olphen, H. van, *Introduction to clay colloid chemistry* (Wiley).

Rose, C. W., *Agricultural physics* (Pergamon).

Shaw, B. T., *Soil physical conditions and plant growth* (Academic Press).

HONOURS DEGREE.

WB89 Agricultural Biochemistry for the Honours degree of B.Ag.Sc.

Pre-requisite subject: A good pass in WB04 Agricultural Biochemistry II.

WB99 Soil Science for the Honours degree of B.Ag.Sc.

Pre-requisite subject: A good pass in WB14 Soil Science II.

Students wishing to take the Honours degree in either Agricultural Biochemistry or Soil Science should consult the Chairman of the Department of Agricultural Biochemistry and Soil Science during the third term of their final year of the B.Ag.Sc. ordinary degree.

Candidates will be required to attend tutorials and to prepare seminars on selected topics. A research project will be assigned to each candidate, who will be required to present the results in a short thesis at the end of the course. Examination papers will also be set. Candidates should have a reading knowledge of a modern, foreign language. Candidates are expected to begin studies on 1 February.

AGRICULTURE.

WA02 Agriculture II.

A course of three lectures, three hours practical work, one tutorial a week for three terms and two one-day weekend field trips.

HUMAN ECOLOGY AND AGRICULTURAL RESOURCES:

Human social development: ecological modes of existence, the development of agriculture; *Hunter/Gatherer phase*: energy flow; disease and population control; attitudes to the environment; the domestic transition. *Subsistence and surplus Agricultural Phases*: technology of agriculture; population changes, energy sources, specialisation; the industrial transition. *Agricultural/Industrial Phase*: technology without science, the rise of science, energy and social change, demography, disease. *Modern science*: the logic of scientific discovery, science and logical positivism. *Science and society*: the military scientist, the responsibility of scientists, technological solutions. *Resources of Contemporary Agriculture*: energy flow in the biosphere, energy flow in agricultural systems; the resource inputs into contemporary agriculture—land, fertilisers, chemicals, energy, water, the role of science and technology. *Biological background and agriculture*: human archaeology; comparative neurology of behaviour; domestication of plants and animals; chronology; theories of domestication; centres of domestication; human uses of domestication.

PHYSICAL ENVIRONMENT OF AGRICULTURE:

An integrated development of the following topics. *Climate*: radiation; energy and water balances. Climatic variations; macro- and micro-climates; relationships to plants, animals and man. *Hydrology*: precipitation, evaporation, surface runoff, infiltration, and their effects on soil water, ground water and stream flow. Water quality, salinity. Hydrology and land use. *Soils*: origin and constitution of soils; soils of the world; geomorphology, soils and land use of Australian regions.

ECOLOGY OF NATURAL AND AGRICULTURAL SYSTEMS:

The basic similarities and differences between natural and man-made systems are considered in terms of their thermodynamic stability. Environmental limits, ecological niches. Plant and animal variability, breeding and selection. Intensive agriculture and animal husbandry. Causes of instability and management of inherently unstable systems. The allocation and protection of natural resources and the formulation and implementation of agricultural policies.

Text-books:

Australia C.S.I.R.O., *The Australian environment*, 4th ed. (M.U.P., paperback).

Chorley, R. J. (ed.), *Introduction to physical hydrology* (Methuen, paperback).

Corbett, J. R., *The living soil* (Martindale Press).

Flöhn, H., *Climate and weather* (World Universities Library, paperback).

South Australia, Dept. of Mines, *Groundwater handbook* (paperback).

Reference:

Chang, Jen-Hu, *Climate and agriculture* (Aldine).

WA03 Agriculture III.

Pre-requisite subject: WA02 Agriculture II.

A course of two lectures and three hours practical work a week for three terms.

LAND USE:

Determination of land use by climate, soil, economic and sociological factors. The nature of farming and farming operations. Soil fertility, tillage, soil conservation and the use of fertilisers. Irrigation and drainage. Land development. Principles of pasture establishment and pasture improvement.

CROP PRODUCTION:

Principles of crop production. Annual and perennial crops. Comparisons of horticultural and agricultural production. Areas, types of enterprise, problems, research.

Factors affecting crop yields. Plant populations, plant type, environment and physiological factors.

Selected topics of production and uses of a range of crops: soil preparation, seeding, fertilisers, weed and pest control, harvesting and processing, storage and markets.

Marketing and economic control of the crop industries.

ANIMALS AND THE ANIMAL INDUSTRIES:

Characteristics, distribution and environmental tolerances of principal species and breeds of livestock. Animal nutrition—ecological niches; nutritional inadequacies—their nature and effects.

Animal reproduction, growth and lactation. Factors which limit reproductive rate, numbers of offspring, rate of growth, body composition, lactation, wool growth.

Feeding systems. Nutritive value of pastures, seasonal cycles; regional characteristics. Pasture-animal interactions.

Animal production systems and industries. Use of resources, efficiency, present and future production.

Reference books:

Australia, C.S.I.R.O., *The Australian environment*, 4th edition (M.U.P.).
Cooke, G. W., *The control of soil fertility* (Crosby Lockwood).
Davidson, B. R., *Australia wet or dry?* (M.U.P.).
Klingman, G. L., *Weed control as a science* (Wiley).
McVickar, M. H., and others, *Fertilizer technology and usage* (Soil Science Society of America).
Molnar, I., *A manual of Australian agriculture* (Heinemann).
Moore, R. M., *Australian grasslands* (A.N.U.).
Wadham, S., and others, *Land utilization in Australia*, 4th edition (M.U.P.).
Williams, D. B. (ed.), *Agriculture in the Australian economy* (S.U.P.).

WA04 Agriculture IV.

Pre-requisite subjects: WA01 Agriculture I (Part A), WA12 Agriculture I (Part B) and WA03 Agriculture II (in 1974 re-named WA03 Agriculture III).

A course of two lectures and three hours practical work a week for three terms.

PRINCIPLES UNDERLYING AGRICULTURAL PRACTICE:

Seed production and certification. The ecology and control of weeds. Plant and animal protection. Quarantine regulations.

THE ANIMAL INDUSTRIES:

Structure, legislation, production, marketing and research in Australia.

CROP PRODUCTION AND THE CROP INDUSTRIES:

Growth, use and distribution of crops. Principles of crop production; physiological and environmental factors. Important crops of Australia. Production-trends, organisation and marketing.

Students are required to participate in and report on tours of agricultural areas in South Australia.

Text-books:

Australia, C.S.I.R.O., *The Australian environment*, 4th edition (M.U.P.).
Wadham, S., and others, *Land utilization in Australia*, 4th edition (M.U.P..).

Reference books:

Alexander, G., and Williams, O. B. (eds.), *The pastoral industries of Australia* (Sydney U.P.).

Carson, Rachel, *Silent spring* (Hamilton).

Klingman, G. L., *Weed control as a science* (Wiley).

Williams, D. B. (ed.), *Agriculture in the Australian economy* (S.U.P.).

WA74 Agronomy.

Pre-requisite subject: WF03 Crop Physiology at Division I or higher.

A course of three lectures and seven hours practical a week for three terms. The practical work includes an individual experimental project.

AGRONOMIC EXPERIMENTATION:

Applied and basic research; empiricism; development of a research project; formulation and testing of hypotheses; errors in experimentation; field and pot culture experiments; the role of controlled environments.

MINERAL NUTRITION AND CROP GROWTH:

General relationships between mineral nutrition and plant growth; methods of assessing soil fertility and fertiliser needs; soil and plant analyses and the concept of critical levels; genotypic variation in nutrient requirements; nutritional effects on plant/water relations and disease resistance.

GROWTH, PRODUCTIVITY AND PHOTOSYNTHESIS OF CROPS; PLANT COMPETITION:

Growth rates, quantitative expression of growth; leaf photosynthesis; community photosynthesis; productivity models and simulation; respiration.

Nature of competition; density, time and yield; plasticity of plants; factors for which competition occurs; the operation of competition; competition in mixtures; plant arrangement; competition in relation to plant breeding.

MASS AND ENERGY TRANSFER IN PLANT COMMUNITIES:

(i) Soil/Plant: Dynamics of water and nutrient supply to the growing crop.

(ii) Plant/Atmosphere: Energy balance and the use of energy; water balance, evaporation; CO_2 movement.

PASTURE ECOLOGY, PRODUCTION, MANAGEMENT AND UTILIZATION:

The grazing animal in the ecosystem; pasture production under grazing; nutritive value of pastures and the role of supplementary forage crops and fodder conservation; soil-plant-animal interrelationships of grazing management and animal production systems.

EVOLUTION, VARIATION AND TAXONOMY OF CROP PLANTS:

Origin, evolution, morphology and development of wheat, oats, barley, rye, maize, sorghum, subterranean clover, pasture legumes and grasses.

Text-books:

Milthorpe, F. L., and Moorby, J., *An introduction to crop physiology* (C.U.P.).

Rose, C. W., *Agricultural physics* (Pergamon Press).

Reference books:

Alexander, G., and Williams, O. B. (eds.), *The pastoral industries of Australia* (Sydney U.P.).

Commonwealth Bureau of Pastures and Field Crops: Bulletin 45: *Research techniques in use at the Grassland Research Institute, Hurley* by Members of the Institute Staff (The Bureau).

Moore, R. M. (ed.), *Australian grasslands* (A.N.U.).

WA84 Plant Breeding.

Pre-requisite subject: SJ02 Genetics II, at Division I or higher.

A course of three lectures and seven hours practical work a week for three terms. The practical work includes an individual project.

Objectives and bases of breeding programmes. Plant introduction, adaptation, effect of breeding history, breeding systems, variability, selection methods, in self and cross-pollinated plants. Crop plant evolution.

Polyploidy, incompatibility, mutation, male sterility, disease resistance, cytogenetics and inter-specific hybridisation in relation to plant breeding.

Breeding for yield and quality. Biometrical, physiological and biochemical analysis. General philosophy of breeding, contributions of plant breeding to agriculture. Field plot, mechanisation, computer techniques.

Reference books:

Allard, R., *Principles of plant breeding* (Wiley).

Burnham, C. R., *Discussions in cytogenetics* (Burgess).

Falconer, D. S., *Introduction to quantitative genetics* (Oliver and Boyd).

Hutchinson, J. B. (ed.), *Essays on crop plant evolution* (Cambridge U.P.).

Plant breeding symposium, Iowa State University, *Plant breeding*; ed. K. J. Frey (Iowa State U.P.).

HONOURS DEGREE.

WA89 Agronomy for the Honours degree of B.Ag.Sc.

WA79 Animal Husbandry and Nutrition for the Honours degree of B.Ag.Sc.

WA99 Plant Breeding for the Honours degree of B.Ag.Sc.

A candidate for the degree will be required to pass such examinations on the chosen subject of study as may be prescribed by the Chairman of the Department of Agronomy, and to submit a thesis reporting research work undertaken during the year.

A candidate may also be required to attend lectures and pass examinations in related subjects and to satisfy the Chairman of the Department that he has a reading knowledge of one or more modern languages other than English. University time not devoted to lectures must be spent in activities approved by the Chairman of the Department. Intending candidates should consult the Chairman of the Department and should be prepared to begin studies on or about 1 February.

ANIMAL PHYSIOLOGY.

WN03 Animal Physiology and Production I.

A three-term course of five hours weekly in three sections.

ANATOMY AND HISTOLOGY:

Gross structure and histology, with emphasis on the anatomical specialisation of ruminants.

PHYSIOLOGY AND BIOCHEMISTRY:

Animal functions in relation to environment, nutrition and productive efficiency. Protein production, and its ecological implications. Functions of skin, glands, hair and wool. Body composition, growth; metabolic turnover and conversion of water, electrolytes, proteins, carbohydrates and fats. Chemistry and synthesis of milk, meat and wool. Circulation and body fluids. Digestion, secretion, absorption and transport of metabolites. Endocrine functions, reproductive physiology. Nervous and neuroendocrine control. Behaviour. Adaptive mechanisms. Principles of animal breeding.

NUTRITION AND PRODUCTION:

Basic concepts of animal nutrition: balance of energy, carbon, nitrogen, electrolytes, and water. Energy, mineral and vitamin requirements and deficiencies in growth, production and reproduction. Ecology and nutrition of the grazing animal: seasonal limitations to production. The economic approach to supplementary feeding, drought feeding, lot feeding; the use and limitations of feeding standards. Nutrition of pigs and poultry. Nutrition as a factor modifying the form, composition and carcass quality of farm animals.

Reference books:

Alexander, G., and Williams, O. B., *The pastoral industries of Australia* (Sydney U.P.).

Austin, C. R., and Short, R. V., *Reproduction in mammals* (C.U.P.).

Barnett, S. A., *Instinct and intelligence* (Pelican).

Brody, S., *Bioenergetics and growth* (Reinhold).

Clark, W. E. le Gros, *The tissues of the body* (O.U.P.).

Conn, E. E., and Stumpf, P. K., *Outlines of biochemistry* (Wiley).

Davson, H., and Eggleton, G., *Principles of human physiology* (Churchill).

Donovan, B. T., *Mammalian neuroendocrinology* (McGraw-Hill).

Hafez, E. S. E., *Reproduction of domestic animals* (Lea and Febiger).

Hammond, J., *Progress in the physiology of farm animals* (Butterworth).

Harper, H. A., *Review of physiological chemistry*, 14th ed. (Lange).

May, N., *The anatomy of the sheep* (Q.U.P.).

Maynard, L. A., and Loosli, J. K., *Animal nutrition* (McGraw-Hill).

Nalbandov, A. V., *Reproductive physiology* (Freeman).

Nickel, R., Schummer, A., and Seiferle, E., *The viscera of the domestic mammals* (Springer).

Rice, V. A., and others, *Breeding and improvement of farm animals*, 6th edition (McGraw-Hill).

Spedding, C. R. W., *Sheep production and grazing management* (Ballière).

Turner, C. D., *General endocrinology* (Saunders).

Wood, D. W., *Principles of animal physiology* (Arnold).

Wright, S., *Applied physiology* (O.U.P.).

Recommended texts:

Bell, G. H., and others, *Textbook of physiology and biochemistry* (Livingstone).

Hafez, E. S. E., and Dyer, I. A., *Animal growth and nutrition* (Lea and Febiger).

Pike, R. L., and Brown, M., *Nutrition: an integrated approach* (Wiley).

Toner, P. G., and Carr, K. E., *Cell structure* (Livingstone).

WN04 Animal Physiology and Production II.

Pre-requisite subject: WN03 Animal Physiology and Production I.

A three term course of ten hours a week including a project.

ANATOMY AND HISTOLOGY:

More detailed study of the structure of sheep, pig and bird. Histology, and electron micrography of cells. Structure-function relations of muscle, storage organs, glands, egg formation and reproductive tract.

PHYSIOLOGY:

Protein sources, protein synthesis, and patterns of protein use. Relative efficiencies and consequences of intensive and extensive production processes. Waste. Functional adjustments of bird, cattle, pig, sheep, goat to diverse environments. Physiological ecology in tropical, desert and temperate zone animal industry. Hormones, growth, and metabolic controls in birds and mammals. Behaviour and sociology. Photoperiod and seasonality. Reproduction, lactation. Population genetics.

ANIMAL PRODUCTION:

Special aspects of ruminant metabolism and nutrition. Principles of experimentation with grazing animals, methods for studying production in the field: wool, growth, milk production, reproduction, body growth and its components; carcass evaluation. Seasonal productivity and nutritive value of pastures, nitrogen turnover of grazing animals. The assessment of herbage intake, grazing time and composition of the diet.

PRINCIPLES OF DISEASE CONTROL:

Developmental, parasitic, degenerative and toxic dysfunctions. Principles of immunology, antibiosis and actions of trace elements. Management and legal aspects of disease.

Reference books:

Annison, E. F., and Lewis, D., *Metabolism in the rumen* (Methuen).
Berger, P., *Invitation to sociology* (Pelican).
Cantarow, A., and Schepartz, B., *Biochemistry* (Saunders).
Donovan, B. T., *Mammalian neuroendocrinology* (McGraw-Hill).
Dougherty, R. W. (ed.), *Physiology of digestion and metabolism in the ruminant* (Butterworth).
Dukes, H. H., *The physiology of domestic animals* (Comstock).
Florey, H., *General pathology* (Saunders).
Gray, D. F., *Immunology* (Cheshire).
Harper, H. A., *Review of physiological chemistry*, current edition (Lange).
Hinde, R. A., *Animal behaviour* (McGraw-Hill).
Hungerford, T. G., *Diseases of livestock* (Angus and Robertson).
Kleiber, M., *The fire of life* (Wiley).
Lerner, I. M., *Population genetics and animal improvement* (C.U.P.).
Lorenz, K., *Studies in animal and human behaviour* (Methuen).
Martini, L., and Ganong, W., *Neuroendocrinology* (Academic Press).
Mitchell, H. H., *Comparative nutrition of man and domestic animals* (Academic Press).
Moule, G. R. (ed.), *Field investigations with sheep: a manual of techniques* (C.S.I.R.O., Melb.).
Phillipson, A. (ed.), *Physiology of digestion and metabolism in the ruminant* (Oriel Press).
Rhodin, J. A. G., *Atlas of ultrastructure* (Saunders).
Roitt, I. M., *Essential immunology* (Blackwell).
Ucko, P., and Dimbleby, J. *Domestication and exploitation of animals and plants* (Duckworth).

Recommended texts:

Blaxter, K. L., *Energy metabolism of ruminants* (Hutchinson).
Hafez, E. S. E. (ed.), *Adaptation of domestic animals* (Lea and Febiger).
Yeates, N. T. M., *Modern aspects of animal production* (Butterworth).

HONOURS DEGREE.

WN99 Animal Physiology and Production for the Honours degree of B.Ag.Sc.

A candidate for the degree will be required to pass such examination on the chosen subject of study as may be prescribed by the Chairman of the Department, and to submit a thesis reporting research work undertaken during the year.

A candidate may also be required to attend lectures and pass examinations in related subjects and to satisfy the Chairman of the Department that he has a reading knowledge of one or more languages other than English. University time not devoted to lectures must be spent in activities approved by the Chairman of the Department. Intending candidates should consult the Chairman of the Department concerned and should be prepared to begin studies on or about 1 February.

BIOMETRY SECTION.

WY73 Biometry I.

The course comprises two lectures and a one-hour practical class each week. The syllabus comprises:

(a) *First and second terms*: Elementary statistical methods, non-parametric methods, introduction to computer programming, standard tests of hypotheses and sampling distributions, linear regression, analysis of variance, some simple experimental design and analysis.

(b) *Third term*: Further experimental design and analysis, sequential analysis, transformations of data, systems analysis and other selected biomathematical topics.

Reference books:

Bailey, N. T. J., *Statistical methods in biology* (English University Press).

Clarke, G. M., *Statistics and experimental design* (Arnold).

Cochran, W. G., and Cox, G. M., *Experimental designs* (Wiley).

Colquhoun, D., *Lectures on biostatistics* (O.U.P.).

Cox, D. R., *Planning of experiments* (Wiley).

Li, Jerome, C. R., *Statistical inference*, Vol. 1 (Edwards Brothers, Inc.).

Snedecor, G. W., and Cochran, W. G., *Statistical methods*, 6th edition (The Iowa State University Press).

Steel, R. G. D., and Torrie, J. H., *Principles and procedures of statistics* (McGraw-Hill).

HONOURS DEGREE.

WY89 Biometry for the Honours degree of B.Ag.Sc.

Pre-requisite subject: QT03 Mathematical Statistics III.

A candidate for the degree will be required to pass such examinations on the chosen subject of study as may be prescribed by the Head of the Section, and to submit a thesis reporting research work undertaken during the year.

A candidate may also be required to attend lectures and pass examinations in related subjects and to satisfy the Head of the Section that he has a reading knowledge of one or more modern languages other than English. University time not devoted to lectures must be spent in activities approved by the Head of the Section. Intending candidates should consult the Head of the Section and should be prepared to begin studies on or about 1 February.

ECONOMICS.

(FOR THE DEGREE OF BACHELOR OF AGRICULTURAL SCIENCE)

Group A half-subjects:

EE1G Macroeconomics IH.

EE2G Microeconomics IH.

For syllabuses see under the degree of B.Ec. in the Faculty of Economics.

Group B half-subjects:

EE3G Macroeconomics IIH.

EE4G Microeconomics IIH.

For syllabuses see under the degree of B.Ec. in the Faculty of Economics.

Group C subjects:

EE43 Economics of Natural Resource Use.

Pre-requisite subject: EE1G Macroeconomics IH and EE2G Microeconomics IH.

Starting in 1975, this course will be offered in alternate years, i.e. odd years, for students proceeding to the degree of Bachelor of Agricultural Science. The course will consist of two lectures and one tutorial a week throughout the year, and will cover the following topics:

Concepts from welfare economics, and in particular the notions of economic efficiency, redistribution of income, externalities and public goods. Application of these concepts to problems of pollution, and the methods of solving environmental problems.

Theory and techniques of project evaluation, and their application to the social evaluation of publicly financed agricultural projects.

Economic growth, including a survey of economists' theories, the historical record, and recent critiques and policy proposals.

The economics of resource conservation and the use of common property resources.

Text-books:

Dolan, E. G., *TANSTAAFL* (Holt, Rinehart and Winston).

Cipolla, C. M., *The economic history of world population* (Penguin).

Mishan, E. J., *Elements of cost-benefit analysis* (Allen and Unwin).

Price-Gittinger, J., *Economic analysis of agricultural projects* (Johns Hopkins U.P.).

Australia. Treasury. Treasury Economic Paper No. 2, *Economic growth: is it worth having* (A.G.P.S.).

Reference books:

Barkley, P. W., and Seckler, D., *Economic growth and environmental decay* (Harcourt, Brace and Jovanovich).

Ciriacy-Wantrup, S. V., *Resource conservation—economics and policies*, rev. ed. (California Agric. Expt. Stn.).

Collard, D., *Prices, markets and welfare* (Faber).

Davidson, B. R., *The northern myth*, 2nd or 3rd ed. (Melbourne U.P.).

Dorfman, R., and Dorfman, N. S. *Economics of the environment—selected readings* (Norton).

Ehrlich, P., *The population bomb* (Pan).

Layard, R., *Cost-benefit analysis* (Penguin).

Maddox, J., *The doomsday syndrome* (Penguin).

Mishan, E. J., *Cost-benefit analysis: an informal introduction* (Allen and Unwin).

Sinden, J. A., *The natural resources of Australia. Prospects and problems for development* (Angus and Robertson).

Additional references will be prescribed by the lecturers.

EE53 Farm Management.

Pre-requisite subject: EE2G Microeconomics IH.

This course started in 1974 and will be offered in alternate years, i.e. even years, for students proceeding to the degree of Bachelor of Agricultural Science. The course will consist of two lectures and three hours practical work a week and will cover the following topics:

The nature of farm businesses, theories of farm management, farmers' goals, an analysis of farm investment, and farm management accounting methods.

Farm management techniques—including cash flow, partial and parametric budgeting, gross margins analysis, development budgets and net present value, and the decision theoretic approach to farm management problems. Farm management games are used to give students the opportunity to gain experience in the use of these techniques.

Text-books:

Chisholm, A. H., and Dillon, J. L., *Discounting and other interest rate procedures in farm management* (Professional farm management guidebook no. 2).

Makeham, J. P., and others, *Best-bet farm decisions* (Professional farm management guidebook no. 6).

Rickards, P. A., and McConnell, D. J., *Budgeting, gross margins and programming for farm planning* (Professional farm management guidebook no. 3).

Reference books:

Bishop, C. E., and Toussaint, W. O., *Introduction to agricultural economic analysis* (Wiley).

Bradford, L. A., and Johnson, G. L., *Farm management analysis* (Wiley).

Castle, E. N., and Becker, M. H., *Farm business management* (Macmillan).

Hardaker, J. B., and others, *Farm management and agricultural economics* (Angus and Robertson).

Heady, E. O., and Candler, W., *Linear programming methods* (Iowa State Univ. Press).

Mallyon, C. A., *The principles and practice of farm management accounting* (Law Book Co.).

Officer, R., and Dillon, J. L., *Calculating the best-bet fodder reserve* (Professional farm management guidebook no. 1).

Queensland. Dept. of Primary Industries, *Accounting and planning for farm management.*

Robertson, C. A., *An introduction to agricultural production economics and farm management* (Tata McGraw-Hill).

Western Australia. Dept. of Agriculture, *Farm management planning, budgeting, and financial control.*

Wright, A., and Watson, A. S., *Sheep flock growth rate tables* (Professional farm management guidebook no. 5).

EE63 Farm Prices and Policy.

Pre-requisite subject: EE1G Macroeconomics IH and EE2G Microeconomics IH.

Starting in 1975, this course will be offered in alternate years, i.e. odd years, for students proceeding to the degree of Bachelor of Agricultural Science. The course will consist of two lectures and one tutorial a week throughout the year, and will cover the following topics:

An analysis of the determinants of prices for agricultural products, and various methods of forecasting agricultural prices.

The objectives of agricultural policy, and an analysis of agricultural policy measures in Australia and some overseas countries.

Text-books:

Campbell, K. O., *Agricultural marketing and prices* (Cheshire).

Throsby, C. D., *Agricultural policy* (Pelican).

Reference books:

Anderson, R., *Crisis on the land* (Sun Books).

Fox, K. A., and Johnson, D. G., *Readings in the economics of agriculture* (Allen and Unwin).

Shepherd, G. S., *Agricultural price analysis* (Iowa State U.P.).

Williams, D. B., *Agriculture in the Australian economy* (Sydney U.P.).

Additional references will be prescribed by lecturers.

Group D subjects:

EE03 Economics III.

EE03 Economics III is available to students proceeding to the degree of Bachelor of Agricultural Science. A candidate who wishes to present EE03 Economics III for the degree must study EE7G International Economics IIIH and two half-subjects from the following list *one* of which must be either EE5G Macroeconomics IIIH *or* EE6G Microeconomics IIIH*:

EE4H Agricultural Economics IIIH,
EE3H Economics of Labour IIIH,
EE5G Macroeconomics IIIH,
EE7H Managerial Economics IIIH,
EE6G Microeconomics IIIH*,
EE2H Public Finance IIIH.

* EE6G Microeconomics IIIH will be offered for the first time in 1975, and may not be presented by a candidate who has passed EE02 Economics II in 1973 or earlier.

ENTOMOLOGY.

WE03 Entomology and Plant Pathology.

A course of two lectures and one practical class each week throughout the year. Half the year is spent on Entomology and half on Plant Pathology.

ENTOMOLOGY:

The course is concerned with ecological control of insect pests, the physiological action of insecticides and an introduction to insect taxonomy and morphology.

Students will be required to make a collection of 30 species of insects, representing 10 of the natural Orders, which must be submitted during the last week of lectures in third term. Collection should begin in the long vacation preceding the course and equipment may be obtained by intending students from the Entomology Department before this vacation.

Text-books:

Imms, A. D., *Outlines of entomology*, 5th ed. (Methuen).

Wigglesworth, V. B., *Insect physiology*, 6th ed. (Methuen).

Reference books:

Borror, D. J., and De Long, D. M., *An introduction to the study of insects* (Holt).

Imms, A. D., *Insect natural history* (Collins).

Martin, H., *Scientific principles of crop protection* (Arnold).

O'Brien, R. D., *Insecticides: action and metabolism* (Academic Press).

Tillyard, R. J., *Insects of Australia and New Zealand* (Angus and Robertson).

Australia, C.S.I.R.O., *The insects of Australia* (M.U.P.).

PLANT PATHOLOGY:

A course in crop protection—in the introductory lectures the nature of disease, the incidence of disease and aspects of ecological plant pathology will be considered. The remaining lectures include cultural, physical, chemical and biological control of plant diseases and plant pathogens as well as host resistance, quarantine, forecasting of disease epidemics and extension work. The practicals will be devoted to the recognition and study of fungi, nematodes, viruses and bacteria.

Reference books:

Text-books and research papers to which students can refer will be indicated during the course.

WE04 Entomology II.

Pre-requisite subject: WE03 Entomology and Plant Pathology.

A course of three lectures and six hours practical work a week on a more detailed study of:

(1) Insect morphology and taxonomy, with practice in the classification of insects to Families.

(2) Insect ecology.

(3) Insect physiology and biochemistry.

(4) Forest entomology, insect behaviour, social insects and apiculture.

Students will be required to make a collection of insects, properly mounted and identified, illustrating the morphological and taxonomic features of insects. The collection may be commenced in the long vacation preceding the course. Equipment may be collected by intending students from the Entomology Department before the vacation. The collection must be submitted in the last week of the final term.

Text-book:

Australia, C.S.I.R.O., *The insects of Australia* (M.U.P.).

Reference books:

Anderson, R. F., *Forest and shade-tree entomology* (Wiley).

Andrewartha, H. G., and L. C. Birch, *The distribution and abundance of animals* (U.C.P.).

Chapman, R. F., *The insects* (American Elsevier).

Imms, A. D., *A general text-book of entomology*, 9th ed. (Methuen).

Metcalf, C. L., Flint, W. P., and Metcalf, R. L., *Destructive and useful insects* (McGraw-Hill).

Sokal, R. R., and Rohlf, F. J. *Biometry* (Freeman).

Southwood, T. R. E., *Ecological methods* (Methuen).

Tillyard, R. J., *Insects of Australia and New Zealand* (Angus and Robertson).

HONOURS DEGREE.

WE99 Entomology for the Honours degree of B.Ag.Sc.

Students who wish to take the Honours degree in Entomology should consult the Chairman of the Department of Entomology some time during their final year.

Candidates are expected to attain a higher standard in general Entomology than that required for the Ordinary degree. In addition, they are required to study more intensively some branch of Entomology and to carry out a research project in that field.

Candidates may be required to attend such lectures and to pass such examinations as the Chairman of the Department may require. All time not necessarily devoted to lectures and set work must be spent in the laboratory.

A course of reading will be prescribed by the Chairman of the Department and should be commenced in the long vacation prior to the Honours year.

Candidates must have some reading knowledge of French and German and may be required to attend courses and pass examinations in these subjects.

GENETICS.

HONOURS DEGREE.

SJ79 Genetics for the Honours degree of B.Ag.Sc.

A candidate for the degree will be required to pass such examinations on the chosen subject of study as may be prescribed by the Head of the Department, and to submit a thesis reporting research work undertaken during the year.

A candidate may also be required to attend lectures and pass examinations in related subjects and to satisfy the Head of the Department that he has a reading knowledge of one or more modern languages other than English. University time not devoted to lectures must be spent in activities approved by the Head of the Department. Intending candidates should consult the Head of the Department and should be prepared to begin studies on or about 1 February.

PLANT PATHOLOGY.

WP03 Agricultural Microbiology.

A course of one lecture and one practical a week throughout the year.

An introduction to micro-organisms; their morphology, physiology, ecology and general classification; the techniques used in the study of micro-organisms; the occurrence of micro-organisms in soil, air and water; their importance in agriculture and industry; the microbiology of foods.

WP04 Plant Pathology II.

Pre-requisite subjects: WE03 Entomology and Plant Pathology and WP03 Agricultural Microbiology.

A course of three lectures and eight hours of practical work a week for three terms covering:

The morphology, taxonomy and physiology of fungi, nematodes, viruses and bacteria; infection of and proliferation in the host plant by pathogens; the resistance and tolerance of plants to disease; the behaviour and characteristics of pathogens prior to penetration of the host; ecological plant pathology; control of pathogens and disease in plants; the dispersal of pathogens. In the third term the practical classes will be devoted to an epidemiological project in the field in which a diseased crop will be sampled and the data analysed to establish the environmental factors (including pathogens) that contribute most to the disease.

Reference books:

Text-books and research papers to which students can refer will be indicated during the course.

HONOURS DEGREE.

WP99 Plant Pathology for the Honours degree of B.Ag.Sc.

A candidate for the degree will be required to pass such examinations on the chosen subject of study as may be prescribed by the Chairman of the Department, and to submit a thesis reporting research work undertaken during the year.

A candidate may also be required to attend lectures and pass examinations in related subjects and to satisfy the Chairman of the Department that he has a reading knowledge of one or more modern languages other than English. University time not devoted to lectures must be spent in activities approved by the Chairman of the Department. Intending candidates should consult the Chairman of the Department and should be prepared to begin studies on or about 1 February.

PLANT PHYSIOLOGY.

WF03 Crop Physiology.

This course consists of two lectures and three hours practical work a week for three terms and covers:

Effects of external environment, including temperature, light, water and atmospheric conditions on the determination of plant size, form and development; the growth patterns of selected crop plants.

The interaction of internal and environmental factors in the physiological control of dormancy, germination, vegetative growth (roots, leaves, stem), accumulation of storage substances, and sexual reproduction (floral initiation, seed set, fruit growth).

The course will use crop species as examples where appropriate.

Attention will be given to critical assessment of published information, presentation of such assessments and the undertaking of a short experimental project.

Text-book:

Leopold, A. C., *Plant growth and development* (McGraw-Hill).

Reference books:

Such books and papers as are assigned during the course.

WF04 Horticultural Science.

Pre-requisite subject: WF03 Crop Physiology at Division I or higher standard.

A course consisting of three lectures and seven hours of practical work a week for three terms. Lectures, practical work, demonstrations and field trips will cover:—

The growth of fruit trees, mechanisms controlling growth, the uses of growth regulators in horticulture.

The water requirements of crops, methods of irrigation and drainage.

Mineral nutrition, fertilisers and soil management.

Movement and accumulation of substances in plants, reserves.

Bud development and bearing habit, propagation principles and methods, root-stocks, pruning and training.

Flower and fruit morphogenesis, mechanisms of floral initiation, fruit setting and fruit growth, and practices involved.

Ripening of fruits, harvesting, post-harvest physiology, storage, marketing and processing of fruits.

Horticultural production and establishment, varieties, protection, frost.

The culture of important horticultural crops.

Attention will be given to training and experience in experimental method, reading, writing and speaking. Opportunity will be given for a project of individual study involving literature revision and limited original investigation. No text-books are required but selected reading will be assigned.

HONOURS DEGREE.

WF89 Plant Physiology for the Honours degree of B.Ag.Sc.

WF99 Horticultural Physiology for the Honours degree of B.Ag.Sc.

A candidate for the degree will be required to pass such examinations on the chosen subject of study as may be prescribed by the Chairman of the Department, and to submit a thesis reporting research work undertaken during the year.

A candidate may also be required to attend lectures and pass examinations in related subjects and to satisfy the Chairman of the Department that he has a reading knowledge of one or more modern languages other than English. University time not devoted to lectures must be spent in activities approved by the Chairman of the Department. Intending candidates should consult the Chairman of the Department and should be prepared to begin studies on or about 1 February.

PRACTICAL EXPERIENCE.

Candidates for the degree of Bachelor of Agricultural Science are required to obtain practical agricultural experience as laid down in the regulations.

In addition, students in Agricultural Science are required in the fourth year of the course to attend organised tours of various agricultural areas of South Australia.

OF THE DEGREE OF

MASTER OF AGRICULTURAL SCIENCE

REGULATIONS

*1. (a) Subject in each case to the applicant's academic qualifications being accepted by the Faculty of Agricultural Science as sufficient, the following persons may become candidates for the degree of Master of Agricultural Science: (i) Bachelors of Agricultural Science; (ii) other graduates.

(b) Subject to the approval of the Council, the Faculty may, in special cases and subject to such conditions (if any) as it may see fit to impose in each case, accept as a candidate for the degree a person who does not hold a degree of a university but has given evidence satisfactory to the Faculty of his fitness to undertake work for the degree.

**2. A candidate who holds the Honours degree of Bachelor of Agricultural Science or its equivalent in a university recognised by the University of Adelaide may proceed to the degree of Master of Agricultural Science at the expiration of one year from the date of his admission to the Honours degree of Bachelor: no other candidate shall proceed to the degree before the expiration of two years from the date of the beginning of his candidature.

3. Subject to conditions to be determined in each case, a graduate of a university recognised by the University of Adelaide may be allowed by the Council to proceed to the degree in compliance with these regulations. Every such candidate must spend at least three consecutive academic terms or twelve calendar months at the University of Adelaide or at an institution approved for the purpose by the University of Adelaide.

†4. (a) Unless a candidate has completed one year of full-time study beyond that prescribed for the Ordinary degree, and has obtained an Honours degree at the University or at another university recognised for the purpose, he shall spend a qualifying period, the length of which shall be prescribed by the Faculty on the recommendation of the department concerned, on supervised study or research before he is permitted to continue with his candidature. Such qualifying period shall date from a time recommended by the department concerned and approved by the Faculty.

* Amended 16 March, 1961, and 4 October, 1962.
† Amended 21 December, 1972.
** Amended 28 February, 1974.

(b) On completion of such qualifying period as may be prescribed under (a) above, the candidate's progress will be reviewed by the Faculty after departmental assessment based on (i) written examination at Honours level or (ii) satisfactory progress with a research programme or (iii) both. The Faculty may then permit the candidate to continue his candidature or may grant him permission to transfer his candidature to that for another degree or may terminate his candidature.

°°5. The Faculty of Agricultural Science shall annually review the progress of candidates for the degree. If in the opinion of the Faculty a candidate is not making satisfactory progress the Faculty may, with the consent of the Council, withdraw its approval of his candidature and the candidate shall cease to be enrolled for the degree.

Before making a recommendation for termination of candidature to the Council the Faculty shall notify the candidate of its intention so to do and shall permit him to offer within one month such explanation as he can for his lack of satisfactory progress. If, notwithstanding any submission made by the candidate, the Faculty decides to recommend termination of his candidature, the candidate shall be informed accordingly and shall have the right of appeal within one month to the Council and any such appeal shall be considered by the Council at the same time as it considers the Faculty's recommendation.

6. To qualify for the degree a candidate shall submit a thesis upon an approved subject and shall adduce sufficient evidence that the thesis is his own work. The thesis shall give the results of original research or of an investigation on which the candidate has been engaged. A candidate may also submit other contributions in Agricultural Science in support of his candidature.

§7. Every candidate shall give at least three terms' notice of his intended candidature, and shall indicate therewith in general terms the subject of the research work or investigation on which he proposes to submit a thesis. The Faculty of Agricultural Science, if it approve the subject of his research, may appoint a supervisor to guide the candidate in his work. The candidate shall submit his thesis not earlier than *three terms* and, except by special permission of the Faculty, not later than *nine* terms after approval by the Faculty of the subject of his research.

8. The Faculty shall appoint a Board of Examiners to report upon the thesis and any supporting papers that the candidate may submit. The Board of Examiners may require any candidate to pass an examination in the branch of science to which his original research or investigation is cognate.

§ Amended 4 October, 1962.
°° Awaiting allowance at time of printing.

†9. On completion of his work the candidate shall lodge with the Registrar three copies of his thesis prepared in accordance with directions given to candidates from time to time.*

10. A candidate who complies with the foregoing conditions and satisfies the Board of Examiners shall, on the recommendation of the Faculty of Agricultural Science, be admitted to the degree of Master of Agricultural Science.

‡11. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 14 December, 1950.

‡ Allowed 18 October, 1956. † Allowed 16 March, 1961.

* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

FACULTY OF ARCHITECTURE AND TOWN PLANNING

REGULATIONS, SCHEDULES AND SYLLABUSES OF DEGREES

Bachelor of Architecture (B.Arch.)
- Regulations and Schedules - - - - - - 542
- Syllabuses - - - - - - - - - 547

Master of Architecture (M.Arch.)
- Regulations - - - - - - - - - 565

Master of Town Planning (M.T.P.)
- Regulations and Schedules - - - - - - 567
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Doctor of Philosophy (Ph.D.)
- Regulations and Schedules: under "Board of Research Studies"—*see* Table of Contents.

OF THE DEGREE OF

BACHELOR OF ARCHITECTURE

REGULATIONS

1. There shall be an Ordinary and an Honours degree of Bachelor of Architecture.

2. Schedules defining the courses of study, including lectures and the practical work to be undertaken, the examinations to be passed and the fees to be paid by candidates, shall be drawn up by the Faculty and submitted to the Council.

Such schedules shall become effective as from the date of approval by the Council or such other date as the Council may determine, and shall be published in the next University Calendar which is issued after that approval has been given.

3. (a) To qualify for the Ordinary degree of Bachelor of Architecture a candidate shall regularly attend lectures and do written and practical work (where such is required) and pass examinations in the subjects prescribed.

(b) Before being admitted to the degree a candidate shall also submit satisfactory evidence that he has had not less than twelve months' practical experience, not necessarily consecutive, in work approved by the Faculty as appropriate to his course.

4. (a) A candidate who has completed the work of the third year and who wishes to proceed to the Honours degree must apply to the Faculty, on or before 1 March of the year in which he intends to take the Honours course, for permission to do so.

(b) Before granting such permission the Faculty will take into consideration the candidate's work up to the time of his application.

(c) To qualify for the Honours degree a candidate shall complete the full course prescribed for the Ordinary degree and shall in addition undertake further work of an advanced nature and pass examinations in such work. Further, he must pass in the subjects which he takes after his acceptance as an Honours student at a higher standard than is required from candidates for the Ordinary degree.

*(d) The names of candidates who pass with Honours shall be arranged alphabetically in the following classes: First Class, Second Class Division A, Second Class Division B. A candidate who fails to obtain first or second class Honours may be awarded the Ordinary degree provided he has in all other respects completed the work for that degree.

* Amended 21 December, 1967.

(e) Before being admitted to the degree a candidate shall also submit satisfactory evidence that he has had not less than twelve months' practical experience, not necessarily consecutive, in work approved by the Faculty as appropriate to his course.

5. Except by permission of the Faculty a candidate shall not be admitted to the class in any subject for which he has not completed the pre-requisite work as prescribed in the syllabus for that subject.

6. (a) All annual examinations, other than supplementary, shall take place towards the end of the academic year, except that practical examinations and examinations in a subject in which the course of instruction has been completed by the end of the second term, may be held at any convenient time fixed by the Faculty.

(b) A candidate shall enter for examination on the form and by the date prescribed by the Council, but shall not be eligible to present himself for examination unless he has regularly attended the prescribed lectures and has done written and practical work where required to the satisfaction of the professors and lecturers concerned.

(c) Written and practical work done by candidates at the direction of the professors or lecturers and the results of terminal or other examinations in any subject may be taken into consideration at the final examination in that subject.

(d) There shall be three classifications of pass at the annual examination in any subject or division of a subject for the degree as follows: Pass with Distinction, Pass with Credit, Pass. The names of candidates who pass with Distinction or with Credit shall be arranged in order of merit within the classification; the names of other candidates who pass shall be arranged in alphabetical order either in one list or in two divisions as the Faculty may determine. If the pass list be published in two divisions, a pass in the higher division may be prescribed in the syllabuses as pre-requisite for admission either to further courses in that subject or to other subjects.

(e) A candidate who fails to pass in any subject shall again attend lectures and do practical work in that subject to the satisfaction of the professors and lecturers unless exempted by the Faculty. Any such exemptions granted will hold for one academic year only.

(f) Supplementary examinations will be held only in special circumstances approved by the Faculty after consideration of individual cases.

7. Except in case of illness or other sufficient cause allowed by the Faculty, no candidate shall be credited in any year with attendance at lectures or practical work in a subject unless he has attended the lectures and practical work respectively in that subject to the satisfaction of the lecturer concerned.

8. No candidate shall be granted exemption from attendance at lectures or practical work except upon grounds approved by the Faculty.

9. A candidate who has twice failed to pass the examination in any subject or division of a subject may not present himself again for instruction or examination therein unless his plan of study is approved by the Dean. If he fails a third time he may not proceed with the subject again except by special permission of the Faculty, and under such conditions as the Faculty may prescribe.

For the purpose of this regulation a candidate who is refused permission to sit for examination in any subject or division of a subject shall be deemed to have failed to pass the examination.

10. A student who has passed examinations *in pari materia* in another faculty or otherwise, or who desires that his work at other universities or technical schools should be counted *pro tanto* for the degree of Bachelor of Architecture may on application be granted such exemption from the requirements of these regulations as the Council shall determine.

*11. Repealed.

Regulations allowed 9 January, 1958.
* Repealed 21 December, 1967.

SCHEDULES

(Made by the Council under Regulation 2.)

NOTE: Syllabuses of subjects for the degree of B.Arch. are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

1. During the first, second, third, fourth and fifth years every candidate shall, unless exempted therefrom, attend courses of instruction and at the annual examination for the appropriate year shall satisfy the examiners in each of the following subjects:

(a) *First year*:
Building Construction I
Architectural Structures I
Building Science I
History of Architecture I
Architectural Design and Planning I
Architectural and Free Drawing
Elective*
Studio Work I

(b) *Second year*:
Building Construction II
Architectural Structures II
Building Science II
History of Architecture II
Architectural Design and Planning II
Architectural Surveying
Studio Work II

* The elective for 1975 is "Art History and Appreciation".

(c) *Third year*:
Building Construction III
Architectural Structures III
Building Science III
Architectural Design and Planning III
Professional Practice I
Studio Work III

(d) *Fourth year*:
Building Construction IV
Structures III*
Building Science IV
Architectural Design and Planning IV
Urban and Regional Planning and Urban Design I
Professional Practice II
Studio Work IV

Additional work for students who, under regulation 4, have been granted permission to proceed to the Honours degree:

Advanced Studies I: seminar courses in a selection of the following topics:

(i) Advanced Architectural Design and Planning
(ii) Architecture and Environment
(iii) Development of Contemporary Architecture
(iv) Industrialised Building
(v) Architectural Structure
(vi) Urban Design and Planning
(vii) Landscape Design
(viii) Professional Management and Administration
(ix) Interior and Furniture Design
(x) Building Services
(xi) Architectural Acoustics
(xii) Philosophy of Architecture

(e) *Fifth year*:
Building Construction V
Structures IV*
Building Science V
Urban and Regional Planning and Urban Design II
Architectural Thesis
Professional Practice III
Studio Work V

Additional work for students approved to proceed to Final Honours Architecture:

Advanced Studies II: seminar courses in a selection of topics set out under Advanced Studies I.

* NOTE: Structures III will be replaced in 1976 by Architectural Structures IV; and Structures IV in 1977 by Architectural Structures V.

2. Except by permission of the Faculty, a candidate shall not proceed to any part of the work of the second or a subsequent year unless he has completed the whole of the work of, and passed the examination proper to, the preceding year or years. At the discretion of the Board of Examiners a candidate who fails to satisfy the examiners in not more than two subjects at an annual examination may be permitted to present himself for a supplementary examination in the subject or subjects concerned; and if he satisfies the examiners in the supplementary examination he shall then be deemed to have passed the whole examination.

3. (a) During the fourth year every candidate will normally be required to obtain at least six months' practical experience satisfactory to the Faculty.

(b) Such practical experience may form part of the twelve months' practical experience required under regulation 3(b) or 4(e).

(c) Students attending National Service or Commonwealth Military Force training may be permitted to count such training, up to a maximum period of three months, as part of their required practical experience.

4. Matriculated students in the course for the degree of Bachelor of Engineering who completed subjects for that degree prior to 1958, may transfer to the course for the degree of Bachelor of Architecture, and shall be granted such status as may in each case be determined.

5. Courses of study must be approved by the Dean of the Faculty (or his nominee) at enrolment each year.

OF THE DEGREE OF

BACHELOR OF ARCHITECTURE

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The two letters identify the faculties and departments responsible for subjects as follows:

Faculty of Engineering, Department of Civil Engineering - - - NC
Faculty of Architecture and Town Planning,
Department of Architecture and Town Planning - - - - - RA

The first digit—

0–6: Indicates that the subject forms part of a sequence.
7–9: Indicates that the subject does not form part of a sequence.

The second digit—

1–5: Indicates year of Ordinary degree subject, e.g. first, second, and so on.
(6–7: Not used.)
8: Indicates Preliminary Honours (fourth year).
9: Indicates Final Honours (fifth year).

FIRST-YEAR SUBJECTS.

RA01 Building Construction I.

General principles—functional requirements; the building team; the building contractor. Foundations. External and internal walls. Ground floor construction and fireplaces. Roofs. Joinery—doors and windows. Masonry.

Text-books:

Foster, J. S., *Structure and fabric*, part 1, Mitchell's Building Construction (Batsford).

King, H., and Everett, H., *Components and finishes*, Mitchell's Building Construction (Batsford).

Sharp, W. W., *Australian methods of building construction* (Angus and Robertson).

Reference books:

Gratwick, R. T., *Dampness in buildings*, volumes I and II (Crosby Lockwood).

Mitchell, G. A., and Mitchell, A. M., *Elementary building construction*, 23rd edition by R. Moxley (Batsford).

McKay, W. B., *Building construction*, volume I (Longmans).

NC51 Architectural Structures I.

The course consists of approximately 40 hours of lectures and 40 hours of tutorials on the following topics:

The nature, function and form of structures, behaviour and failure of structural materials. Loads on structures. Equilibrium of forces, force diagrams for simple trusses and other statically determinate plane frames. Elasticity, stress and strain. Design of axially loaded members. Shear force and bending moment diagrams. Bending stresses. Design of steel or timber beams for bending.

Students will be required to undertake a structural design in association with Studio Work I.

Text-book:

Cowan, H. J., *Architectural structures* (Elsevier).

Reference books:

Lisborg, N., *Principles of structural design* (Batsford).

Reynolds, T. J., and Kent, L. E., *Introduction to structural mechanics*, 6th ed., S.I. Units (E.U.P.).

RA11 Building Science I.

Lectures: one hour a week for three terms, with additional specialist lectures on human responses one hour a week for two terms.

Laboratory: two hours a week for three terms.

Introduction; man, environment and shelter. Human responses. The nature and properties of common building materials; occurrence and manufacturing problems; physical phenomena; moisture and porosity; moisture movement. Principles of control of natural environment; sun control; daylighting standards and assessment; natural ventilation.

Text-books:

Australia. Commonwealth Experimental Building Station, *Notes on the science of building* (C.E.B.S.) as prescribed by the lecturer.

Australia. Commonwealth Experimental Building Station, Bulletin No. 7: *The design of buildings for daylighting*, by D. Paix (C.E.B.S.).

Australia. Commonwealth Experimental Building Station, Bulletin No. 8: *Sunshine and shade in Australasia*, by R. O. Phillips (C.E.B.S.).

Australia. Labour and National Service Department of, Industrial Welfare Division, *Data sheets on architectural control of sunlight penetration*, (The Department, Melbourne).

Geeson, A. G., *Building science,* Vol. 2 (English Universities Press).
Great Britain. Building Research Board, *Principles of modern building,* Vol 1 (H.M.S.O.).
Great Britain. Building Research Station, *Architectural physics: lighting,* by Hopkinson, R. G. (H.M.S.O.).

Reference books:

Butterworth, B., *Bricks and modern research* (Crosby Lockwood).
Ragsdale, L. A., and Raynham, E. A., *Building materials technology,* 2nd ed. (Arnold).

RA21 History of Architecture I.

The architecture of Egypt, Mesopotamia, the Aegean, Greece and Rome; and of the Early Christian, Byzantine, Romanesque, and Gothic periods.

Text-books:

Fletcher, B., *History of architecture* (Batsford).
Pevsner, N., *An outline of European architecture* (Penguin).

Reference books:

Allsopp, H. B., *The general history of architecture* (Pitman).
Copplestone, T. (Ed.), *World architecture* (Paul Hamlyn).
Cowell, F. R., *Everyday life in ancient Rome* (Batsford).
Gardner, H., *Art through the ages* (Bell).
Giedion, S., *The eternal present,* vol. 2: *The beginnings of architecture* (O.U.P.).
Kidson, P., *Mediaeval world* (Paul Hamlyn).
Quennell, M. and C. H. B., *Everyday things in ancient Greece* (Batsford).
Saggs, H. W. F., *Everyday life in Babylonia and Assyria* (Batsford/Putnam).
Simpson, F. M., *History of architectural development,* Vols. I, II, III (Longmans).
The great ages of world architecture series (Braziller).
The Pelican *History of art* series.
Van Loon, H. W., *The arts of mankind* (Harrap).
White, J. M., *Everyday life in ancient Egypt* (Batsford/Putnam).

RA31 Architectural Design and Planning I.

Two one hour lectures a week, assessment based on project(s) required during year.

The role and function of the architect in society historically and today; the elements of architectural design; an introduction to the nature and demands of architectural design at an elementary level; attitudes of designer favourable to users' satisfaction; design as an integrated use of information. Elementary numerical techniques.

Reference books:

Arnheim, R., *Visual thinking* (Faber).
Dalzell, W. R., *Architecture* (Hamlyn).
Damaz, P., *Art in European architecture* (Reinhold).
Danby, M., *Grammar of architectural design* (Oxford U.P.).
Gauldie, S., *Architecture* (Oxford U.P.).
Gregory, R. L., *Eye and brain* (Weidenfeld and Nicholson).
Gropius, W., *The scope of total architecture* (Allen and Unwin).
Hall, E. T., *The hidden dimension* (Doubleday).

Hamlin, T., *Forms and functions of 20th century architecture*, 4 vols. (Columbia).
Handel, S., *The electronic revolution* (Pelican).
Hollingdale, S. H., and Tootill, G. C., *Electronic computers* (Pelican).
Jacobson, E., *Basic colour—an interpretation of the Ostwald colour system* (Theobald).
McKim, R. H., *Experiences in visual thinking* (Brooks-Cole).
Muschenheim, W., *Elements of the art of architecture* (Thames and Hudson).
Ponti, G., *In praise of architecture* (Dodge Corporation).
Rasmussen, S. E., *Experiencing architecture* (M.I.T.).
Reichmann, W. J., *Use and abuse of statistics* (Pelican).
Richardson, D., *Made by man* (Cheshire).
Senior, D., *Your architect* (Hodder).
Singh, J., *Operations research* (Pelican).
Sommer, R., *Personal space* (Prentice-Hall).
Vernon, M. D., *The psychology of perception* (Penguin).
Williams-Ellis, C., *The pleasures of architecture* (Cape).
Zevi, B., *Architecture as space* (Horizon).

RA71 Architectural and Free Drawing.

Standard drawing office practice. Orthographic projection; isometric and axonometric projection. The theory and practice of architectural perspective, division and measurement in perspective, angular and parallel perspective and interior perspective. Reflections in perspective. Sciagraphy. Systems of rendering in various media and drawing presentation; lettering and lay-out; creative design; colour. Free drawing.

Text-books:

Lee, L. A., and Reekie, R. F., *Descriptive geometry* (Arnold).
Reekie, R. F., *Draughtsmanship* (Arnold).
Sierp, A., *Applied perspective* (Angus and Robertson).

Reference books:

Hohauser, S., *Architectural and interior models* (Reinhold).
Janke, R., *Architectural models* (Thames and Hudson).
Lockard, W. K., *Drawing as a means of architecture* (Reinhold).
Schaarwächter, G., *Perspective for the architect* (Thames and Hudson).

RA81 Art History and Appreciation.

The evolution and development of art forms through history and appreciation of contemporary development in the arts.

Text-books:

Christensen, E. O., *A pictorial history of western art* (Mentor).
Clark, K., *Civilisation* (B.B.C.).
Collingwood, R. G., *The principles of art* (Oxford).
de la Croix, H., and Tansey, R. G., *Gardner's art through the ages* (Harcourt, Brace and World).
Levey, M., *A concise history of painting—from Giotto to Cezanne* (Thames and Hudson).
Orban, D., *Understanding art* (Ure Smith)
Sloane, P., *Colour-basic principles, new directions* (Studio Vista).
Tyndall, G. de V., and Chambers, G. E., *A synopsis of art history* (Angus and Roberston).

Reference books:
Arnheim, R., *Art and visual perception* (California U.P.).
Carraher, R. G., and Thurston, J. B., *Optical illusions and the visual arts* (Studio Vista).
Dewey, J., *Art as experience* (Capricorn).
Itten, J., *The art of colour* (Reinhold).
Maillard, R., and Lake, C., *A dictionary of modern painting* (Methuen).
Read, H., *A concise history of modern painting* (Thames and Hudson).
Smith, B., *Australian painting* (Oxford).
Seuphor, M., *A dictionary of abstract painting* (Methuen).

RA41 Studio Work I.

The practical application of theoretical work in architectural and free drawing, architectural design, building construction and building science.

SECOND-YEAR SUBJECTS.

RA02 Building Construction II.

Paths and pavings. Upper floor construction and fireplaces. Timber frame construction. Framed timber roof construction. Roofing. Internal wall and ceiling finishes. Staircase construction. Gas and electricity services. Windows and doors. Joinery, cupboards, etc., and hardware. Screen walls and fences.

Text-books:
Sharp, W. W., *Australian methods of building construction* (Angus and Robertson).
McKay, W. B., *Building construction*, Vol. 2 (Longmans).
Mitchell, G. A., and Mitchell, A. M., *Elementary building construction*, 23rd edition, edited by R. Moxley (Batsford).

Reference books:
Boyne, D. A. C. A. (ed.), *Architects' working details* (Architectural Press).
Pearson, R. G., and others, *Timber engineering design handbook*, 2nd ed. (Jacaranda Press).
Wallis, N. A. K., *Australian timber handbook*, 3rd edition (Angus and Robertson).

NC52 Architectural Structures II.

The course consists of approximately 30 hours of lectures and 50 hours of tutorials, design and laboratory classes on the following topics:

Concrete as a structural material. Shear stress in beams. Design of reinforced concrete and composite beams, and floor systems. Introduction to prestressed concrete. Steel, reinforced concrete and composite columns, footings and foundations. Deflection of beams. Propped cantilevers, fixed end beams and two span continuous beams. Structural connections.

Students will be required to undertake a structural design in association with Studio Work II.

Text-books:
C. & C.A. Australia, *Design, control and characteristics of concrete* (Metric ed.).
Standards Association of Australia, AS.1480, 1974, *Use of reinforced concrete in structures* (Metric version).
Standards Association of Australia, AS.1250, 1972, *Steel structures code.*

Reference book:
Crawley, S. W., and Dillon, R. M., *Steel buildings* (Wiley).

RA12 Building Science II.

Lectures: one hour a week for three terms with additional specialist lectures on sanitary science one hour a week for three terms.

Laboratory: two hours a week for three terms.

Provision of satisfactory environment; human physiology and comfort conditions relating to radiation, temperature, humidity, light, sound and ventilation. Climatology of Australia. Solar radiation and building shape. Thermal inertia of building materials; thermal effects of colour of materials; insulation; condensation and vapour barriers. Ventilation and air movement through buildings. Properties of sound; acoustical properties of materials; noise and the design of rooms. Light measurement. Electricity supply and wiring. Structural properties and applications of materials; adhesives and adhesion; sheet materials generally. Metals; corrosion; hardness of water and softening systems.

Sanitary science; hygiene. Water supply; hot and cold water services; plumbing. Central heating. Drainage; wastes; siphonage; sanitary fittings. Pumps. Sewerage; septic tanks; industrial effluents. Garbage disposal. Sanitary regulations.

Text-books:

Australia. Commonwealth Experimental Building Station, Bulletin No. 6, *Designing houses for Australian climates* (C.E.B.S.).

Australia. Commonwealth Experimental Building Station, *Notes on the science of building* (C.E.B.S.), as prescribed by the lecturer.

Bedford, T., *Basic principles of ventilation and heating*, 2nd edition (Lewis).

Billington, N. S., *Thermal properties of buildings* (Cleaver Hume).

Parkin, P. H., and Humphreys, H. R., *Acoustics, noise and buildings* (Faber Paperback).

S.A. Works, Ministry of, Regulations under the Sewerage Act 1929-1962, (S.A. Government Printer).

Sheridan, N. R., and others, *Air conditioning* (University of Queensland Press).

Reference books:

Australia. Department of Labour and National Service, *Sanitary plumbing and water supply* (McCarron Bird).

Blake, E. H., and Jenkins, W. R., *Drainage and sanitation* (Batsford).

Diamant, R. M. E., *Insulation of buildings* (Iliffe).

Faber, O., *Heating and ventilating* (Spon).

Knudsen, V. O., and Harris, C. M., *Acoustical designing in architecture* (Wiley).

RA22 History of Architecture II.

Renaissance architecture in Italy, France and England. Mannerism and Baroque. The Regency, 19th and 20th centuries architecture. The early architecture of Australia and its development to the present day.

Text-books:

Fletcher, B., *History of architecture* (Batsford).

Pevsner, N., *An outline of European architecture* (Penguin).

Wittkower, R., *Architectural principles in the age of humanism* (Tiranti).

Reference books:

Allsopp, B., *The general history of architecture* (Pitman).

Bazin, G., *Baroque and rococo* (Thames and Hudson).

Burckhardt, J., *The civilisation of the renaissance in Italy* (Phaidon or Mentor).

Clark, K. M., *Civilisation* (BBC/John Murray).

Copplestone, T., ed., *World architecture* (Paul Hamlyn).

Gardner, H., *Art through the ages* (Bell).

Giedion, S., *Space, time and architecture* (Harvard University Press).

Encyclopaedia of modern architecture, edited by G. Hatje (Thames and Hudson).
Joedicke, J., *History of modern architecture* (Architectural Press).
Jordan, R. F., *Victorian architecture* (Pelican).
Lynton, N., *The modern world* (Paul Hamlyn).
Martindale, A., *Man and the renaissance* (Paul Hamlyn).
Pevsner, N., *Pioneers of modern design* (Pelican).
Pevsner, N., *The sources of modern architecture and design* (Thames and Hudson).
Simpson, F. M., *History of architectural development,* volume IV (Longmans).
The great ages of world architecture series (Braziller).
The Pelican *History of art* series

RA32 Architectural Design and Planning II.

Two lectures a week—assessment based on project(s) required during the year.

The theory and application of design methods; programme development; communities and groups of buildings; environment and architectural siting and density; landscape; visual elements of design and aesthetics; further development of ideas introduced in the first year; computer programming and problem solution.

Reference books:

Alexander, C., *Synthesis of form* (Harvard U.P.).
Blake, P., *The master builders* (Gollancz).
British Standards Institution, B.S. 1708: *Modular co-ordination.*
Broadbent, G., *Design in architecture* (Wiley).
Broadbent, G., and Ward, A., *Design methods in architecture* (Architectural Association Paper No. 4).
Chermayeff, S., *Community and privacy* (Doubleday).
Fry, E. M., *Fine building* (Faber).
Greenough, H., *Form and function* (University of California Press).
Gregory, S., *The design method* (Butterworth).
Halprin, L., *The R.S.V.P. cycles* (Braziller).
Hamlin, T., *Forms and functions of 20th century architecture,* 4 vols. (Columbia).
Jellicoe, G. A., *Studies in landscape design* (O.U.P.).
Jones, J. C., *Design methods—seeds of human futures* (Wiley).
Kepes, G., *The language of vision* (Theobald).
Le Corbusier, *Modular* 1 *and Modular* 2 (Faber).
Le Corbusier, *New world of space* (Reynal and Hitchcock).
Le Corbusier, *Towards a new architecture* (Architectural Press).
Lynch, K., *Site planning* (M.I.T.).
McHarg, I., *Design with nature* (Natural History Pr.).
Moore, G. T., *Emerging methods in environmental design and planning* (Design Methods Group International Conference, 1st. Cambridge, Mass., 1969).
Nelson, G., *Problems of design* (Whitney).
Norberg Schulz, C., *Intentions in architecture* (M.I.T.).
Ramsey, C. G., and Sleeper, H. R., *Architectural Graphic Standards* (Wiley).
Raskin, E., *Architecturally speaking* (Reinhold; Chapman and Hall).
Scholfield, P. H., *Theory of proportion in architecture* (Cambridge).
Sullivan, L., *Kindergarten chats* (Wittenborn).
Time Saver Standards (Dodge).
Viollet le Duc, E. E., *Discourses on architecture* (Tiranti).
Zevi, B., *Architecture as space* (Horizon).

RA82 Architectural Surveying.

Lectures: one hour a week for three terms.

Field work: two hours a week for three terms and measured surveying during final two weeks of third term.

The construction, use and adjustment of surveying equipment; optical square; staff; levels; theodolites and tellurometer. Chain surveys, levelling, traverses; measurement and setting out of building works; computation of traverses and levels, areas and volumes with straight and irregular boundaries; use of planimeter; plane table surveys. Survey and measurements of existing buildings relating to dilapidations and alterations, photogrammetry.

Text-books:

Bannister, A., and Raymond S., *Surveying* (Pitman).

Curtin, W., and Lane, R. F., *Concise practical surveying* (E.U.P.).

Reference book:

Huggins, F. R., *Building surveys* (Batsford).

RA42 Studio Work II.

The practical application of theoretical work in architectural design; building construction; building science; history of architecture.

THIRD-YEAR SUBJECTS.

RA03 Building Construction III.

Retaining walls. Steel and reinforced concrete frame construction. Concrete slab floors and roofs. Foundations. Joinery, fitments, etc. Special doors and windows. Brickwork and panel walling. Shoring: timbering to trenches. Designed foundations and damp proofing of basements. Ductwork. Fire services, requirements, etc. Staircases, fire-resisting and special.

Text-books:

Sharp, W. W., *Australian methods of building construction* (Angus and Robertson).

McKay, W. B., *Building construction*, Vol. 3 (Longmans).

Great Britain: Building Research Board, *Principles of modern building*, Vol. 2 (H.M.S.O.).

Eastwick-Field, J., and Stillman, J., *The design and practice of joinery* (Architectural Press).

Reference books:

Mitchell, G. A., and Mitchell, A. M., *Advanced building construction*,
volume 1. *Components, services and finishes*; revised by D. Neild;
volume 2. *The structure*; revised by J. S. Foster (Batsford).

Salvadori, M., *Structure in architecture* (Prentice-Hall).

NC53 Architectural Structures III.

The course consists of approximately 30 hours of lectures and 50 hours of tutorials, design and laboratory classes. In addition, approximately 30 hours will be spent on structural design aspects of Studio Work III. Lecture topics will include:

Rigid frame buildings—three-dimensional action, resistance to wind loads, structural requirements for multi-storey buildings. Statical indeterminacy, approximate solutions. Analysis of continuous beams and simple frames by moment distribution. Applications of computers to analysis. Prestressed concrete, design and applications. Advanced structures. Selection of structural forms.

Reference books:

Crawley, S. W., and Dillon, R. M., *Steel Buildings* (Wiley).

Salvadori, M., *Structure in architecture* (Prentice-Hall).

Torroja Miret, E., *Philosophy of structures* (California U.P.).

RA13 Building Science III.

Lectures: one hour a week for three terms.

Laboratory: two hours a week for three terms.

Internal environment; heating and air-conditioning (public and commercial buildings); artificial illumination; noise control. Acoustical design of auditoria and studios. Sun control problems associated with large buildings. Daylight control in group planning. Fire in buildings; fire resistance of materials. Functional analysis of architectural planning; ergonomics. Materials; concreting cements, special cements and additives; dense concrete surface finishes. Ceramics. Floor finishes. Biological attack on building materials; preventive methods.

Text-books:

Great Britain. Ministry of Housing and Local Government. Planning bulletin 5: *Planning for daylight and sunlight* (H.M.S.O.).

Lighting Industry Federation (London), *Interior lighting design.*

Parkin, P. H., and Humphreys, H. R., *Acoustics, noise and buildings* (Faber Paperback).

Standards Assoc. of Aust., C.A.30—1965, *Artificial lighting of buildings.*

Walsh, J. W. T., *Planned artificial lighting* (Odhams).

Reference books:

Gay, C. M. (ed.), *Mechanical and electrical equipment for buildings,* 5th edition, by W. J. McGuinness and others (Wiley).

Harris, N. C., *Modern air-conditioning practice* (McGraw-Hill).

Phillips, D., *Lighting in architectural design* (McGraw-Hill).

RA33 Architectural Design and Planning III.

Pre-requisite: RA32 Architectural Design and Planning II.

Lectures: one hour a week. Assessment based on project work during the year.

Theories of architecture and planning principles, historical and modern. Landscape architecture and design. Computer applications.

Reference books:

Birren, F., *Color, forms and space* (Reinhold).

Chermayeff, S. I., and Alexander, C., *Community and privacy* (Pelican).

Cullen, G., *Townscape* (Arch. Pr.).

Gibberd, F., *Town design* (Architectural Press).

Giedion, S., *Architecture, you and me* (Harvard University Press).

Grillo, P. J., *What is design* (Tiranti).

Hamlin, T., *Forms and functions of 20th century architecture,* 4 vols (Columbia).

Hatje, G., *Design for modern living* (Thames and Hudson).
Hesselgren, S., *The language of architecture* (Applied Sci. Pub.).
Jensen, R., *High density living* (Hill).
Jensen, R., *Cities of vision* (Applied Sci. Pub.).
Joedicke, J., *History of modern architecture* (Architectural Press).
Kultermann, U., *Architecture of today* (Zwemmer).
Neutra, R. J., *Life and human habitat* (Koch).
Neutra, R., *Survival through design* (O.U.P.).
New directions in architecture, Series (Studio Vista).
Norberg-Schulz, C., *Intentions in architecture* (Allen and Unwin).
Papanek, V., *Design for the real world* (Thames and Hudson).
Pevsner, N., *Pioneers of modern design from William Morris to Walter Gropius* (Pelican).
Ponti, G., *In praise of architecture* (Dodge).
Proshansky, H. M., *Environmental psychology* (Holt).
Rasmussen, S. E., *Experiencing architecture* (M.I.T.).
Richards, J. M., *An introduction to modern architecture* (Pelican).
Scott, G., *Architecture of humanism* (Constable).
Simonds, J. O., *Landscape architecture* (Dodge).
Zevi, B., *Architecture as space* (Horizon).

RA53 Professional Practice I.

Specification; structure and organisation of building industry; central and local government; general law of contract; pricing of tenders; preparation of quantities. Business management and administration; book-keeping and accountancy. Building Act and bye-laws, and other legislation.

Reference books:

Aqua Group, *Pre-contract practice* (Lockwood).
Dobson, D. E., *Building regulations: a review of the position in some western countries.* South Africa. National Building Research Institute, *Bulletin* 54.
Building Act and Regulations 1970-71 (S.A. Govt. Printer).
Green, R., *Architects guide to running a job* (Architectural Press).
Hudson, A. A., *Building and engineering contracts*, 10th edition, edited by E. J. Rimmer and I. N. D. Wallace (Sweet and Maxwell).
Institute of Quantity Surveyors (Aust.), *Australian standard method of measurement of building works* (The Institute).
Institute of Builders: Board of Building Education, *Management studies for the building industry* (The Institute).
Koontz, H., and O'Donnell, C., *Principles of management* (International Students Paperback).
Newman, W. H., Summer, C. E., and Warren, E. Kirby, *The process of management*, latest edition (Prentice-Hall).
Perrigo, A. E. B., *Modern managerial techniques* (Van Nostrand).
Royal Institute of British Architects, *Handbook of architectural practice and management* (R.I.B.A.).
Royal Australian Institute of Architects, W.A. Practice Group, *Guide specification* (R.A.I.A.).
Royal Institute of British Architects, *The architect and his office* (R.I.B.A.).
Royal Australian Institute of Architects, *Handbook. Specification* (Architectural Press).
Walker-Smith, D., and Close, H. A., *The standard form of building contract* (C. Knight).
Willis, A. J., *Specification writing for architects and surveyors* (Lockwood).
Willis, A. J., *The elements of quantity surveying* (Lockwood).

RA43 Studio Work III.

The practical application of theoretical work in architectural design, building construction, building science, and structures.

FOURTH-YEAR SUBJECTS.

RA04 Building Construction IV.

Load bearing walls. Movement joints. Prestressed concrete. Special structures: large span roofs, etc. Roof lights.

Text-book:

Mitchell, G. A., and Mitchell, A. M., *Advanced building construction*, volume 1 revised by D. Nield, volume 2 revised by J. S. Foster (Batsford).

Reference books:

Angerer, F., *Surface structures in building* (Tiranti).

Cassie, W. F., and Napper, J. H., *Structure in building* (Architectural Press).

Engel, H., *Structure systems* (Iliffe).

Faber, C., ***Candela the shell builder*** (Architectural Press).

Huxtable, A. L., *Pier Luigi Nervi* (Braziller).

Joedicke, J., *Shell architecture* (Reinhold).

Michaels, L., *Contemporary structure in architecture* (Reinhold).

Preston, H. K., *Prestressed concrete for architects and engineers* (McGraw-Hill).

Roland, C., *Frei Otto structures* (Longmans).

Salvadori, M., ***Structure in architecture*** (Prentice-Hall).

Siegel, C., ***Structure and form in modern architecture*** (Crosby Lockwood).

Torroja Miret, E., *The structures of Eduardo Torroja* (Dodge Corporation).

NC24 Structures III.

(This subject will be replaced in 1976 by Architectural Structures IV.)

Analysis of indeterminate framed structures. Multi-storey building frames. Moment distribution. Concrete mix design. Design of reinforced concrete members. Selection of structural systems.

Text-books:

Norris, C. H., and Wilbur, J. B., *Elementary structural analysis* (McGraw-Hill).

Standards Association of Australia, AS.1480, 1974, *Use of reinforced concrete in structures* (metric version).

Standards Association of Australia, AS.1170, SAA Loading Code Part 1, *Dead and live loads*, Part 2, *Wind forces.*

NC54 Architectural Structures IV.

(This course will be given for the first time in 1976).

The course consists of 18 lectures and 36 hours of practical classes, and design tutorials in conjunction with Studio Work IV. Lecture topics will include:

Soil mechanics—foundations, slope stability and retaining walls. Structural economics and construction problems. New structural materials. Precasting and prefabrication. Application of computers to structural design.

RA14 Building Science IV.

Lectures: one hour a week for two terms.

Laboratory: two hours a week for two terms.

Lightweight aggregates and concrete; precast and prestressed concrete products. Behaviour of materials and structural elements in fires, protective measures. Plastics and building applications; structural sandwich panels. Protection and decoration of materials and surface finishes. Illumination; design of the visual field, glare; permanent supplementary artificial lighting of interiors. Acoustics; speech reinforcement and loud speaker installations. Mechanical engineering services in large buildings; air-conditioning, lifts and escalators. Introduction to climatic aspects of group planning; natural air flow patterns around buildings.

Text-books:

Gay, C. M. (ed.). *Mechanical and electrical equipment for buildings*, 5th edition, by W. J. McGuiness, and others (Wiley).

Great Britain: Building Research Station, *Architectural physics: lighting*, by R. G. Hopkinson (H.M.S.O.).

Illuminating Engineering soc. Technical report No. 4: *Lighting during day-light hours* (I.E.S.).

Kinzey, B. Y., and Sharp, H. M., *Environmental technologies in architecture* (Prentice-Hall).

Ontario Assoc. of Architects, *The environmental services of buildings.*

Phillips, D., *Lighting in architectural design* (McGraw-Hill).

Sherratt, A. F. C. (ed.), *Air conditioning system design for buildings* (Elsevier).

Reference books:

Bird, E. L., and Docking, S. J., *Fire in buildings* (Black).

Lushington, R., *Plastics and you* (Pan).

Olgyay, V., *Design with climate* (Princeton U.P.).

Strakosch, G. R., *Vertical transportation: elevators and escalators* (Wiley).

RA34 Architectural Design and Planning IV.

Pre-requisite: RA33 Architectural Design and Planning III.

Lecture: one hour a week. Assessment based on project work during the year.

Programming the built environment. Design objectives in planning, construction and environmental performance of buildings. Specialised design problems.

Reference books:

Banham, R., *The architecture of the well-tempered environment* (Arch. Press).

Broadbent, G., *Design in Architecture* (Wiley).

Cassie, W. F., and Napper, J. H., *Structure in building* (Architectural Press).

Hamlin, T., *Forms and functions of 20th century architecture*, 4 vols. (Columbia).

Michaels, L., *Contemporary structure in architecture* (Reinhold).

Nervi, P. L., *Structures* (Dodge).

Papanek, V., *Design for the real world* (Thames and Hudson).

Proshansky, H. M., *Environmental psychology* (Holt).

Ragon, M., *The aesthetics of contemporary architecture.*

Siegel, C., *Structure and form in modern architecture* (Lockwood).

Torroja Miret, E., *Philosophy of structures* (University of California Press).

Wachsmann, K., *The turning point of building* (Reinhold).

RA64 Urban and Regional Planning and Urban Design I.

The architect and town planning; the history of town planning from ancient times; colonial town planning; problems in town planning deriving from the industrial revolution; the garden city movement; the Radburn principle; the neighbourhood unit; satellites and new towns; regionalism; the central core and urban renewal; town planning as an art form; civic art and urban design.

Text-books:

Gallion, A. B., and Eisner, S., *The urban pattern* (Van Nostrand).
Mumford, L., *The city in history* (Pelican).

Reference books:

Abercrombie, L. P., *Town and country planning* (O.U.P.).
Collins, G. R., and Collins, C. C., *Camillo Sitte and the birth of modern city planning* (Columbia U.P.).
Cullen, G., *Townscape* (Architectural Press).
Doxiadis, C. A., *Ekistics* (Hutchinson).
Gibberd, F., *Town design* (Architectural Press).
Giedion, S., *Space, time and architecture* (Harvard U.P.).
Hiorns, F., *Town building in history* (Harrap).
le Corbusier, *The radiant city* (Faber).
Lynch, K., *Image of the city* (M.I.T. Press).
Rasmussen, S. E., *Towns and buildings* (Liverpool University Press).
Reps, J. W., *The making of urban America* (Princeton U.P.).
Sitte, C., *City planning according to artistic principles* (Phaidon).
Smailes, A. E., *The geography of towns* (Hutchinson).
Spreiregen, P. D., *Urban design* (McGraw-Hill).
Stamp, L. D., *The geography of life and death* (Collins).
Tetlow, J., and Goss, A., *Homes, towns and traffic* (Faber).
Weber, M., *The city* (Macmillan).
Wurman, R. S., *Making the city observable* (M.I.T. Press).
Zucker, P., *Town and square* (Columbia University Press).

RA54 Professional Practice II.

Building economics. Quantity surveying. Bills of quantities. Standard method of measuring. Law of building contracts. Standard form of contract.

Text-books:

Eggleston, A. S., *The practising architect* (M.U.P.).
Cost control in building design (Research and development building management handbook, No. 4) (H.M.S.O.).
Royal Australian Institute of Architects, *Lump sum contracts, conditions*, current edition.

Reference books:

Hudson, A. A., *Building and engineering contracts*, 10th edition edited by E. J. Rimmer and J. N. D. Walker (Sweet and Maxwell).
Institute of Quantity Surveyors (Aust.), *Australian standard method of measurement of building works* (The Institute).

RA44 Studio Work IV.

The practical application of theoretical work in architectural design, urban planning, building construction and services, building science, and structures.

RA98 Advanced Studies I.

For details see under RA99 Advanced Studies II.

FIFTH-YEAR SUBJECTS.

RA05 Building Construction V.

Builders' plant. Road construction. Concrete work and finishes. Glass-concrete and patent glazing. Lifts and escalators. Curtain walling. Factory production and prefabrication.

Reference books:

Diamant, R. M. E., *Industrialised buildings*, vols. 1, 2 and 3 (Iliffe).
Morris, A. E. J., *Precast concrete cladding* (Fountain Press).
Schaal, R., ***Curtain walls*** (Reinhold).
Wilson, J. G., *Exposed concrete finishes*, 2 vols. (C. R. Books).
See also titles under Final Honours Architecture (d).

NC25 Structures IV.

(This subject will be replaced in 1977 by Architectural Structures V.)

Soil mechanics. Plastic theory of design, Prestressed concrete. Three-dimensional framed structures. Structural design.

NC55 Architectural Structures V.

(This course will be given for the first time in 1977.)

No lectures will be given in this course which will consist of structural design aspects of Studio Work V. Seminars will be held on appropriate topics.

RA15 Building Science V.

Lectures: one hour a week for two terms.

Laboratory: two hours a week during first term.

Research project: two hours a week during second term.

Quality control and materials. Sound measurements and acoustics tests on building elements and auditoria; noise surveys. Climatic aspects of group planning; solar radiation; sunlight and orientation; daylighting; air movement and atmospheric pollution. Illumination; luminance design; street lighting. Solar energy in architecture: solar heating and cooling. Bearing properties and classification of soils. Soil stabilisation. Specialised problems and scientific research for architecture and town planning.

Reference book:

Hopkinson, R. G., and others, *Daylighting* (Heinemann).

RA65 Urban and Regional Planning and Urban Design II.

The practice of town and country planning. The principles of civic survey and the study of modern planning schemes. Outline of planning legislation. Regional and national planning with reference to economics, sociology and demography.

Text-book:

Brown, A. J., and Sherrard, H. M., *Town and country planning*, 2nd ed. (Angus and Robertson).

Reference books:

Association for Planning and Regional Reconstruction, ***The town and country planning text-book*** (Architectural Press).
Chapin, F. S., Jnr., ***Urban land use planning***, 2nd edition (University of Illinois Press).
Cullen, G., *Townscape* (Architectural Press).

Freeman, T. W., *The conurbations of Great Britain* (Manchester U.P.).
Gallion, A. B., and Eisner, S., *The urban pattern* (Van Nostrand).
Gifford, K. H., *The Victorian town planning handbook* (Law Book Co. of Aust.).
Jensen, R., *Cities of vision* (Applied Science Pub.).
Jensen, R., *High density living* (Hill).
Keeble, L. B., *Principles and practice of town and country planning* (Estates Gazette, London).
Landau, R., *New directions in British architecture* (Studio Vista).
Mumford, L., *The culture of cities* (Secker and Warburg).
Rapkin, C., and Grigsby, W. G., *Residential renewal in the urban core* (University of Pennsylvania).
Rasmussen, S. E., *Towns and buildings* (Liverpool U.P.).
Sharp, T., *Town planning* (Pelican).
South Australia: Town Planning Committee, *Report on the metropolitan area of Adelaide* (Govt. Printer, S.A.).
Sulman, J., *An introduction to the study of town planning in Australia* (Govt. Printer, N.S.W.).
Unwin, R., *Town planning in practice* (Fisher Unwin).
Winston, D., *Sydney's great experiment* (Angus and Robertson).

RA75 Architectural Thesis.

To be on a selected and approved subject involving architectural design, building science, and constructional problems and to be accompanied by an explanatory report.

RA45 Studio Work V.

Advanced projects in architectural design and applications relating to building science, architectural construction, and structures.

RA55 Professional Practice III.

The code of professional conduct. Standard fee scales. Office organisation. Programming. Building investment and budgeting. Variations. Certificates and accounts. Law relating to the architect. Arbitration. Insurance. Bankruptcy and liquidated damages. Contract law.

Text-book:

Brunton, Baden Hellard and Boobyer, *Management applied to architectural practice* (The Builder).
Eggleston, A. S., *The practising architect* (M.U.P.).

Reference books:

Hudson, A. A., *Building and engineering contracts* (Sweet and Maxwell).
Keating, D., *Law and practice of building contracts* (Sweet and Maxwell).
Turner, H. H., *Architectural practice and procedure* (Batsford).
Willis, A. J. and George, W. N. B., *The architect in practice* (Crosby Lockwood).

HONOURS DEGREE OF BACHELOR OF ARCHITECTURE.

RA99 Advanced Studies II.

The work for the Honours degree will consist of the work prescribed for the Ordinary degree together with additional seminar courses in a selection of the topics set out in the Schedules under the subjects RA98 Advanced Studies I and RA99 Advanced Studies II.

Honours candidates will be required to show a much greater depth of understanding than that required for the Ordinary degree.

(a) Suggested reading list:

Buchanan, R. A., *Technology and social progress* (O.U.P.).

Curl, J. S., *European cities and societies* (Hill).

Handler, A. B., *Systems approach to architecture* (Elsevier).

Churchman, C. W., *The systems approach* (Delacorte).

Chapman, S. D., *The beginnings of industrial Britain* (London Univ. Tut. Pr.).

Klemm, F., *A history of western technology* (Allen and Unwin).

Seidenberg, R., *Post historic man: An inquiry* (Bacon).

Man in the city of the future: a symposium, ed. by R. Eells and C. Walton (Macmillan).

Young, J. Z., *The explosion of science* (Thames and Hudson).

Mantoux, P., *The Industrial Revolution in the eighteenth century* (Cape).

Calder, N., *Technopolis: Social control of the uses of science* (MacGibbon and Kee).

Mumford, L., *The myth of the machine* (Secker and Warburg).

Mumford, L., *Technics and civilisation* (Harcourt, Brace).

Le Corbusier, *Towards a new architecture* (Architectural Pr.).

Wittkower, R., *Architectural principles in the age of humanism* (Tiranti).

Banham, R., *Theory and design in the first machine age* (Praeger).

(b) Text-books:

Arvill, R., *Man and environment* (Penguin).

Australia. Bureau of Meteorology, *Climate and meteorology of Australia* (Govt. Printer, Canberra).

Bedford, T., *Basic principles of ventilating and heating*, 2nd edition (Lewis).

Billington, N. S., *Thermal properties of buildings* (Cleaver Hume).

Carrel, A., *Man, the unknown* (Penguin).

Drysdale, J. W., *Designing houses for Australian climates* (Australia: C.E.B.S., Bulletin No. 6).

Fry, E. Maxwell, and Drew, J., *Tropical architecture in the dry and humid zones* (Batsford).

International Commission on Illumination, *Sunlight in buildings*, ed. R. G. Hopkinson (Bouwcentrum).

Kinzey, B. Y., and Sharp, H. M., *Environmental technologies in architecture* (Prentice-Hall).

Manning, P. (ed.), *Office design: a study of environment* (Liverpool Univ., Building Science, Dept. of, Pilkington Res. Unit).

Oakley, D., *Tropical houses* (Batsford).

Olgyay, V., *Design with climate* (Princeton U.P.).

Sheridan, N. R., and others, *Air conditioning* (University of Queensland Press).

Straaten, J. F. Van, *Thermal performance of buildings* (Elsevier).

Reference books:

Architectural Forum, November, 1948, *Measure*; *or*

Aronin, J. E., *Climate and architecture* (Reinhold).

Brooks, C. E. P., *Climate in everyday life* (Benn).

Bedford, T., *Environmental warmth and its measurement*, Medical Research Council, War Memo. No. 17 (H.M.S.O.).

Bruce, W., *Man and his thermal environment* (National Research Council, Canada. Div. of Building Research, Technical Paper No. 84).

Building Research Institute, *Windows and glass* (Building Research Institute, Washington).

Chandler, T. J., *The climate of London* (Hutchinson).

Conklin, E. G., *The weather conditioned house* (Reinhold).

Fitch, J. M., *American building* (Houghton Mifflin).

Geiger, R., *The climate near the ground* (Harvard U.P.).

Groundwater, I., *Solar radiation in air conditioning* (Lockwood).

Holmes, B. M., *Weathering in the tropics* (Australia: C.S.I.R.O. Division of Building Research).

Keough, J. J., *Selected Australian climatic data* (Australia, Commonwealth Experimental Building Station, Technical Study, 36).

Koeppe, C. E., and de Long, G. C., *Weather and climate* (McGraw-Hill).

Lee, D. H. K., *Physiological objectives in hot weather housing* (Govt. Printing Office, Washington).

Macpherson, R. K., *Environmental problems in tropical Australia* (Govt. Printer, Canberra).

Markham, S. F., *Climate and the energy of nations* (O.U.P.).

Michigan. University, Ann Arbor. School Environments Research Project. SER: *School environments research*, Vols. 2-3 (University of Michigan).

Mills, C. A., *Climate makes a man* (Gollancz).

Olgyay, A., and Olgyay, V., *Solar control and shading devices* (Princeton U.P.).

Trewartha, G. T., and others, *Elements of geography, physical and cultural* (McGraw-Hill).

U.N.E.S.C.O., Arid Zone Research Series (U.N.E.S.C.O.).
Parts VII *Wind and solar energy symposium*,
X *Climatology*,
XI *Climatology and microclimatology*.

U.S.A.: Housing and Home Finance Agency, *Application of climatic data to house design* (U.S. Govt. Printing Office).

Various other British and Australian Building Research Station publications as prescribed by the lecturer.

(c) Text-books:

Benevolo, L., *History of modern architecture* (Routledge and Kegan Paul).

Collins, P., *Changing ideals in modern architecture* (Faber and Faber).

Encyclopaedia of modern architecture, edited by G. Hatje (Thames and Hudson).

Joedicke, J., *History of modern architecture* (Architectural Press).

Pevsner, N., *Pioneers of modern design from William Morris to Walter Gropius* (Pelican).

Pevsner, N., *Sources of modern architecture and design* (Thames and Hudson).

Reference books:

Banham, R., *Theory and design in the first machine age* (Architectural Press).

Banham, R., *Guide to modern architecture* (Architectural Press).

Blake, P., *The master builders* (Gollancz).

Giedion, S., *Space, time and architecture* (Harvard U.P.).

Hitchcock, H. R., *Architecture of the 19th and 20th centuries* (Pelican).

Makers of contemporary architecture series (Braziller).

Masters of world architecture series (Braziller).

(d) Reference books:

British Standards Institution. B.S. 1708: *Modular co-ordination.*

British Standards Institution. B.S. 2900: *Modular co-ordination in building,* Part I, Glossary.

Cement and Concrete Association, *Housing from the factory* (The Association).

Cherner, N., *Fabricating houses from component parts* (Reinhold).

Corker E., and Diprose, A., *Modular primer* (Modular Society Ltd., London).

Diamant, R. M. E., *Industrialised building,* 3 vols. (Iliffe).

Ehrenkrantz, Ezra D., *The modular number pattern* (Tiranti).

Great Britain: Works, Ministry of, *Post-war building studies — House construction* No. 1, 23, 25 (H.M.S.O.).

Harrison, D. D., *An introduction to standards in building* (Spon).

Kent, S. R., *Modular drafting manual* (National Research Council of Canada, Div. of Building Research, Technical Paper 123).

Madge, J. H., *Tomorrow's houses* (Pilot Press).

Massachusetts Institute of Technology. Albert Farwell Bemis Foundation. *The prefabrication of houses* (M.I.T.).

Modular Building Standards Association, *Modular practice* (Wiley).

O.E.E.C., European Productivity Agency, *Modular co-ordination in building,* first report of EPA project 174 (H.M.S.O.).

O.E.E.C. European Productivity Agency, *Modular co-ordination,* second report of EPA project 174 (H.M.S.O.).

O.E.E.C., European Productivity Agency, *Prefabricated building*—project 226 (from E.P.A.—O.E.E.C.).

Royal Institute of British Architects, *The co-ordination of dimensions for building* (R.I.B.A.).

Standards Association of Aust. A148: *Recommendations for modular co-ordination in building* (S.A.A.).

Wachsmann, K., *The turning point of building* (Reinhold).

White, R. B., *Prefabrication,* National Building Studies. Special Report No. 36 (H.M.S.O.).

(e) Reference books:

Aldrich, V. C., *Philosophy of art* (Prentice-Hall).

Alexander, C., *Notes on the synthesis of form* (Harvard).

Bergson, H., *The creative mind* (Phil Lib.).

Cassirer, E., *An essay on man* (Yale U.P.).

Conference on systematic and intuitive methods in engineering, industrial design, architecture and communications (Pergamon).

Cornell, E., *Humanistic inquiries into architecture* (Gunperts Forlag).

De Zurko, E. R., *Origins of functionalist theory* (Columbia U.P.).

Fry, R., *Vision and design* (Pelican).

Getzels, J. W., and Jackson, P. W., *Creativity and intelligence* (Wiley).

Ghiselin, B., *The creative process* (Mentor Books).

Gilbert, K., and Kuhn, H., *A history of esthetics* (Thames and Hudson).

Gotshalk, D. W., *Art and the social order* (Dover).

Kneller, G. F., *The art and science of creativity* (Holt).

Koestler, A., *The act of creation* (Hutchinson).

Langer, S., *Reflections on art* (Oxford).

Maritain, J., *Creative intuition in art and poetry* (Meridian).

Moholy-Nagy, L., *The new vision, and Abstract of an artist* (Wittenborn).

Norberg Schulz, C., *Intentions in architecture* (Allen and Unwin).

Panofsky, E., *Gothic architecture and scholasticism* (Meridian).

Philipson, M. H., *Aesthetics today* (Meridian).

Wittkower, R., *Architectural principles in the age of humanism* (Tiranti).

OF THE DEGREE OF

MASTER OF ARCHITECTURE

REGULATIONS

1. There shall be a degree of Master of Architecture.

2. A candidate for the degree shall either:

   (a) have been admitted to the degree of Bachelor of Architecture in the University of Adelaide; or

   (b) have been admitted to another degree in the University of Adelaide or to a degree in another university recognised by the University of Adelaide, the qualifications of which degree are considered by the Faculty of Architecture and Town Planning to be equivalent for the purpose to those of the degree of Bachelor of Architecture.

†2A. Subject to the approval of the Council, the Faculty may in special cases and subject to such conditions (if any) as it may see fit to impose in each case accept as a candidate for the degree a person who does not hold a degree of a university but has given evidence satisfactory to the Faculty of his fitness to undertake work for the degree.

3. To qualify for the degree a candidate shall prepare a thesis, embodying the results of original research or investigation made by him into an architectural topic which has been approved in advance by the Faculty, which he has prepared under the guidance of and in regular consultation with a supervisor or supervisors appointed by the Faculty.

4. Before approving the topic of his proposed research or investigation, the Faculty may require a candidate to pursue for not more than one calendar year under the supervision of a supervisor or supervisors appointed by the Faculty, and pass examinations in, advanced courses related to his field of study.

5. Unless the Faculty approve an extension of time in a particular case, a candidate shall submit the thesis not earlier than one calendar year and not later than three calendar years from the date of approval of the topic.

† Allowed 28 February, 1974.

6. If in the opinion of the Faculty a candidate for the degree is not making satisfactory progress, the Faculty may, with the consent of the Council, withdraw its approval of his candidature, and the candidate shall cease to be enrolled for the degree.

*7. A candidate shall lodge with the Registrar three copies of his thesis, prepared in accordance with directions given to candidates from time to time.

8. The Faculty shall nominate examiners of the thesis, of whom at least one shall be external. The examiners may recommend that the thesis:

(a) be accepted; or

(b) be accepted subject to the candidate passing an examination in the field of study immediately relevant to the subject of his thesis; or

(c) be returned to the candidate for revision and re-submission (within such period of time as the Faculty may allow); or

(d) be rejected.

9. A candidate for the degree of Doctor of Philosophy whose work is considered by the Faculty, after report by the examiners appointed to adjudicate on it, not to be of sufficient merit to qualify him for that degree, but of sufficient merit to qualify him for the degree of Master of Architecture, may be admitted to the degree of Master provided that he is otherwise qualified to become a candidate for the degree.

10. A candidate who complies with the foregoing conditions and satisfies the examiners may be admitted to the degree of Master of Architecture.

11. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 21 December, 1967.

* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

OF THE DEGREE OF

MASTER OF TOWN PLANNING

REGULATIONS

1. There shall be a degree of Master of Town Planning.

2. A candidate for admission to the course of study for the degree shall:

(a) be a graduate of the University of Adelaide or of another university recognised for the purpose by the University of Adelaide; provided that subject to the approval of the Council the Faculty of Architecture and Town Planning may, in special cases and subject to such conditions (if any) as it may prescribe, accept as a candidate for the degree a person who does not hold a degree of a university, but has given evidence satisfactory to the Faculty of his fitness to undertake work for the degree;

(b) have completed any preliminary work prescribed in accordance with the schedules;

(c) have obtained the approval of the Faculty of Architecture and Town Planning for his candidature.

°3. To qualify for the degree a candidate shall:

(a) attend courses of study extending over a period of not less than two academic years of full-time work or three academic years of part-time work, and pass the examinations prescribed in the schedules;

(b) satisfactorily complete the practical work prescribed in the schedules;

(c) subsequently present a thesis on a subject approved by the Faculty, prepared under the guidance of, and in regular consultation with, a supervisor or supervisors appointed by the Faculty.

No candidate may present himself for examination or submit his thesis unless he has regularly attended classes and has satisfactorily completed such written and practical work as may have been required of him.

4. Schedules defining the preliminary work, the courses of study for the degree, the practical work required and the examinations to be passed by candidates shall be drawn up from time to time by the Faculty and approved by the Council. The schedules so prescribed shall be published in the Calendar.

° Amendment awaiting allowance at time of printing.

†5. Unless the Faculty approve an extension of time in a particular case, a candidate shall:

(a) within three months of beginning the second year of study in the full-time course, or within three months of beginning the third year of study in the part-time course, submit in writing through the Academic Registrar for approval by the Faculty the subject on which he proposes to prepare the thesis prescribed in regulation 3; and

(b) not before all courses of study and practical work prescribed in regulation 3 are completed and not later than three calendar years from the date of approval by the Faculty of the subject, submit the thesis prescribed in regulation 3.

6. If in the opinion of the Faculty a candidate for the degree is not making satisfactory progress the Faculty may, with the consent of the Council, withdraw its approval of his candidature and the candidate shall cease to be enrolled for the degree.

7. The Faculty shall appoint examiners to conduct the examinations prescribed in regulation 3.

8. Except in special circumstances approved by the Faculty, a candidate who has failed the examinations in any of the courses of study may not present himself for re-examination in those courses of study.

9. A candidate shall lodge with the Registrar three copies of his thesis prepared in accordance with directions given to candidates from time to time.*

10. The Faculty shall nominate examiners of the thesis, of whom at least one shall be external. The examiners may recommend that the thesis:

(a) be accepted; or

(b) be accepted subject to the candidate passing a special examination in the field of study directly related to the subject of his thesis; or

(c) be returned to the candidate for revision and re-submission (within such period as the Faculty may allow); or

(d) be rejected.

11. A candidate for the degree of Doctor of Philosophy whose work is considered by the Faculty, after report by the examiners appointed to adjudicate upon it, not to be of sufficient merit to qualify him for that degree, but of sufficient merit to qualify him for the degree of Master of Town Planning, may be admitted to the degree of Master provided that he is otherwise qualified to become a candidate for the degree.

† Amendment awaiting allowance at time of printing.

* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

12. A candidate who complies with the foregoing conditions and satisfies the examiners may be admitted to the degree of Master of Town Planning.

13. The fees to be paid by the candidates shall be prescribed from time to time by the Council. The schedules of fees so prescribed shall be published in the University Calendar.

Regulations allowed 21 December, 1967.

SCHEDULES

(Made by the Council under Regulations 2 and 3.)

NOTE: Syllabuses of subjects for the degree of M.T.P. are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I: PRELIMINARY WORK

1. A person who holds one of the following qualifications, or a qualification deemed to be equivalent, will have satisfied the requirements of this Schedule:

Bachelor of Architecture

Bachelor of Arts (with Economics or Geography as a three-course subject for the degree)

Bachelor of Economics

Bachelor of Engineering (in Civil or Electrical Engineering)

Bachelor of Laws

Bachelor of Technology (in either Building Technology, Civil Engineering or Surveying).

2. Any other graduate may satisfy the requirements of this schedule by passing in such subjects and/or carrying out such further work as may in his case be prescribed by the Faculty of Architecture and Town Planning.

SCHEDULE II: COURSES OF STUDY

1. A candidate for the degree of Master of Town Planning shall satisfactorily complete the following courses of study and practical work, and pass such examinations therein as may be prescribed by the Faculty of Architecture and Town Planning:

(a) Theory and practice of town planning.
(b) History of town planning.
(c) Environmental design.
(d) Elements of statistics.
(e) Social and economic aspects of planning.
(f) The law in relation to planning.
(g) Physical basis of planning.
(h) Engineering aspects of planning.
(i) Practical project work.

Courses of study must be approved by the Dean (or his nominee) at enrolment each year.

2. A candidate who desires that work which he has completed in the University or in another institution approved by the University for the purpose should be counted *pro tanto* for the degree of Master of Town Planning may, on written application to the Academic Registrar, be granted such exemption from the requirements of this schedule as the Council, on the advice of the Faculty of Architecture and Town Planning, shall determine.

OF THE DEGREE OF

MASTER OF TOWN PLANNING

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Architecture and Town Planning: R.

The second letter identifies the Department of Architecture and Town Planning: A.

The first digit 0–9 identifies each of the ten subjects for the course work for the degree of Master of Town Planning.

The second digit 0 indicates that it is a pre-thesis subject for the degree of Master of Town Planning.

RA00 Theory and Practice of Town Planning I.

Introduction.—Nature and purpose of planning, planning at various levels, structure of towns, town and country, principles underlying the preparation of town and regional plans.

Theory of land use, movement, and their relationship.

Basic planning surveys: Land use, land values, land suitability, condition of buildings and environment, visual features, transportation.

Growth factors: urban and regional economy, population.

Elements of town plans—residential areas, land subdivision and development, layout of detached and mixed housing areas, neighbourhoods and living areas, residential density, residential zoning, analysis of future housing requirements.

Text-books:

Brown, A. J., and Sherrard, H. M., *Town and country planning* (Melb. U.P.).

Chapin, F. S., *Urban land use planning* (University of Illinois Press).

Gibberd, F., *Town design* (Architectural Press).

Reference books:

Australia, National Capital Development Commission. Various reports (N.C.D.C., Canberra).

Baker, G., and Funaro, B., *Parking* (Reinhold).

Boyd, R. P., *The Australian ugliness* (Cheshire).

Forth, M. L. and McKeever, J. R., *Planned industrial districts* (Urban Land Institute).

Geddes, P., *Cities in evolution* (Williams and Norgate).

Gibbs, J. P., *Urban research methods* (Van Nostrand).

Gooch, R. B., *The selection and layout of land for playing fields and playgrounds*, Reports of the New Towns Committee (National Playing Field Assoc., London, H.M.S.O.).

Great Britain. Ministry of Housing and Local Government, *Design in town and village*, by T. Sharp, and others (H.M.S.O.).

Great Britain, Ministry of Transport, *Traffic in towns* (The Buchanan Report) (H.M.S.O.).

Gruen V. D., and Smith, L., *Shopping towns, U.S.A.* (Reinhold).

Isard, W., *Methods of regional analysis* (M.I.T. Press).

Jensen, R., *Cities of vision* (Applied Sci. Pub.).

Jones, J. H., *The geometric design of modern highways* (Spon).

Keeble, L. B., *Principles and practice of town and country planning* (Estates Gazette).

Logie, G., *Industry in towns* (Allen and Unwin).

Lynch, K., *Site planning* (M.I.T. Press).

Lynch, K., *The image of the city* (Technology Press).

Mayer, H. M., and Kohn, C. F., *Readings in urban geography* (Uni. of Chicago Press).

Melbourne, Melbourne and Metropolitan Board of Works, Melbourne Metropolitan Planning Scheme, 1954, *Survey and analysis—Report* (Melbourne and Metropolitan Board of Works).

Mumford, L., *The culture of cities* (Secker and Warburg).

Mumford, L., *The city in history* (Harcourt Brace).

National Committee on Urban Transportation, *Better transportation for your city* (Public Administration Service, U.S.A.).

New York (City), City Planning Commission, *Rezoning New York city* (The Commission).

Regional Plan Association, *The race for open spaces* (Regional Plan Association Inc., New York).

Ritter, P., *Planning for man and motor* (Pergamon Press).

Robinson, E., and Keeble, L. B., *The development of building estates* (Estates Gazette).

S.A. Town Planning Committee, *Report on the metropolitan area of Adelaide* (Government Printer, Adelaide).

Simonds, J. O., *Landscape architecture* (Iliffe).

Stein, C., *Towards new towns for America* (Reinhold).

Stephenson, G., and Hepburn, J. A., *Plan for the metropolitan region, Perth and Fremantle—Report* (Government Printing Office, Perth).

Tunnard, C., and Pushkarev, B., *Man-made America: chaos or control?* (Yale U.P.).

Urban Land Institute, Community Builders Council, *Community Builders' handbook* (Urban Land Institute).

Urban Land Institute, *New approaches to residential land development* (Urban Land Institute).

Winston, D., *Sydney's great experiment* (Angus and Robertson).

Note.—Students will be expected to keep abreast of current developments occurring during the course and the following periodicals are recommended for this purpose:

American Institute of Planners Journal.

Royal Australian Planning Institute Journal.

Royal Town Planning Institute Journal.

The Town Planning and Local Government Guide.

Town and Country Planning (U.K.).

RA10 Theory and Practice of Town Planning II.

Form and function: optimum size of cities, defence, dispersion, concentric, linear and radial growth, satellite towns, other forms of decentralisation.

Elements of town plans—industrial areas, planned industrial districts, industrial zoning, mineral workings and after use; wholesaling and storage areas; business centres, commercial zoning; public service facilities: transport terminals, utility undertakings; recreation: regional parks, foreshores, water sport facilities, sports grounds, parks and gardens, caravan parks, commercial recreation facilities; education, health and other institutions; transportation: future travel, traffic generation, parking, traffic distribution including home—work travel, travel assignment, freeways and other roads, interchanges and their effect on land use, public transport, systems of traffic and transport.

The town as a whole: design of new towns, planning of existing towns.

Political level of decision making in planning.

Text-books and Reference books as for RA00.

RA20 Theory and Practice of Town Planning III.

The central business area: studies of land use, movement and design.

Redevelopment, rehabilitation and conservation: economic, social and technical aspects, design.

Programming: objects, methods and implementation.

Statutory planning practice: principles and methods of development, control, zoning and reservations, by-laws and ordinances; regional, metropolitan and local planning schemes: preparation, role of the consultant, presentation, exhibitions, the public enquiry.

Planning as a profession: professional conduct, fees, public relations, the Planning Institutes.

Text-books and Reference books as for RA00.

RA30 History of Town Planning.

Origins. Ancient town planning. Mediaeval and early Renaissance. Baroque. Georgian and Regency. Industrial revolution. Garden city movement. The development of modern planning concepts, including the Radburn principle and the neighbourhood unit Early planning in Australia.

Text-books:

Hiorns, F., *Town building in history* (Harrap).

Mumford, L., *The city in history* (Secker and Warburg).

Reference books:

Collins, G. R., and Collins, C. C., *Camillo Sitte and the birth of modern city planning* (Phaidon).

Giedion, S., *Space, time and architecture* (Harvard U.P.).

Gibberd, F., *Town design* (Architectural Press).

Hackett, B., *Man, society and environment* (Percival Marshall).

Rasmussen, S. E., *Towns and buildings* (Liverpool U.P.).

Rosenau, H., *The ideal city in its architectural evolution,* (Routledge and Kegan Paul).

Stewart, C., *Prospect of cities* (Longmans).

Sulman, J., *Town planning in Australia* (Government Printer, N.S.W.).

Tout, T. F., *Mediaeval town planning* (Manchester U.P.).

Tunnard, C., *The city of man* (Scribners).

Zucker, P., *Town and square* (Columbia U.P.).

RA40 Environmental Design.

(i) *Architecture in relation to planning*: Design in relation to use. Design as a means of environmental control. Structure and materials as part determinants of form. The art of architecture. Concepts of unity, harmony, contrast. Mass and volume. Formality and informality. Architecture as a social phenomenon: building in relation to the town.

(ii) *Civic design*: Introduction: the town as an art form. The relationship of buildings to each other, to groups, to streets, and to the town. Appropriateness and good relations between buildings: some methods of control. The design of urban open spaces. Street furnishings: the equipment of the city. The preservation of historic monuments as part of the living town: the concept of permanence and change. Advertising as part of the urban scene.

(iii) *Landscape design*: The relationship between landscape pattern and architecture. Landscape in the urban scene. Layout of open spaces, parks, recreational areas, camps, cemeteries, etc. Planting in relation to utility and aesthetics: the materials of landscape design. Public and private open space in the countryside. Preservation of rural amenity by landscaping.

RA50 Elements of Statistics.

Statistical measurements: classification and tabulation of data; limits of accuracy. Types of distribution: averages and measurements of dispersion. Graphical methods: index numbers; sampling and the calculation of standard errors; linear correlation; elementary curve fitting and interpolation; analysis of time-series. Computation and statistical method programming. Application to town planning in respect of population, industry, transport, utilities, etc.

RA60 Social and Economic Aspects of Planning.

(i) *Economics*: Scope, method and fundamental concepts of economics. Economic development in Australia, and potential development as it affects planning. The economics of land use on national, regional and local level. Land tenure and its effect on planning. Land values and rents. Financial aspects of private and public developments.

(ii) *Sociology*: Principles of sociology. Elements of demography. Elements of social economics. Measurement and interpretation of economic and social phenomena. The idea of social planning. The social structure of the city.

RA70 Law in Relation to Planning.

Forms and functions of central, state and local governments. History of planning legislation. Development of planning legislation in Australia. Current Planning Acts. Other legislation affecting planning. Statutory planning procedure. Planning inquiries, appeals.

RA80 Physical Basis of Planning.

(i) *Geology*: The geological formation of Australia. Solid rocks and surface deposits. Relation of geology to surface relief and scenery. Relation of geology to fertility and agriculture. Weathering and erosion. Water supply, with reference to protection from contamination. Mineral deposits and mining. Construction and interpretation of geological maps.

(ii) *Geography*: Land distribution. Distribution and potential density of population. Location of industry and commerce. Distribution of mineral and power resources. Communications. Pattern of agricultural resources. Analysis of climatic factors.

RA90 Engineering Aspects of Planning.

(i) *Engineering*: Provision for transport by road, rail, water, air. Planning, designing and construction of roads. Road junctions, bridges, subways, laybys, etc. Public services: water, gas, electrical supply and distribution systems. Sewer and storm water disposal. Traffic capacity and regulation. Traffic census. Parking sites and garages. Street lighting.

(ii) *Surveying*: The use of survey instruments. Types of surveys. Levelling and contouring. Computation of areas. Principles of aerial survey and photogrammetry. The use and compilation of maps. The compilation and interpretation of the topographic plan.

Practical Project Work.

To illustrate and elaborate problems of survey, plan and physical development.

Thesis.

On a subject to be approved by the Faculty.

Reference books for the course for the degree of **Master of Town Planning:**

Abercrombie, L. P., *Greater London plan* 1944 (H.M.S.O.).

Abercrombie, P., *Town and country planning* (Thornton Butterworth).

Alexander, W. P., *Education in England: the national system, how it works* (Newnes).

Allen, R. G. D., *Statistics for economists* (Hutchinson's University Library).

Architectural Review, June 1955, *Outrage.*

Architectural Review, December 1956, *Counter attack* (Special Number).

Association for Planning and Regional Reconstruction, *Town and country planning text-book* (Architectural Press).

Bailey, Sir E. B., *Geological survey of Great Britain* (Thomas Murby).

Barratt, C., *Your local authority* (Pitman).

Batson, R. G., *Roads, their alignment, layout and construction* (Longmans).

Bjorklund, E. M., *Focus on Adelaide* (Chicago U.P.).

Boumphrey, G., *British roads* (Nelson).

Bowen, I., *Population* (C.U.P.).

Bracey, H. E., *English rural life* (Routledge).

British Broadcasting Corporation, *B.B.C. handbook,* (B.B.C.).

British Broadcasting Corporation, *The B.B.C. television service. A technical description* (B.B.C.).

British Industries: oil (Cassell).

British Petroleum Company, *The oilfields of Britain* (The British Petroleum Co.).

British Road Federation, *Urban motorways.*

Brogan, O., *Roman Gaul* (Bell).

Buchanan, C. D., *Mixed blessing: the motor in Britain* (Hill).

Bullock, E. H., *Planning tomorrow's Britain* (Muller).

Cadbury brothers, *Our Birmingham* (Cadbury).

Cadbury brothers, *Changing countryside* (Cadbury).

Cairncross, A. K., *Introduction to economics* (Butterworth).

Cauter, T., and Downham, J. S., *The communication of ideas* (Chatto and Windus).

Carcopino, J., *Daily life in ancient Rome* (Routledge).

Clarke, W. M., *The city's invisible earnings* (Institute of Economic Affairs).

Cole, G. D. H., *Practical economics* (Pelican).

Cole, G. D. H., *Britain's town and country pattern* (Faber).

Collins, B. J., *Development plans explained* (H.M.S.O.).

Collins, H. J., and Hart, C. A., *Principles of road engineering* (Arnold).

Connor, L. R., *Statistics in theory and practice* (Pitman).

Cotgrove, S. F., *Technical education and social change* (Allen and Unwin).

Crossley, E. L., *The United Kingdom dairy industry* (U.K. Dairy Assoc.).

Cullen, G., *Townscape* (Architectural Press).

Current Town Planning Acts, *Orders and regulations for the United Kingdom and Australian states.*

East, W. G., *The geography behind history* (Nelson).

Edlin, H. L., *England's forests* (Faber).

Fawcett, C. B., *A residential unit for town and country planning* (London U.P.).

Fearnsides, W. G., and Bulman, O. M. B., *Geology in the service of man* (Pelican).

"Fortune", *The exploding metropolis* (Doubleday).

Freeman, T. W., *The conurbations of Great Britain* (Manchester U.P.).

Freeman, T. W., *Geography and planning* (Hutchinson).

Forshaw, J. H., and Abercrombie, L. P., *County of London plan* 1943 (Macmillan).

Gifford, K. H., *The Victorian town planning handbook* (Law Book Co.).

Gillie, F. B., and Hughes, P. L., *Some principles of land planning* (Liverpool U.P.).

Ginsberg, M., *Sociology* (Home University Library).

Glass, R., *Social aspects of town planning* (Association for Planning and Regional Reconstruction).

Glass, D. V., *Social mobility in Britain* (Routledge)

Goldsmith, H. E., *Practical road engineering* (Technical Press).

Gutkind, E. A., *Revolution of environment* (Routledge and Kegan Paul)

Gutkind, E. A., *Our world from the air* (Chatto and Windus).

Great Britain. Advisory Council on Scientific Policy. Committee on scientific manpower, *Scientific manpower* (Barlow Report) (H.M.S.O.).

Great Britain. British Transport Commission, *Proposals for the railways*, (see Great Britain, Parliament. Command paper no. 9880).

Great Britain. Central Advisory Water Committee. Sub-Committee on Information on Water Resources, *Report* (H.M.S.O.).

Great Britain. Central Advisory Water Committee. Sub-Committee on Growing Demand for Water, *1st, 2nd and final Reports* (H.M.S.O.).

Great Britain, Central Office of Information, *Farming Britain* (C.O.I.).

Great Britain. Central Office of Information, *Post-war industrial progress in the United Kingdom*, Reference Pamphlet R. 3908 (C.O.I.).

Great Britain. Central Office of Information, Reference Division, *Nuclear energy in Britain* (H.M.S.O.).

Great Britain. Central Office of Information, Reference Division, *Rural industries in Britain* (Reference Paper R. 3334, C.O.I.).

Great Britain. Committee on land utilization in rural areas, *Report* (Scott Report) (H.M.S.O.).

Great Britain. Department of the Environment, *Roads in England and Wales*, (Annual Report) (H.M.S.O.).

Great Britain. Distribution of the Industrial Population, Royal Commission on the, *Report* (H.M.S.O.).

Great Britain. Distribution of the Industrial Population, Royal Commission on the, *Evidence* (H.M.S.O.).

Great Britain. General Register Office:

Census, 1951, *England and Wales. Report on usual residences and work-place* (H.M.S.O.).

Census, 1951, *England and Wales. Report on greater London and five other conurbations* (H.M.S.O.).

Studies on Medical and Population Subjects, No. 27, Newton, M. P., and Jeffrey, J. R., *Internal migration* (H.M.S.O.).

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Pamphlet No. 1, *Nuclear weapons.*

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FACULTY OF ARTS

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OF THE DEGREE OF

BACHELOR OF ARTS

REGULATIONS

1. There shall be an Honours degree and an Ordinary degree of Bachelor of Arts. A candidate may obtain either degree or both.

†2. The course of study for the Ordinary degree shall extend over three academic years and that for the Honours degree over four academic years.

†3. (a) In these regulations and in schedules made under them by the Council the word "subject" means a course of study at the University normally completed in one academic year. In syllabuses, if the context so requires, it may mean alternatively a subject at one of the public examinations conducted by the University.

(b) The Council, after receipt of advice from the Faculty of Arts, shall from time to time prescribe schedules defining (i) the subjects of study for the degree to be provided by the University, (ii) the range of subjects (including lecture courses, laboratory courses and other practical work) to be satisfactorily completed and the examinations to be passed by candidates, and (iii) the fees to be paid by candidates.

(c) Such schedules shall become effective from the date of prescription by the Council or such other date as the Council may fix.

(d) The syllabuses of subjects shall be specified by the Head of the Department concerned and submitted to the Faculty and the Council for approval.

(e) Schedules made and syllabuses approved by the Council shall be published in the next edition of the University Calendar.

§4. A candidate for the degree shall attend classes as required by the Head of the Department concerned and pass examinations in accordance with the provisions of Schedule II (Ordinary degree) or Schedule III (Honours degree).

††5. (a) A candidate desiring to enter for an honours school must obtain the approval of the head of the school concerned. The final examination may not, except by special permission of the Faculty, be taken until four years of study have been completed after matriculation.

† Allowed 28 January, 1965. †† Allowed 16 December, 1965.
§ Amended 24 December, 1969, and 21 December, 1972.

(b) The work of the Final Honours year must be completed in one year of full-time study, save that on the recommendation of the Head of the Department concerned, the Faculty may permit a candidate to spread the work over two years, but not more, under such conditions as it may determine.

(c) The names of the candidates who qualify for the Honours degree shall be published in alphabetical order within the following classes and divisions in each school:

First Class
Second Class
Division A
Division B
Third Class.

*(d) A candidate who is unable to complete the course for the Honours degree within the time allowed, or whose work is unsatisfactory at any stage of the course, or who withdraws from the course shall be reported to the Faculty which may permit him to re-enrol for the Honours degree under such conditions (if any) as it may determine.

(e) A candidate may not enrol a second time for the Final Honours course in the same school if he (i) has already qualified for Honours in that school; or (ii) has presented himself for examination in that school but has failed to obtain Honours; or (iii) withdraws from his course, unless the Faculty under paragraph (d) hereof permits him to re-enrol.

††6. Except by permission of the Faculty a candidate shall not proceed to a subject for which he has not completed the pre-requisite subjects prescribed in the syllabuses.

7. A candidate shall do such written or practical work as may be prescribed by the professor or lecturer.

*8. Except in special cases approved by the Council the annual examinations shall take place towards the end of the academic year. A candidate shall enter for examination on the form and by the date prescribed by the Council, but shall not be eligible to present himself for examination unless he has regularly attended the prescribed classes and has done written and laboratory or other practical work, where required, to the satisfaction of the professors and lecturers concerned. Written or practical work done by candidates by direction of the Professors or Lecturers and the results of terminal or other examinations in a subject may be taken into consideration at the final examination of that subject.

†† Allowed 16 December, 1965.
* Amended 21 December, 1972.

*9. The names of candidates who pass at an annual examination in any subject or division of a subject for the Ordinary degree shall be published in alphabetical order in the following classifications:

Pass with Distinction,
Pass with Credit,
Pass.

If the pass lists be published in two divisions, a pass in the higher division may be prescribed in the syllabuses as a pre-requisite for admission either to further courses in that subject or to other subjects.

10. A candidate who fails to pass in a subject and who desires to take the subject again shall again attend lectures and do practical work in the subject to the satisfaction of the professors and lecturers, unless exempted therefrom by the Faculty of Arts.

†11. A candidate who has twice failed to pass the examination in any subject or division of a subject may not enrol for that subject again except by special permission of the Faculty and then only under such conditions as the Faculty may prescribe.

For the purpose of this regulation a candidate who is refused permission to sit for examination, or who fails, without a reason accepted by the Dean as adequate, to attend all or part of an annual examination (or a supplementary examination if granted) after having enrolled for at least two terms in that year, shall be deemed to have failed to pass the examination.

**12. A candidate who has passed subjects in other faculties or universities or elsewhere may on written application to the Academic Registrar be granted such exemption from these regulations and from schedules made under them as the Council on the recommendation of the Faculty may determine.

‡13. (a) A graduate in another faculty who wishes to proceed to the degree of Bachelor of Arts and to count towards that degree subjects which he has already presented for another degree may do so subject to the following conditions:—(i) he may present not more than three such subjects, save that a graduate in law may present five such subjects; (ii) he shall present a range of subjects which fulfils the requirements of the relevant schedule made under regulation 4; and (iii) he shall present two third-year subjects not presented for another degree.

(b) A candidate who holds a diploma may be granted such status in the course for the degree of Bachelor of Arts as the Faculty shall in each case determine; provided that if status be granted for more than three subjects the candidate shall, except as provided for in section (c) of this regulation, surrender his diploma before being admitted to the degree.

† Allowed 16 March, 1961.
* Allowed 28 January, 1965; amended 17 December, 1970, and 21 December 1972.
‡ Allowed 16 December, 1965; amended 17 December, 1970.
** Amended 21 December, 1972.

(c) A matriculated student who was enrolled for the Diploma in Social Studies before 30 June, 1962, may until 30 June, 1967, present for the degree of Bachelor of Arts more than three subjects which he has presented for the diploma without surrendering his diploma before being admitted to the degree.

§14. No graduate who has obtained an Honours degree in a subject or field of study in another faculty may obtain the Honours degree of Bachelor of Arts in a corresponding subject, field of study, or school of the Faculty of Arts.

*15. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 17 January, 1952.
§ Amended 24 December, 1969. * Allowed 18 October, 1956.

SCHEDULES

(Made by the Council under Regulation 3.)

NOTE: Syllabuses of subjects for the degree of B.A. are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I: COURSES OF STUDY

1. The following shall be the subjects of classes and examinations:

Group A:

(1) *Arts subjects*:

Anthropology I
Chinese I
Classical Studies I
Drama I
Economic Geography I
Elements of Accounting I
English I
French I and IA
German I and IA
Greek I and IA
History IA, IB and IC
Japanese I and IA
Latin I
Mathematics IM
Mathematics (Economics) I
Music I and IA
Politics I
Psychology I
Social Economics I

Arts half-subjects:
Human Geography IH
Logic IH
Macroeconomics IH
Mathematics IH
Microeconomics IH
Philosophy IH(A) and IH(B)
Physical Geography IH
Physics, Man and Society IH

(2) *Science subjects*:
Biology I
Chemistry I
Geology I
Physics I
Zoology I

Science half-subjects:
Astronomy IH
General Biology IH
Genetics and Human Variation IH
Geology IH
Plant Biology IH

(3) *Mathematical Sciences subjects*:
Mathematics I

Mathematical Sciences half-subjects:
Computing IH
Statistics IH

Group B:
(1) *Arts subjects*:
American Literature II
Ancient History II
Asian Development II
Australian Literary Studies II
Classical Studies II
Economic History II
Economic Statistics II and IIA
English II
French II, IIA and IIB
German II, IIA and IIB
Greek II and IIS
History II
Latin II
Linguistics II
Logic II
Mathematics IIM
Music II
Old and Middle English II
Philosophy II
Politics IIA and IIB
Psychology II

Arts half-subjects:
Anthropological Studies in Social Inequality and Change IIH
Biogeography and Climatology IIH
Communication, Interaction and Culture IIH
Ecology and Taxonomy IIH
Economic and Political Anthropology IIH
Economic Geography IIH
Ethnological Studies in Ritual and Religion IIH
Geomorphology IIH
Macroeconomics IIH
Microeconomics IIH
Social Geography IIH

(2) *Science subjects*:
Biochemistry II
Botany II
Chemistry II
Genetics II
Geology II
Organic Chemistry II
Physical and Inorganic Chemistry II
Physics II
Physiology II
Zoology II

(3) *Mathematical Sciences subjects*:
Applied Mathematics IIA and IIB
Mathematical Statistics II
Pure Mathematics II

(4) *Law subjects*:
Constitutional Law II
Jurisprudence
The Law of Property

Group C:

(1) *Arts subjects*:
Australian Literary Studies III
Classical Studies III
Economic Development Studies III
Economics III
English III and IIIS
French III and IIIB
Geography IIIA and IIIB
German III and IIIB
Greek III and IIIS
History IIIA, IIIB and IIIS
Latin III
Linguistics III
Logic III
Music III and IIIS
Old and Middle English III

Philosophy IIIA and IIIB
Politics IIIA and IIIB
Psychology III

Arts half-subjects:
Geography IIIH
Philosophy IIIH*
Political Sociology IIIH*
Psychology IIIH(A) and IIIH(B)
Social Biology IIIH

(2) *Science subjects*:
Applied Mathematics IIIM
Biochemistry III and IIIM
Botany III and IIIM
Computing Science IIIM
Genetics III
Geochemistry III
Geology III and IIIM
Geophysics III
Histology and Cell Biology III
Microbiology III
Organic Chemistry III and IIIM
Physiology IIIA, IIIB and IIIM
Physical and Inorganic Chemistry IIIB and IIIM
Physics III and IIIM
Pure Mathematics IIIM
Theoretical Physics III
Zoology III and IIIM

(3) *Mathematical Sciences subjects*:
Applied Mathematics III and IIIA
Computing Science III and IIIA
Mathematical Physics III
Mathematical Statistics III
Pure Mathematics III and IIIA

2. No subject shall be counted twice, and a candidate shall not present both subjects of any of the following pairs:

Ancient History II and *either* Greek II *or* Latin II *or* Latin III;
Applied Mathematics IIA and Applied Mathematics IIB;
Biology I and *either* Botany I *or* Zoology I *or* General Biology IH *or* Plant Biology IH;
Chemistry II and *either* Physical and Inorganic Chemistry II *or* Organic Chemistry II;
Classical Studies I and *either* Greek II *or* Greek III;

* These half-subjects may only be taken with Social Biology IIIH.

Computing IH and Applied Mathematics IIB;
Economic Geography I and *either* one or both of Human Geography IH and Physical Geography IH *or* Geography I (available prior to 1974);
Economics I and Social Economics I;
Economics I and Macroeconomics IH *or* Microeconomics IH;
Economics II and Macroeconomics IIH *or* Microeconomics IIH;
French I and French IA;
French II and French IIA;
Geography I and Human Geography IH *or* Physical Geography IH;
Geology I and *either* Geology IH *or* General Geology IH *or* Physical Geology IH;
Geology IH and *either* General Geology IH *or* Physical Geology IH;
German I and German IA;
German II and German IIA;
Greek IA and Greek IIS;
Greek I and Greek IIIS;
Logic II and Logic III;
Mathematics IIM and *either* Pure Mathematics II *or* Applied Mathematics IIA *or* Applied Mathematics IIB *or* Computing IH (after 1974);
Music I and Music IA;
Philosophy I and any of Logic and Argument IH, Introductory Philosophy IH, Philosophy IH(A), Philosophy IH(B);
Physics I and Physics, Man and Society IH;
Psychology III and Psychology IIIH(A) *or* Psychology IIIH(B).

3. A candidate shall not present any two of Mathematics IS, Mathematics IM, Mathematics I, Mathematics IH.

4. A candidate shall not present more than two of History IA, History IB and History IC.

5. A candidate shall not present any of the following: Mathematics (Economics) I, Economic Statistics II and Economic Statistics IIA unless he has also passed Macroeconomics IH and Microeconomics IH.

6. A candidate shall not present more than four of Biogeography and Climatology IIH, Ecology and Taxonomy IIH, Economic Geography IIH, Geomorphology IIH and Social Geography IIH.

7. A candidate who enrolled as a matriculated student before 31 March, 1964, and passed in Education before 31 March, 1966, may present that subject for either the Ordinary or the Honours degree.

8. When, in the opinion of the Faculty of Arts, special circumstances exist, the Council, on the recommendation of the Faculty in each case, may vary any of the provisions of clauses 1-6 above.

9. These schedules came into force on 1 January, 1973.

A candidate who enrolled as a matriculated student prior to 1 January, 1973, may continue under the regulations and schedules in force in 1972. Alternatively, he may complete his degree under the present regulations and schedules with such modifications as may be necessary to ensure that subjects validly passed under the 1972 or earlier schedules be counted *pro tanto* under the present schedules.

Schedule II: The Ordinary Degree

1. To qualify for the Ordinary degree a candidate shall present nine subjects which shall include:

(a) Not more than four subjects or their equivalent from Group A.

(b) At least two subjects or their equivalent from Group C of which at least one must be chosen from Group C(1) or C(3).

(c) Not more than three subjects or their equivalent from Group A(2) and B(2) combined.

(d) Not more than four subjects or their equivalent from Group B(3) and C(3).

NOTES (not forming part of the regulations and schedules):

1. *Pattern of study.*

The Faculty of Arts recommends that the normal pattern of study for the Ordinary degree of Bachelor of Arts be four subjects in the first year, three in the second and two in the third.

2. *Work required to complete an Adelaide degree* (Policy of the Faculty of Arts).

To qualify for the degree:

(i) students who have completed most of the requirements for the degree of Bachelor of Arts at another institution will be required as a minimum to complete a full third-year's work in order to qualify for the Adelaide degree; and

(ii) with special permission of the Faculty, a student who has completed most of the subjects for the degree of Bachelor of Arts in Adelaide including one third-year subject may be permitted to complete the requirements for the degree at another institution.

All applications must be made in writing to the Academic Registrar.

Schedule III: The Honours Degree

1. A candidate for the Honours degree shall attend classes regularly and pass examinations in one of the following subjects:

Anthropology,
Classical Studies,
Classics,
Economics,
English Language and Literature,
French Language and Literature,
Geography,
German Language and Literature,
History,
Latin,
Music,
Philosophy,
Politics,
Psychology,

or in a combination of subjects approved by the Faculty and including such subjects of two schools as shall be deemed equivalent to those of a single school, provided that subjects within the Faculty of Mathematical Sciences and Faculty of Science may be combined with any one of the above.

A candidate wishing to proceed to Honours in subjects within the Faculty of Mathematical Sciences is referred to regulation 11 of the degree of Bachelor of Science in Mathematical Sciences.

A candidate desiring to enter for an Honours school must obtain the approval of the head of the school concerned.

2. A candidate for the Honours degree in any subject shall not begin final-year Honours work in that subject until he has qualified for the Ordinary degree of Bachelor of Arts and has completed such prerequisite subjects (if any) as may be prescribed in the syllabus.

3. Except by permission of the Faculty a candidate shall take the whole of the final examination for the Honours degree at the one annual examination.

OF THE DEGREE OF

BACHELOR OF ARTS

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Pre-requisite subjects:

Students are reminded that in order to proceed to the second year in any subject in the Faculty of Arts they must, in the case of any first-year subject or pre-requisite subject in which the past list is published in two divisions, pass at Division I level or higher, unless special permission is obtained in writing from the Academic Registrar.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Arts: A.

The second letter identifies the department teaching the subject, as follows:

Anthropology	A	German	G
Asian Studies	Q	History	H
Classics	C	Philosophy	L
English	E	Politics	P
French	F	Psychology	Y
Geography	J		

The first digit—

0–6: If followed by 1, 2 or 3 indicates that the subject is in sequence with another subject.

7–9: Indicates that the subject is either not in sequence with another subject or is prescribed for the Honours degree. (Except Old and Middle English II and III.)

The second digit—

1, 2, 3: Indicates year of subject, e.g. first, second or third.

4, 5: Indicates subject for a diploma.

6: Indicates service subject.

7: Indicates second-year subject taken only by Honours students. (Except Old and Middle English II.)

8: Indicates third-year subject normally taken only by Honours students.

9: Final Honours.

0: Indicates subject for a diploma.

The letter H used in place of the second digit indicates a half-subject two of which count towards the degree as a whole subject.

ANTHROPOLOGY.

This was a new department in 1974 and a full undergraduate course in Anthropology will be developed with AA01 Anthropology I and four second-year half-subjects currently being offered. In 1976, third-year courses will be given, leading to Honours in 1977.

FIRST YEAR.

AA01 Anthropology I.

No pre-requisite. Students will be expected to attend two lectures a week in addition to one tutorial and to submit written work when required.

The course is a general introduction to social and cultural Anthropology: the ideas and beliefs of non-western peoples and their patterns of social and economic organisation. Topics include witchcraft and magic, modes of economic production and distribution, and problems relating to power and authority in tribal and peasant societies. A primary aim of the course will be to show how the study of exotic cultures leads to an understanding of the general principles underlying social and cultural organisation.

The books recommended are intended to provide a general background to the subject and more exhaustive reading lists will be distributed at the beginning of the year.

Reference books:

Evans-Pritchard, E. E., *Witchcraft, oracles and magic among the Azande* (Oxford).

*Gluckman, M., *Politics, law and ritual in tribal society* (Mentor).

*Hannerz, U., *Soulside* (Columbia).

*Kaplan, D., and Manners, R. A., *Culture theory* (Prentice-Hall).

Malinowski, B., *Argonauts of the Western Pacific* (Routledge).

*Mauss, M., *The gift* (Cohen and West).

Meggitt, M., *The desert people* (Angus and Robertson).

*Pospisil, L., *The Kapauku Papuans of West New Guinea* (Holt, Rinehart and Winston).

*Radcliffe-Brown, A. R., and Forde, D., *African systems of kinship and marriage* (O.U.P.).

*Sahlins, M. D., *Tribesmen* (Prentice-Hall).

*Walter, E. V., *Terror and resistance* (O.U.P.).

*Whyte, W. F., *Street corner society* (Free Press).

Books marked * are available in paperback editions.

SECOND YEAR.

Pre-requisite: AA01 Anthropology I.

There are four fields of study offered, each representing a half-subject comprising one lecture and one tutorial a week. Students intending to proceed to third-year work in Anthropology must complete satisfactorily at least two of the half-subjects offered in Anthropology at second-year level. Essays and tutorial assignments will constitute an essential part of the Anthropology course work.

More exhaustive reading reference lists will be available from the department at the beginning of the year.

AA1H Economic and Political Anthropology IIH.

This course will cover systems of production, patterns of economic and social exchange and forms of political mobilisation in tribal and peasant societies. The lectures will initially be concerned with the social organisation of production in small scale societies. Cultural ecology, the social implications of land tenure systems, and 'Domestic modes of production' will be examined in some detail. The sociology of exchange and the economic basis of political organisation in these types of societies will also be considered. Such traditional anthropological interests as kinship and marriage will be looked at in relation to this.

Text-books:

°Evans-Pritchard, E. E., *The Nuer* (Oxford).
°Firth, R., *Themes in economic anthropology* (Tavistock).
°Sahlins, M. D., *Stone Age economics* (Tavistock).

Reference books:

Brookfield, H., and Hart, D., *Melanesia: a geographical interpretation of an island world* (Methuen).
Crocombe, R., *Land tenure in the Pacific* (O.U.P.).
°Engels, F., *The origin of the family, private property and the state* (International publishers).
*Geertz, C., *Agricultural involution* (Univ. of Calif. Pr.).
*Marx, K., *Pre-Capitalist economic formations* (New World Paperbacks, International Publishers).
Pospisil, L., *Kapauku Papuan economy* (Yale U.P.).
*Rappaport, R. A., *Pigs for the ancestors* (Yale U.P.).
Richards, A., *Land, labour and diet in Northern Rhodesia* (O.U.P.).
*Terray, E., *Marxism and "primitive" societies* (Monthly Review Press).

Books marked * are available in paperback editions.

AA2H Communication, Interaction and Culture IIH.

This course will provide an introduction to some of the more recent developments in anthropological and sociological theory, but will also be firmly grounded in a variety of ethnographic studies. In particular lectures will concentrate on cognitive anthropology, 'folk', taxonomies, and the study of human communication systems (e.g. in the work of Bateson, Conklin, Frake and Levi-Strauss). Some attention will also be placed on such sociological orientations as symbolic interactionism and ethnomethodology (e.g. Becker, Goffman, Garfinkel, Cicourel), and the phenomenology of interpersonal behaviour (as in the work of Schütz, Berger and Luckmann).

Reading list:

°Bateson, G., *Steps to an ecology of mind* (Paladin).
°Berger, P. L., and Luckmann, T., *The social construction of reality* (Penguin).
Douglas, J., *Understanding everyday life* (Routledge).

°Goffman, E., *Behaviour in public places* (Harper).
°Goffman, E., *Interaction ritual* (Anchor).
°Goffman, E., *Presentation of self in everyday life* (Penguin).
Gouldner, A., *For sociology* (Allen Lane).
Levi-Strauss, C., *The elementary structures of kinship* (Beacon Pr.).
Levi-Strauss, C., *The savage mind* (Weidenfeld and N.).
Levi-Strauss, C., *Structural anthropology* (Allen Lane).
°Murphy, R. F., *The dialectics of social life* (Allen and Unwin).
°Schütz, A., *The phenomenology of the social world* (H.E.B. Paperback).
Smith, A. G., *Communication and culture* (Holt).
Sudnow, D., *Studies in social interaction* (Free Press).
Tyler, S. A., *Cognitive anthropology* (Holt).

Books marked ° are available in paperback editions.

AA3H Ethnological Studies in Ritual and Religion IIH.

The course will begin with a consideration of the major anthropological and sociological approaches to the study of systems of belief and their practical application to daily life. The course begins with an assessment of the work of such scholars in this field as Robertson-Smith, Durkheim, Weber, Van Gennep, Levi-Strauss and Turner. Attention will then be directed to the way their ideas have been developed by field anthropologists studying small-scale tribal societies and in communities in the Buddhist, Hindu and Islamic worlds.

Reading list:

Douglas, M., *Natural Symbols* (Pelican).
Douglas, M., *Purity and danger* (Pelican).
°Dumont, L., *Homo hierarchicus* (Paladin).
°Durkheim, E., *The elementary forms of the religious life* (Free Press).
°Geertz, C., *Islam observed* (Yale U.P.).
Geertz, C., *The religion of Java* (Chicago).
Gombrich, R., *Precept and practice* (Oxford).
°Leach, E., *The dialectics of practical religion* (Cambridge).
°Levi-Strauss, C., *Structural anthropology* (Allen Lane).
Levi-Strauss, C., *The raw and the cooked* (Harper and Row).
°Levi-Strauss, C., *Totemism* (Penguin).
Robertson-Smith, W., *The religion of the Semites* (Cambridge).
Spiro, M., *Buddhism and society* (Allen and Unwin).
Spiro, M., *Burmese supernaturalism* (Prentice-Hall).
Stanner, W. E. H., *On Aboriginal religion* (Oceania Monograph No. 11).
Turner, V. W., *The forest of symbols* (Cornell).
°Turner, V. W., *The ritual process* (Routledge).
°Van Gennep, L., *The rites of passage* (Routledge).
Weber, M., *The religion of China* (Free Press).
°Weber, M., *The religion of India* (Free Press).

Books marked ° are available in paperback editions.

AA4H Anthropological Studies in Social Inequality and Change IIH.

This course will examine the economic, social and political organisation of local level communities in the context of Third World development. The emphasis throughout will be on the manner in which economic resources, prestige and influence, and the distribution of power are allocated in localised contexts as a consequence of, and response to, overarching economic relationships and political organisation. Dominant themes will be the nature of social change in peasant societies, migration, urbanisation, religious movements, ethnicity and political mobilisation. A particularly important part of the course will attempt to develop

an anthropological perspective on peasant and proletarian movements as a response to broader systems of social inequality and the unequal distribution of power. Ethnographic data will be drawn from Africa, Latin America and Asia in particular.

Reading list:

Bailey, F. G., *Caste and the economic frontier* (Manchester).
Bailey, F. G., *Politics and social change: Orissa in* 1959 (Manchester).
*Bailey, F. G., *Stratagems and spoils* (Blackwell).
Balandier, G., *Political anthropology* (Penguin).
*Banton, M., *Political systems and the distribution of power* (Tavistock).
*Banton, M., *The social anthropology of complex societies* (Tavistock).
*Beteille, A., *Caste class and power: changing patterns of stratification in a Tanjore village* (Campus).
*Beteille, A., *Social inequality* (Penguin).
Cohen, A., *Urban ethnicity* (Tavistock).
*Cohn, B., *India; the social anthropology of a civilization* (Prentice-Hall).
*Dumont, L., *Homo hierarchicus* (Paladin).
*Epstein, A. L., *Politics in an urban African community* (Manchester).
Epstein, T. S., *Economic development and social change in South India* (Manchester).
*Geertz, C., *Agricultural involution* (California).
*Geertz, C., *Peddlers and princes* (California).
Geertz, C., *The social history of an Indonesian town* (California).
Grillo, R. D., *African railwaymen* (Cambridge).
Kapferer, B., *Strategy and transaction in an African factory* (Manchester).
*Long, N., *Social change and the individual* (Manchester).
*Mitchell, J. C., *Social networks in urban situations* (Manchester).
Peacock, J., *Indonesia—an anthropological perspective* (Goodyear).
*Shanin, T., *Peasants and peasant societies* (Penguin).
Swartz, M., *Local level politics* (Aldine).
Vatuk, S., *Kinship and urbanization* (Calif. U.P.).
Vincent, J., *African elite: the big men of a small town* (Columbia U.P.).
Wertheim, W., *Indonesian society in transition* (Van Hoeve).

Books marked * are available in paperback editions.

CENTRE FOR ASIAN STUDIES

AQ01 Chinese I.

Subject to the availability of staff a course in modern Chinese language (Mandarin) will be introduced in 1975, beginning with Chinese I (no pre-requisite). Further details will be available at or before the time of enrolment (February 1975). Prospective students may have their names placed on a mailing list for advance information by writing to the Chairman, Centre for Asian Studies.

AQ21 Japanese I and AQ31 Japanese IA.

Subject to the availability of staff a course in modern Japanese language will be introduced in 1975, beginning with Japanese I (pre-requisite: Japanese to Matriculation standard) and Japanese IA (no pre-requisite). Further details will be available at or before the time of enrolment (February 1975). Prospective students may have their names placed on a mailing list for advance information by writing to the Chairman, Centre for Asian Studies.

AQ12 Asian Development II.

Pre-requisite: Any two first-year subjects (or the equivalent in half-subjects) in the departments of Economics, Geography, History or Politics.

AQ12 Asian Development II is an interdisciplinary subject surveying the historical background to, and nature of contemporary political and economic institutions and issues in the three major regions of Asia: East, South and South-East Asia. It will be conducted as two lectures and one tutorial per week throughout the year.

Introductory reading:

Elkan, W., *An introduction to development economics* (Penguin).

Stein, L., *Economic realities in poor countries* (Angus and Robertson).

Myint, H., *South East Asia's economy* (Penguin).

Buchanan, K. McP., *The South-East Asian world* (Bell).

Panikkar, K. M., *Asia and Western dominance* (Methuen University Paperbacks).

Reference books:

Little, I. M. D., Scitovsky, T., and Scott, M. F., *Industry and trade in some developing countries* (O.U.P.).

Myrdal, G., *Asian drama* (Penguin or Pantheon, 3 volumes. A one volume condensed version is also available.).

Sutcliffe, R. B., *Industry and underdevelopment* (Addison Wesley).

Bernstein, H. (ed.), *Underdevelopment and development* (Penguin).

Seers, D., and Joy, L. (eds.), *Development in a divided world* (Penguin).

Onslow, C. (ed.), *Asian economic development* (Weidenfeld and Nicolson).

Kirby, E. S., *Economic development in East Asia* (Allen and Unwin).

Robinson, E. A. G., and Kidron, M. (eds.), *Economic development in South Asia* (St. Martins Press).

Economic survey of Asia and Far East (annual) (U.N.E.C.A.F.E.); *and Economic bulletin for Asia and the Far East* (quarterly) (U.N.E.C.A.F.E.).

Donnithorne, A. G., *China's economic system* (Allen and Unwin).

Li Choh-Min (ed.), *Industrial development in Communist China* (Praeger).

Wheelwright, E. L., *The Chinese road to socialism* (Monthly Review).

Wu Yuan-Li, *The economy of Communist China* (Pall Mall).

Malenbaum, W., *Prospects of Indian development* (Allen and Unwin).

Hanson, A. H., *The process of planning: a study of India's five year plans, 1950-1964* (O.U.P.).
Streeton, P., and Lipton, M. (eds.), *The crisis of Indian planning* (O.U.P.).
Golay, F. H., *The Philippines: public policy and national economic development* (Cornell U.P.).
Power, J. H., and Sicat, G. P., *The Philippines: industrialisation and trade policies* (O.U.P.).
Steinberg, D. J., and others, *In search of South East Asia: a modern history* (Praeger).
Friedman, E., and Seldon, M., *America's Asia* (Random).
Caldwell, M., *Indonesia* (O.U.P.).
Legge, J., *Indonesia* (Prentice-Hall).
Geertz, C., *Agricultural involution* (California U.P.).
Chesneaux, J., *The Vietnamese nation* (Current Book Distributors).
Committee of Concerned Asian Scholars, *The Indo-China story* (Bantam).
Sansom, R. L., *The economics of insurgency in the Mekong Delta of Vietnam* (M.I.T. Press).
Means, G. P., *Malaysian politics* (London U.P.).
McAlister, J. T., *Vietnam: the origins of revolution* (Allen Lane).
Fitzgerald, F., *Fire in the lake* (Little, Brown).

Other references will be given at the beginning of first term.

CLASSICS

The editions of Greek and Latin texts mentioned below are not prescribed, but are recommended for the use of students.

Parts of the syllabuses may be examined separately during the year.

Before starting the final Honours year in any school, students must be qualified for admission to the Ordinary degree.

LATIN.

There are three subjects in Latin for the Ordinary degree of Bachelor of Arts: AC01 Latin I, AC02 Latin II, and AC03 Latin III. Except with the permission of the Faculty of Arts, no student proceeding to a degree may take the subject AC02 Latin II until he has passed in AC01 Latin I, or the subject AC03 Latin III until he has passed in AC02 Latin II. No subject is pre-requisite to AC01 Latin I, but the standard of Latin at the Matriculation Examination is assumed, and, in general, students are not advised to attempt the subject unless they have reached Grade C or higher in that examination.

Every student taking a subject in Latin should have a Latin-English lexicon and a Latin grammar. Students who propose to take more than one subject in Latin should have Lewis and Short, *Latin Dictionary* (O.U.P.).

AC01 Latin I, AC02 Latin II and AC03 Latin III are available to approved students with exemption from lectures in special circumstances approved by the Chairman of the Department of Classics.

AC01 Latin I.

The subject is divided into two parts:

(a) The study of three works of Latin literature:
Virgil, *Aeneid II*, ed. R. G. Austin (O.U.P.).
Livy, Book I, eds. H. E. Gould and J. L. Whiteley (Macmillan).
Horace, *Odes I*, eds. H. E. Gould and J. L. Whiteley (Macmillan).

Each work is the subject of two weekly lectures in one term. The works may be examined separately during the year: passages from them are set for translation, short passages are set for comment, and an essay may also be set.

(b) A course to improve the students' knowledge of the language, and to widen their reading. The material that students will use will be issued during the year. There will be weekly written work and a weekly tutorial.

AC02 Latin II.

The subject is divided into three parts:

(a) The study of four works of Latin literature:
Ovid, *Amores I*, ed. J. A. Barsby (O.U.P.).
Horace, *Odes III*, ed. G. Williams (O.U.P.).
Juvenal, *Satires*, ed. J. D. Duff (C.U.P.).
Levens, R. G. C., *A book of Latin letters* (Methuen).
The works may be examined separately during the year.

(b) A course to improve the students' knowledge of the language: it will include exercises in translation and in the criticism of selected passages. The material will be issued during the year. There will be a weekly tutorial throughout the year.

(c) The history of the later Roman Republic (133-27 B.C.). See the syllabus for AC72 Ancient History II for the content of the lectures and the preliminary reading necessary. The lectures will be given, and an essay is to be written, in the second term. Students should obtain Cary, *History of Rome* (Macmillan) *or* Scullard, *From the Gracchi to Nero* (Methuen).

Students intending to enrol for the course should consult the Chairman of the Department as early as possible in January to discuss vacation reading. It is intended that one of the set texts in (a) will have been read before the start of the first term.

AC03 Latin III.

The subject is divided into four parts:

(a) The study of five works of Latin literature:

Tacitus, *Annals I*, ed. N. P. Miller (Methuen), in addition to the works prescribed for AC02 Latin II. The works may be examined separately during the year.

(b) A course to improve the students' knowledge of the language: it will include exercises in translation and in the criticism of selected passages. The material will be issued during the year. There will be a weekly tutorial throughout the year.

(c) The history of the early Roman Empire (27 B.C.-180 A.D.). See the syllabus for AC72 Ancient History II for the content of the lectures and the preliminary reading necessary. The lectures will be given, and an essay is to be written, in the third term. Students should obtain Cary, *History of Rome* (Macmillan) *or* Wells and Barrow, *Short history of the Roman Empire to the death of Marcus Aurelius* (Methuen).

(d) Roman society of the late Republic and early Empire. Students are advised to obtain Balsdon, J. P. V. D., *Life and leisure in Ancient Rome* (Bodley Head).

Students intending to enrol for the course should consult the Chairman of the Department as early as possible in January to discuss vacation reading. It is intended that one of the set texts in (a) will have been read before the start of the first term.

HONOURS DEGREE.

AC89 Latin for the Honours degree of B.A.

Pre-requisite subjects: AC01 Latin I, AC02 Latin II, AC03 Latin III; AC11 Greek I *or* AC78 Greek IIIS.

The formal work of the final Honours year consists mainly of weekly essays and tutorials. Essays in one term are devoted to literature, and in the other two to history and society. Unseen translation is also practised.

The examination consists of the following three-hour papers:

(a) Passages for translation into English from Latin prose authors.
(b) Passages for translation into English from Latin poets.
(c) Latin literature.
(d) Roman history: the Age of Augustus.
(e) Roman society, thought and religion.

A wide choice of topics will be given in papers (c), (d) and (e).

GREEK.

There are four subjects in Greek for the Ordinary degree of Bachelor of Arts: AC71 Greek IA, AC11 Greek I, AC12 Greek II and AC13 Greek III. Except with the permission of the Faculty of Arts, no student proceeding to a degree may take the subject AC12 Greek II until he has passed in AC11 Greek I, or the subject AC13 Greek III until he has passed in AC12 Greek II. No subject is pre-requisite to AC11 Greek I, but, in general, students are advised to have obtained the standard of Greek at the Matriculation Examination, or a pass in AC71 Greek IA.

Every student taking a subject in Greek should have a Greek-English lexicon and a Greek grammar. Students who propose to take more than one subject in Greek should have Liddell and Scott, *Greek-English Lexicon*, 9th edition, ed. Jones (O.U.P.).

AC71 Greek IA.

This subject aims to give students with no previous knowledge of the language a reading knowledge of classical Greek in one year. It is countable as one of the required nine subjects towards the Ordinary degree. It occupies four hours of formal tuition a week.

Students who pass in the examination at the end of this subject will be expected to take AC11 Greek I in a subsequent year.

The following books will be used:

Walters, W. C. F., and Conway, R. S., *Deigma* (Murray).
McKay, K. L., *Croesus of Lydia* (A.N.U. Press).

AC11 Greek I.

The subject is divided into two parts:

(a) The study of four works of Greek literature:
Homer, *Odyssey VI-VII*, in *Odyssey I-XII*, ed. Stanford (Macmillan).
Herodotus IX, ed. E. S. Shuckburgh (C.U.P.).
Euripides, *Medea*, ed. D. L. Page (O.U.P.).
Nairn, J. A., and Nairn, G. A., *Greek through reading* (Ginn).

The works may be examined separately during the year: passages from them are set for translation, short passages are set for comment, and an essay may be set.

(b) A course to improve the students' knowledge of the language, and to widen their reading. The material that students will use will be issued during the year. It involves weekly written work and a weekly tutorial.

Students intending to enrol for the course should consult the Chairman of the Department as early as possible in January to discuss vacation reading. It is intended that one of the set texts in (a) will have been read before the start of the first term.

AC77 Greek IIS.

This subject is available only to those who have been accepted as Honours students in Classical Studies or Latin. It aims to give students with no previous knowledge of the language a reading knowledge of classical Greek in one year. It occupies four hours of formal tuition a week.

The books used are as set out in the syllabus for AC71 Greek IA.

AC12 Greek II.

The subject is divided into three parts:

(a) The study of four works of Greek literature:
Homer, *Odyssey IV*, in *Odyssey I-XII*, ed. E. S. Stanford (Macmillan).
Thucydides VI, ed. K. J. Dover (O.U.P.).
Sophocles, *Antigone*, eds. R. Jebb and E. S. Shuckburgh (C.U.P.).
Aristophanes, *Birds*, ed. W. W. Merry (O.U.P.).

The works may be examined separately during the year.

(b) The history of Greece (600-404 B.C.). See the syllabus for AC72 Ancient History II for the content of the lectures and the preliminary reading necessary. The lectures will be given, and an essay is to be written, in the first term. Students should obtain Ehrenberg, V., *From Solon to Socrates* (Methuen University Paperback).

(c) A course to improve the students' knowledge of the language: the course will include exercises in translation, and the detailed study of selected passages. There will be weekly written work and a weekly tutorial. The material to be used by students will be issued during the year.

Students intending to enrol for the course should consult the Chairman of the Department as early as possible in January to discuss vacation reading. It is intended that one of the set texts in (a) will have been read before the start of the first term.

AC78 Greek IIIS.

Pre-requisite subject: AC77 Greek IIS.

This subject is available only to those who have been accepted as Honours students in Classical Studies or Latin.

The syllabus is as set out for AC11 Greek I.

AC13 Greek III.

The subject is divided into three parts:

(a) The study of five works of Greek literature:
Aeschylus, *Agamemnon*, eds. Denniston and Page (O.U.P.),
in addition to the works prescribed for AC12 Greek II.

The works may be examined separately during the year.

(b) Greek society and thought down to the fourth century B.C.

Recommended books:
Cornford, F. M., *Before and after Socrates* (C.U.P.).
Andrewes, A., *Greek society* (Penguin).
Frost, F. J., *Greek society* (Heath).
Jones, A. H. M., *Athenian democracy* (Blackwell).

(c) A course to improve the students' knowledge of the language: the course will include exercises in translation, and the detailed study of selected passages. There will be weekly written work and a weekly tutorial in the second and third terms. The material to be used by students will be issued during those terms.

Students intending to enrol for the course should consult the Chairman of the Department as early as possible in January to discuss vacation reading. It is intended that one of the set texts in (a) will have been read before the start of the first term.

CLASSICAL STUDIES.

There are three subjects in Classical Studies for the Ordinary degree of Bachelor of Arts: AC31 Classical Studies I, AC32 Classical Studies II and AC33 Classical Studies III. Except with the permission of the Faculty of Arts, no student proceeding to a degree may take the subject AC32 Classical Studies II until he has passed in AC31 Classical Studies I, or the subject AC33 Classical Studies III until he has passed *either* in AC32 Classical Studies II *or* both AC31 Classical Studies I and AC72 Ancient History II. No subject is pre-requisite to AC31 Classical Studies I.

In these subjects classical literature is studied in translation, and no knowledge of Greek or Latin is required.

A student may not count as subjects towards the degree both AC31 Classical Studies I and *either* AC12 Greek II *or* AC13 Greek III.

AC31 Classical Studies I.

The subject forms an introduction to the classical world, and is concerned with the literature of classical Greece and its social and cultural background. Greek epic is studied in first term, Greek tragedy and prose history (Herodotus) in second term, and Greek drama in third term. As an example of the method that is followed, the treatment of epic is as follows: there is one lecture and one tutorial a week on epic literature, combining a broader survey with detailed study of the *Iliad*, the *Odyssey*, and the *Argonautica*. The tutorial, for which preparatory written work is set, is connected with the lecture. A second lecture a week is given in a general course intended to provide background for the literary studies. Topics include Mycenaean civilisation, Homeric society, religion, archaeology, etc.

Parts of the syllabus may be examined separately during the year.

General books for the whole subject, which students should obtain:

Finley, M. I., *The ancient Greeks* (Pelican); *or*

Baldry, H. C., *Ancient Greek literature in its living context* (Thames and Hudson); *or*

Arnott, P. D., *Introduction to the Greek world* (Sphere Books).

Bowra, C. M., *Landmarks in Greek literature* (Weidenfeld Goldback *or* Pelican).

Books for the individual genres studied:

1. EPIC.

Texts which students should obtain:

The Iliad of Homer, tr. Lattimore (Chicago U.P.).
Homer, *The Odyssey*, tr. Fitzgerald (Panther paperback).
Apollonius of Rhodes, *The voyage of Argo*, tr. Rieu (Penguin).

Recommended books:

Beye, C. R., *The Iliad, the Odyssey and the epic tradition* (Macmillan).
Bowra, C. M., *Homer* (Duckworth).
Finley, M. I., *World of Odysseus* (Pelican).
Kirk, G. S., *Homer and the epic* (C.U.P. paperback).
Knight, W. F. J., *Many-minded Homer* (Allen and Unwin).
Mireaux, E., *Daily life in the time of Homer* (Allen and Unwin).
Steiner, G., *Homer* (Prentice-Hall).
Thomas, C. G. (ed.), *Homer's history* (Holt, Rinehart and Winston).
Thornton, A., *People and themes in Homer's Odyssey* (Methuen).

2. DRAMA.

Preliminary reading:

Kitto, H. D. F., *Greek Tragedy* (University paperback). *or*
Lesky, A., *History of Greek Literature* (Methuen). *or*
Lesky, A., *Greek Tragedy* (Benn paperback).

Aeschylus: *Agamemnon*, *Libation Bearers*, *Eumenides* } all in *The complete Greek tragedies*, eds. Grene, D., and Lattimore, R., *Aeschylus*, vol. I (Washington Square Press).

Sophocles: *Oedipus the King*, *Antigone*, *Philoctetes* } all in *The complete Greek tragedies*, eds. Grene, D., and Lattimore, R., *Sophocles*, vols. I and II (Washington Square Press).

Euripides *Hippolytus*, *Bacchae*, *Medea* } all in *The complete Greek tragedies*, eds. Grene, D. and Lattimore, R., *Euripides*, vols. I and V (Washington Square Press).

Aristophanes: *The poet and the women*, in Aristophanes, *Three comedies* (Penguin).
Birds, tr. Arrowsmith (Mentor paperback).

Menander: *The bad-tempered man* in Menander, *Plays and fragments* (Penguin).

Recommended reading:

Arnott, P., *Greek scenic conventions in the fifth century B.C.* (O.U.P.).
Bowra, M., *Sophoclean tragedy* (Oxford paperback).
Dodds, E. R., *The Greeks and the irrational* (Beacon paperback).
Dover, K. J., *Aristophanic comedy* (Batsford).
Ehrenberg, V., *The people of Aristophanes* (Blackwell).
Grant, M., *The Myths of the Greeks and Romans* (Weidenfeld).
Grube, G. M. A., *The Drama of Euripides* (Methuen).
Jones, J., *On Aristotle and Greek Tragedy* (Chatto and Windus).
Kitto, H. D. F., *Form and Meaning in Drama* (Methuen paperback).
Lattimore, R. A., *The Poetry of Greek Tragedy* (Johns Hopkins).
Pickard-Cambridge, A. W., *Dithyramb, Tragedy and Comedy*, revised edition (O.U.P.).
Waldock, A. J., *Sophocles the Dramatist* (C.U.P.).
Webster, T. B. L., *Studies in later Greek comedy* (Manchester U.P.).
Webster, T. B. L., *Studies in Menander* (Manchester U.P.).
Whitman, C. H., *Aristophanes and the Comic Hero* (Harvard Univ. Press).
Whitman, C. H., *Sophocles; a study in Homeric humanism* (Harvard Univ. Press).

3. HERODOTUS.

Text which students should obtain:

Herodotus, *The histories*, tr. de Sélincourt (Penguin).

Books for reference:

Bury, J. B., *The ancient Greek historians* (Dover, New York).
Usher, S., *The historians of Greece and Rome* (University paperback).
Fornara, W., *Herodotus* (O.U.P.).
Myres, J. L., *Herodotus* (O.U.P.).

AC32 Classical Studies II.

Pre-requisite subject: AC31 Classical Studies I.

The subject is concerned with the social and cultural development of Rome from the origins to the principate of Augustus. The method followed in the first and third terms is similar to that of AC31 Classical Studies I, combining literary studies with a study of the social and cultural background. Roman art and architecture is studied in second term: there will be two weekly lectures, illustrated with slides, and a weekly tutorial.

Parts of the syllabus may be examined separately during the year.

General book for the whole subject, which students should obtain:

Barrow, R. H., *The Romans* (Pelican).

Recommended reading:

Arnott, P. D., *An introduction to the Roman world* (Macmillan).
Balsdon, J. P. V. D. (ed.), *Roman civilization* (Pelican).
Duff, J. Wight., *A literary history of Rome in the golden age* (Benn paperback).
Duff, J. Wight., *A literary history of Rome in the silver age* (Benn paperback).
Grant, M., *Roman literature* (Pelican).
Higginbotham, J. (ed.), *Greek and Latin literature, a comparative study* (University paperback).
Williams, G., *The nature of Roman poetry* (Oxford paperback).

Books for the literary studies, within the following periods:

1. Republican Literature: First term.

Texts which students should obtain:

Plautus, *Pseudolus*, in *The pot of gold and other plays* (Penguin).
Catullus, *The poems*, tr. Michie, J. (Hart Davis).
Lucretius, *The way things are*, tr. Humphies (Indiana U.P. paperback).
Cicero, *Selected works*, tr. Grant (Penguin).

Recommended books:

Beare, W., *The Roman stage* (Methuen).
Dorey, T. A., and Dudley, D. R. (eds.), *Roman drama* (Routledge).
Duckworth, G. E., *The nature of Roman comedy* (Princeton).
Dorey, T. A. (ed.), *Cicero* (Routledge).
Dudley, D. R. (ed.), *Lucretius* (Routledge).
Quinn, K., *The Catullan revolution* (Heffer).

2. Roman Art and Architecture: Second term.

Text which students should obtain:

Wheeler, R. E. M., *Roman art and architecture* (Thames and Hudson paperback).

Recommended reading:

Bianchi Bandinelli, R., *Rome: centre of power* (Thames and Hudson).
Boethius, A., *Etruscan and Roman architecture* (Pelican History of Art).
Boethius, A., *The golden house of Nero* (Michigan U.P.).
Dudley, D. R., *Urbs Roma: a source book of classical texts on the city and its monuments*; translated, with commentary (Phaidon).
Earl, D. C., *The age of Augustus* (Elek).
Grant, M., *Cities of Vesuvius* (Weidenfeld and Nicolson).
Grant, M., *The Roman Forum* (Weidenfeld and Nicolson).
Hanfmann, G. M. A., *Roman art* (Cory, Adams and Mackay).
Kähler, H., *Rome and her empire* (Methuen).
MacDonald, W. L., *The architecture of the Roman Empire* (Yale U.P.).
MacKendrick, P. L., *The mute stones speak* (St Martin's).
Pollitt, J. J., *The art of Rome c. 753 B.C.-337 A.D.: sources and documents* (Prentice-Hall).
Pollitt, J. J., *Art and experience in classical Greece* (C.U.P.).
Robertson, D. S., *Greek and Roman architecture* (C.U.P. paperback).
Toynbee, J. M. C., *The art of the Romans* (Thames and Hudson).

3. Augustan Literature: Third term.

Texts which students should obtain:

The odes of Horace, tr. Michie (Penguin).
Ovid's Amores, tr. Lee (Murray paperback).
The Eclogues, Georgics and Aeneid of Virgil, tr. Day Lewis (Oxford paperback).

Recommended reading:
Camps, W. A., *An introduction to Virgil's Aeneid* (O.U.P. paperback).
Commager, H. S. (ed.), *Virgil* (Prentice-Hall).
Dudley, D. R. (ed.), *Virgil* (Routledge).
Highet, G., *Poets in a landscape* (Hamilton).
Luck, G., *The Latin love elegy* (Methuen).
Pöschl, V., *The art of Virgil* (Michigan U.P.).
Wilkinson, L. P., *Ovid surveyed* (C.U.P. paperback).

AC33 Classical Studies III.

Pre-requisite subjects: *Either* AC32 Classical Studies II *or* both AC31 Classical Studies I and AC72 Ancient History II.

The subject is concerned, in the first two terms, with comparative studies of some literary genres practised in Greece and Rome: pastoral, satire, the novel, and historiography. In the the third term students may opt to study *either* the literature of the later Roman Empire and the society that produced it *or* ancient philosophy.

Parts of the syllabus may be examined separately during the year.

1. PASTORAL, SATIRE, AND THE NOVEL: First term.

(a) Pastoral.

Texts which students should obtain:
Greek pastoral poetry, tr. A. Holden (Penguin).
Virgil's *Eclogues* in *The Eclogues, Georgics and Aeneid of Virgil*, tr. Day Lewis (Oxford paperback).

Recommended reading:
Higginbotham, J. (ed.), *Greek and Latin literature, a comparative study* (University paperback).
Lawall, G., *Theocritus' Coan pastorals* (Harvard U.P.).
Putnam, M. C., *Virgil's pastoral art* (Princeton U.P.).
Rose, H. J., *The Eclogues of Virgil* (California U.P.).
Rosenmeyer, T., *The green cabinet* (California U.P.).

(b) Satire.

Texts which students should obtain:
Satires of Horace and Persius, ed. Rudd, N. (Penguin).
Juvenal, *The sixteen satires*, tr. Green (Penguin).

Recommended reading:
Highet, G., *Juvenal the satirist* (O.U.P.).
Rudd, N., *The satires of Horace* (C.U.P.).
Sullivan, J. P. (ed.), *Critical essays on Roman literature: Satire* (Routledge and Kegan Paul).
Witke, C., *Latin satire* (Leiden, Brill).

(c) The novel.

Texts which students should obtain:
Petronius, *The satyricon and the fragments*, tr. Sullivan (Penguin).
Apuleius, *The golden ass*, tr. Graves (Penguin).

Recommended reading:
Sullivan, J. P., *The satyricon of Petronius* (Faber).
Walsh, P. G., *The Roman novel* (C.U.P.).

2. GREEK AND ROMAN HISTORIOGRAPHY: Second term.

Texts which students should obtain:

Herodotus, *The histories*, tr. de Selincourt (Penguin).
Thucydides, *The Peloponnesian war*, tr. Warner, with an Introduction by Finley (Penguin).
Sallust, *The Jugurthine war and the conspiracy of Catiline*, tr. Handford (Penguin).
Tacitus, *On imperial Rome*, tr. Grant (Penguin).
Usher, S., *The historians of Greece and Rome* (University paperback).

The above works will be studied as part of a course in the general development of historical writing, including the work of Polybius and Livy.

Recommended reading:

General:

Bury, J. B., *The ancient Greek historians* (Dover).
Dorey, T. A. (ed.), *Latin historians* (Routledge).
Grant, M., *The ancient historians* (Weidenfeld and Nicholson).
Laistner, M. L. W., *The greater Roman historians* (California U.P.).

Books on individual authors:

Fornara, C. W., *Herodotus* (O.U.P.).
Finley, J. H., *Thucydides* (Michigan U.P.).
Polybius, *The histories*, tr. Chambers, M. (Washington Square Press).
Earl, D. C., *The political thought of Sallust* (Amsterdam, Hakkert).
Walsh, P. G., *Livy* (C.U.P.).
Walker, B., *The annals of Tacitus* (Manchester U.P.).

Either

3A. THE LATER ROMAN EMPIRE: Third term.

This part of the course will be concerned with the Graeco-Roman civilisation of the 4th and 5th centuries A.D. The justification for such a course of study is that it is important to examine a civilisation in decay as well as in growth and climax. These centuries also form a bridge between the ancient and mediaeval worlds. Part of the term will be spent on St. Augustine and the rest of the term on a project involving a 4-5,000 word essay. The art and literature of the age will be looked at, and particular consideration will be given to problems such as the conflict between paganism and Christianity, and reasons for the decline of the Roman empire in the West.

Books which students should obtain:

Brown, P., *The world of late antiquity* (Thames and Hudson).
St. Augustine, *Confessions* (Penguin).
Isbell, H., *The last poets of Imperial Rome* (Penguin).

Recommended reading:

Brown, P., *Augustine of Hippo* (Faber).
Chadwick, H., *The early church* (Pelican).
Chambers, M. (ed.), *The fall of Rome* (Holt, Rinehart and Winston).
Jones, A. H. M., *The decline of the ancient world* (Longmans).
Momigliano, A., *The conflict between paganism and Christianity in the fourth century* (Clarendon).

A further reading list will be issued during the year.

or

3B. ANCIENT PHILOSOPHY: Third term.

The course will be concerned primarily with Greek philosophy, including discussion of its influence on Roman thought. The emphasis will be on the ethical side, though necessary background information will be given on such topics as method of investigation, metaphysics, etc.

Books which students should obtain:

Stace, W. T., *A critical history of Greek philosophy* (Macmillan).
Plato, *Last days of Socrates*, tr. Tredennick, H. (Penguin).
Plato, *Gorgias*, tr. Hamilton, W. (Penguin).
Aristotle, *Ethics*, tr. Thomson, J. A. K. (Penguin).

Recommended reading:

Clarke, M. L., *The Roman mind* (Cohen and West).
Copleston, F., *A history of philosophy*, vol. I (Image paperback—two parts).
Cornford, F. M., *Before and after Socrates* (C.U.P.).
Cornford, F. M., *Principium Sapientiae* (C.U.P.).
Edwards, P., and Popkins, R. H. (eds.), *Readings in the history of philosophy*, vols. I-II (Collier-Macmillan).
Freeman, K., *God, man and state* (MacDonald).
Grube, G. M. A., *Plato's thought* (University paperback).
Guthrie, W. K. C., *The Greek philosophers from Thales to Aristotle* (Methuen).
Hicks, R. D., *Stoic and Epicurean* (Longman Green).
Hussey, E., *The Presocratics* (Duckworth).
Ross, Sir David, *Aristotle* (University paperback).
Taylor, A. E., *Plato* (University paperback).
Wheelwright, P. (ed.), *The Presocratics* (Odyssey Press).

There will be two weekly lectures and a weekly seminar during the term.

HONOURS DEGREE.

AC79 Classical Studies for the Honours degree of B.A.

Pre-requisite subjects: AC31 Classical Studies I; AC32 Classical Studies II *or* AC72 Ancient History II; AC33 Classical Studies III; *either* AC01 Latin I, AC02 Latin II and AC03 Latin III *or* AC78 Greek IIIS.

The work of the final Honours year will consist of:

(a) The study of a Greek or Roman text in the original language: for 1975
either
Sophocles, *Oedipus Tyrannus*, ed. R. Jebb (C.U.P.).
or
Horace, *Odes I-IV*, ed. T. E. Page (Macmillan).

(b) The cultural and social development of classical Greece and Rome, to be studied under set topics: e.g. early Greek lyric and its background; the Athenian tragedians; the new learning; and so on.

(c) A special topic, to be chosen from the field of classical studies in accordance with the interests of the candidate. It will be the subject of a long essay to be written during the year.

AC72 Ancient History II.

Second-year subject. Pre-requisite: AC01 Latin I *or* AC11 Greek I *or* AC31 Classical Studies I *or* AH01 History IA *or* AH31 History IB *or* AH41 History IC *or* AP01 Politics I. Not available to exempted students. No knowledge of Latin or Greek is assumed.

A student cannot count as subjects towards his degree both AC72 Ancient History II and any of the following: AC02 Latin II, AC03 Latin III, AC12 Greek II.

A course of lectures concerned with the political and social history of Greece (600-404 B.C.) and Rome (133 B.C.-A.D. 180). The lectures will assume that students are familiar with the outline of the periods being treated, and it is essential that, before the beginning of each term, students should have read at least once those parts of the recommended text-books which deal with the period to be studied. The lectures on Greek history will be given in the first term, those on Roman Republican history (133-27 B.C.) in the second, and those on Roman Imperial history in the third.

An essay is to be written each term. Tutorials will be held on special topics throughout the year.

Parts of the syllabus may be examined separately during the year. Passages from the ancient sources may be set for comment.

Text-books which students should obtain:

Ehrenberg, V., *From Solon to Socrates* (Methuen University Paperback).
Cary, M., *History of Rome* (Macmillan); *or*
Scullard, H. H., *From the Gracchi to Nero* (Methuen University Paperback).
Plutarch, *Rise and fall of Athens* (Penguin).
Plutarch, *Makers of Rome* (Penguin).
Plutarch, *Fall of the Roman Republic* (Penguin).
Suetonius, *Twelve Caesars* (Penguin).

Some useful books:

Greece:

Andrewes, A., *The Greeks* (Hutchinson), republished as *Greek society* (Penguin).
Bengtson, H., *The Greeks and the Persians* (Weidenfeld and Nicolson).
Bowra, C. M., *Periclean Athens* (Weidenfeld and Nicolson).
Burn, A. R., *Persia and the Greeks* (Arnold).
Claster, J. N., *Athenian democracy* (Holt, Rinehart and Winston).
Forrest, W. G., *The emergence of Greek democracy* (World University Library).
Jones, A. H. M., *Athenian democracy* (Blackwell).
Kagan, D., *The outbreak of the Peloponnesian War* (Cornell U.P.).
Kagan, D., *Problems in ancient history*, vol. 1 (Macmillan).
Lewis, N., *The fifth century* (Hakkert).
Meiggs, R., *The Athenian empire* (O.U.P.).
Zimmern, A. E., *The Greek commonwealth* (O.U.P.).
Thucydides, trans. R. Warner (Penguin Classics).
Herodotus, trans. A. de Selincourt (Penguin Classics).

Roman Republic:

Heitland, W. E., *The Roman republic*, vols. II-III (C.U.P.).
Cambridge ancient history, vols. VIII-X (C.U.P.).
Brunt, P. A., *Social conflicts in the Roman republic* (Chatto and Windus).
Kagan, D., *Problems in ancient history*, vol. 2 (Macmillan).
Holmes, T. Rice, *The Roman republic and the founder of the empire* (O.U.P.).
Cowell, F. R., *Cicero and the Roman republic* (Pelican).
Balsdon, J. P. V. D., *Julius Caesar and Rome* (English U.P.).

Appian, *Roman history,* vols. III-IV (Loeb).
Cicero, *Letters,* ed. Wilkinson (Arrow *or* Hutchinson Paper-back).
Badian, E., *Roman imperialism in the late republic* (Blackwell).
Dickinson, J., *Death of a republic* (Macmillan).
Lewis, N., and Reinhold, M., *Roman civilization,* vol. 1 (Columbia U.P.).
Syme, R., *The Roman revolution* (Oxford paperback).

Roman Empire:

Augustus, *Res Gestae Divi Augusti* (*The achievements of the divine Augustus*), ed. P. A. Brunt and J. M. Moore (O.U.P.).
Tacitus, *On imperial Rome,* tr. Grant (Penguin).
Millar, F., *The Roman empire and its neighbours* (Weidenfeld and Nicolson).
Starr, C. G., *Civilization and the Caesars* (Norton).
Lewis, N., and Reinhold, M. (eds.), *Roman civilization,* vol. II (Columbia U.P.).
Cambridge ancient history, vols. X-XI (C.U.P.).
McMullen, R., *Enemies of the Roman order* (O.U.P.).
Wells, J., and Barrow, R. H., *A short history of the Roman empire* (Methuen).
Yavetz, Z., *Plebs and Princeps* (O.U.P.).

HONOURS DEGREE.

AC99 Classics for the Honours degree of B.A.

Pre-requisite subjects: AC01 Latin I, AC02 Latin II and AC03 Latin III; AC11 Greek I, AC12 Greek II and AC13 Greek III.

The formal work of the final Honours year consists mainly of weekly essays and tutorials. Essays in one term are devoted to literature, and in the other two to history and society. Unseen translation is also practised.

The examination consists of the following three-hour papers:

(a) Passages for translation into English from Greek prose authors and poets.
(b) Passages for translation into English from Latin prose authors and poets.
(c) Greek and Latin literature.
(d) Greek and Roman history: Imperial Athens, and the Age of Augustus.
(e) Greek and Roman society, thought and religion.

A wide choice of topics will be given in papers (c), (d) and (e). In each paper candidates must answer questions from both the Greek and the Roman sections.

DRAMA.

(FOR THE DEGREE OF BACHELOR OF ARTS)

Syllabus for UA11 Drama I is published under "MUSIC (for the degree of Bachelor of Arts)".

ECONOMICS.

(FOR THE DEGREE OF BACHELOR OF ARTS)

It is possible for Arts students to take first- and second-year subjects and/or half-subjects in Economics which will enable them to take either one or even two economics subjects in the the third year of the course for the degree of Bachelor of Arts. Courses in Economics forming such a sequence are the half-subjects EE1G Macroeconomics IH and EE2G Microeconomics IH; EE3G Macroeconomics IIH and EE4G Microeconomics IIH and/or the subjects EE12 Economic History II; and EE03 Economics III and/or EE73 Economic Development Studies III.

Arts students may also take the following subjects in Economics: In first year, EE41 Mathematics (Economics) I and EC01 Elements of Accounting I, and in second year EE22 Economic Statistics II or EE32 Economic Statistics IIA. EE41 Mathematics (Economics) I, however, may not be offered for the degree of B.A. unless the half-subjects EE1G Macroeconomics IH and EE2G Microeconomics IH, are also offered.

The subject EE71 Social Economics I is designed for students who intend to take only a one-year course in Economics, and all such students are recommended to take it instead of the two half-subjects EE1G Macroeconomics IH and EE2G Microeconomics IH. It will not be accepted as qualifying a student to enrol in the second-year half-subjects EE3G Macroeconomics IIH and EE4G Microeconomics IIH, except that students who have passed with credit in EE71 Social Economics I may, with the approval of the Dean of the Faculty of Economics, be permitted to enrol in the two second-year half-subjects EE3G Macroeconomics IIH and EE4G Microeconomics IIH.

EE71 Social Economics I.

This course is given each year, alternating between day lectures in odd years and evening lectures in even years. It comprises two lectures and one tutorial a week. Its scope is as follows:

The economic basis of social welfare, with special reference to the following topics: demand and supply; competition and monopoly; distribution of income and wealth; international trade; national accounting; money and banking; theory of employment; government policy in depression and inflation; capital accumulation in underdeveloped areas.

Preliminary reading:

Heilbroner, R. L., *The making of economic society* (Prentice-Hall).

Text-books:

Gill, R. T., *Economic development past and present* (Prentice-Hall).

Samuelson, P. A., Hancock, K. J., and Wallace, R. H., *Economics*, Australian ed. (McGraw-Hill).

Reference books will be prescribed in lectures.

SUBJECTS FOR A SEQUENCE IN ECONOMICS.
(FOR THE DEGREE OF B.A.)

FIRST YEAR.

(Group A subjects and half-subjects.)

EE41 Mathematics (Economics) I.

EC01 Elements of Accounting I.

EE1G Macroeconomics IH.

EE2G Microeconomics IH.

For syllabuses see under the degree of B.Ec. in the Faculty of Economics.

SECOND YEAR.
(Group B subjects and half-subjects.)

EE12 Economic History II.

EE22 Economic Statistics II.

EE32 Economic Statistics IIA.

EE3G Macroeconomics IIH.

EE4G Microeconomics IIH.

For syllabuses see under the degree of B.Ec. in the Faculty of Economics.

THIRD YEAR.
(Group C subjects.)

Arts students who have passed the necessary pre-requisite subjects and half-subjects may take either or both of the subjects EE03 Economics III and EE73 Economic Development Studies III.

EE03 Economics III.

EE03 Economics III is available to candidates proceeding to the degree of Bachelor of Arts.

A candidate who wishes to present EE03 Economics III towards the degree must take EE7G International Economics IIIH and two half-subjects from the following list *one* of which must be *either* EE5G Macroeconomics IIIH *or* EE6G Microeconomics III*:

EG4H Agricultural Economics IIIH.
EE8H Econometrics IIIH.
EE6H Russian Economic History IIIH.
EE8G Economic Problems in Historical Perspective IIIH.
EE68 Economic Theory.
EE3H Economics of Labour IIIH.
EE5H History of Economic Thought IIIH.
EE5G Macroeconomics IIIH.
EE7H Managerial Economics IIIH.
EE6G Microeconomics IIIH*.
EE2H Public Finance IIIH.

For syllabuses of these half-subjects see under the degree of B.Ec. in the Faculty of Economics.

* EE6G Microeconomics IIIH will be offered for the first time in 1975, and may not be presented by a candidate who passed EE02 Economics II in 1973 or earlier.

EE73 Economic Development Studies III.

Pre-requisite subects: If EE03 Economics III or the half-subject EE7G International Economics IIIH has not been passed, the half-subject EE7G International Economics IIIH must be taken concurrently.

EE73 Economic Development Studies III is available to candidates proceeding to the degree of Bachelor of Arts. A candidate who wishes to present EE73 Economic Development Studies III must study the subject EE13 Economic Development III and *one* of the half-subjects EE5H History of Economic Thought IIIH *or* EE6H Russian Economic History IIIH *or* EE8G Economic Problems in Historical Perspective IIIH *or* EE7G International Economics IIIH, provided that a part subject may not be counted towards both EE03 Economics III and EE73 Economic Development Studies III.

For syllabuses of this subject and these half-subjects see under the degree of B.Ec. in the Faculty of Economics.

HONOURS DEGREE.

EE99 Economics for the Honours degree of B.A. and B.Ec.

For syllabuses see under the degree of B.Ec. in the Faculty of Economics.

ENGLISH LANGUAGE AND LITERATURE.

AE01 English I, AE02 English II, AE03 English III, AE87 Old and Middle English II, AE88 Old and Middle English III, AE82 American Literature II, AE72 Australian Literary Studies II, AE73 Australian Literary Studies III, AE92 Linguistics II and AE93 Linguistics III are subjects for the Ordinary degree of Bachelor of Arts. No student proceeding to a degree may, without special permission, take AE02 English II or AE87 Old and Middle English II until he has passed the final examination in AE01 English I, AE03 English III until he has passed the final examination in AE02 English II, AE88 Old and Middle English III until he has passed the final examination in AE87 Old and Middle English II, AE73 Australian Literary Studies III until he has passed the final examination in AE72 Australian Literary Studies II or AE93 Linguistics III until he has passed the final examination in AE92 Linguistics II.

The subjects are made up of lectures and tutorials. Since the tutorial groups are small, and are arranged as far as possible at times to suit the best convenience of both students and tutors, all students must attend the preliminary meeting held in the first week of the first term in each year, at which the tutorial timetable is fixed.

In AE01 English I and AE02 English II there are two lectures and one tutorial a week. In AE03 English III, three lectures and one tutorial.

AE01 English I, AE02 English II and AE03 English III are available to approved students with exemption from lectures.

AE01 English I.

There are no pre-requisites for AE01 English I, but a knowledge of English Literature and a facility in English expression of Matriculation standard is desirable. Students who have reason to think they do not meet this standard are advised to consult the Chairman of the Department before enrolment.

I. English Language.

The history and structure of the English language.

Pyles, T., and Algeo, J., *English: An introduction to language* (Harcourt, Brace and World paperback).

II. English Literature.

A critical study of some of the main types of English literature at various periods with a detailed knowledge of the following books:

A. Poetry:

Chaucer, *The Miller's prologue and tale*, ed. J. Winny (C.U.P., paperback).

Shakespeare, *The sonnets*, ed. J. Dover Wilson (Cambridge New Shakespeare, paperback).

Wordsworth, *Selected poetry and prose*, ed. G. Hartman (Signet)*

Hopkins, *A selection of poems and prose*, ed. W. H. Gardner (Penguin).*

Modern poets, One (Yeats, Frost, etc.), ed. J. Hunter (Faber).

Modern poets, Two (D. H. Lawrence, Pound, etc.), ed. J. Hunter (Faber).

* Selections to be studied from these texts will be announced early in 1975.

B. Drama:

Shakespeare, *Othello* (Methuen New Arden *or* Cambridge New Shakespeare, paperback)

Much ado about nothing (New Cambridge Shakespeare, paperback).

Congreve, *The way of the world*, ed. K. M. Lynch (Arnold: Regents Restoration Drama Series).

Shaw, G. B., *Heartbreak house*, ed. A. C. Ward (Longmans, Green, paperback).

Bond, E., *Lear* (Methuen Modern Plays).

C. Novel:

Fielding, H., *Joseph Andrews* (Everyman's University Library, paperback).

Austen, J., *Pride and prejudice* (Penguin).

Dickens, *Dombey and son* (Penguin).

James, H., *What Maisie knew* (Penguin).

Woolf, V., *To the lighthouse* (Penguin).

Golding, W., *Free fall* (Faber, paperback).

Assessment as at present envisaged is based upon the year's work (essays and tutorial assignments) and upon two three-hour examinations at the end of the course in the proportion of one-third to two-thirds.

AE02 English II.

Pre-requisite subject: AE01 English I.

For 1975 *only* the English II course will consist of Sections A and B of AE03 English III. In 1976 and later years AE02 English II will be a course in English Literature since 1780 similar in scope to Sections A and B of the 1975 AE03 English III course. In 1976 and later years AE03 English III will be a course in English Literature of the period 1550-1780 of appropriate scope and difficulty for a third-year unit. Special arrangements will be made for students who have completed AE02 English II in 1974 or earlier and who may wish to take AE03 English III in 1976 or later.

Assessment as at present envisaged is by assignments during the year and two examination papers at the end of it. Four questions must thus be answered on each paper; numerous alternatives are provided.

AE03 English III.

Pre-requisite subject: AE02 English II.

A study of English Literature and Drama with special but not exclusive reference to the works listed. This study will comprehend all three sections below.

A. Poetry since 1780.

Selected poems of Blake, Wordsworth, Coleridge, Byron, Keats, Tennyson, Browning, Hardy, Yeats, T. S. Eliot, Auden and Dylan Thomas. The selection will include Wordsworth's *Prelude*. This section will also include a study of the prose essays in Foakes (ed.), *Romantic criticism* (Arnold's English Texts). The following collections are recommended.

Blake, *Poems* (Oxford Standard Authors).

Wordsworth, *Selected poetry and prose* (Signet).

Coleridge, *Selected poems* (New Oxford English Series).

Byron, *Selected poetry and prose* (Signet).

Keats, *Selected poems and letters* (Riverside Edition).

Tennyson, *Tennyson's poetry* (Norton Critical Edition).

Browning, *Selected poetry* (Papermac).

Hardy, *Poems of Thomas Hardy: a selection*, ed. P. N. Furbank (Macmillan).

Yeats, *Selected poetry* (Papermac).

Eliot, *Collected poems*, 1909-1962 (Faber).

Auden, *Collected shorter poems* (Faber).

Thomas, D., *Collected poems* (Everyman).

Foakes (ed.), *Romantic criticism* (Arnold's English Texts).

B. Prose Fiction since 1780.

Flaubert, *Madame Bovary.*
Tolstoy, *Anna Karenina.*
Austen, *Persuasion.*
Bronte, *Wuthering heights.*
Dickens, *Our mutual friend.*
Eliot, *Middlemarch.*
James, *Portrait of a lady.*
Bennet, *The old wives' tale.*
Conrad, *The secret agent.*
Joyce, *Portrait of the artist as a young man.*
Lawrence, *Women in love.*
Woolf, *The waves.*
White, *Riders in the chariot.*

C. Shakespeare; Modern Drama.

Shakespeare, *Hamlet, Antony and Cleopatra, Henry IV*, Part II, and *Richard II.*
Ibsen, *Ghosts and other plays* (Penguin), *The master builder and other plays* (Penguin).
Chekhov, *Three sisters and other plays* (Penguin).
Strindberg, *Three plays* (Penguin).
Pirandello, *Henry IV, and other plays* (Penguin).
Brecht, *Mother Courage, Galileo* (Methuen).
Beckett, *Endgame, Waiting for Godot* (Faber).

Assessment as at present envisaged is by assignments during the year and by two examination papers at the end of it. The first paper is devoted to literature since 1780 (general questions) and drama, the second paper is devoted to poetry and prose since 1780.

Note: In 1975 *only* sections A and B of the syllabus above will be the syllabus for AE02 English II. In 1976 and later years the syllabus for AE03 English III will be a selection of texts from the literature in English of the period 1550-1780. Special arrangements will be made for students who completed English II *before* 1975 and wish to take English III *after* 1975.

Optional alternative:

Comparative Literature.

This course is available in 1975 to all students of AE03 English III, AF03 French III and AG03 German III. It will be taught on an interdisciplinary basis and is the equivalent of one-third of a subject. The course aims at providing a broadly based introduction to the study of comparative literature.

Candidates for AE03 English III who elect to take the optional alternative "Comparative Literature" will omit Section C from the AE03 English III course above. They will sit the first AE03 English III examination paper but alternative assessment will be arranged.

The course which is entitled "Myth and Myth-Parody in Modern Literature" consists of the following topics:

(a) *Classical Myth.*

Pope, *The Dunciad* (Twickenham).
Sartre, J. P., *Les Mouches* (Livre de Poche).
Sartre, J. P., *The Flies* (Penguin 3 Plays).
Giraudoux, *Electra* (Livre de Poche).
Giraudoux, *Electra* (3 Plays, vol. 2, Hill and Wang).
O'Neill, E., *Mourning becomes Electra.*

(b) *Religious Quest and Parody.*
Melville, H., *Moby Dick* (Signet).
Kafka, F., *Das Schloss* (dtv) *The Castle* (Penguin).
Beckett, S., *Waiting for Godot* (Faber).
Beckett, S., *En attendant Godot* (Harrap).
Barth, J., *Giles Goat Boy* (Penguin).

(c) *Utopia and Anti-Utopia.*
Zamyatin, *We* (Dutton).
Huxley, *Brave new world* (Penguin).
Hesse, H., *The glass bead game* (Penguin).

There will be three introductory lectures on the theory and scope of studies in Comparative Literature. These will be based in part on S. Prawer, *Comparative literary studies* (Duckworth, London: required reading) and on selections from *Yearbook of comparative and general literature* (eds. H. Frenz, H. H. Remak and U. Weisstein, Indiana University). There will be a guest lecture by a member of the Classics Department on some of the classical background texts. There will also be a guest lecture by the Professor of Politics on aspects of Utopia.

AE87 Old and Middle English II.

Pre-requisite subject: AE01 English I.

A. Anglo-Saxon Culture and Institutions.

B. Introduction to Old English Language and Literature.

Prescribed book:
Cassidy, F. G., and Ringler, R. N. (eds.), *Bright's Old English grammar and reader*, 3rd edition (Holt, Rinehart and Winston).

C. Introduction to Early Middle English Language and Literature.

Prescribed book:
Bennett, J. A. W., and Smithers, G. V. (eds.), *Early Middle English verse and prose*, 2nd edition (O.U.P.).

AE88 Old and Middle English III.

Pre-requisite subject: AE87 Old and Middle English II.

A. Medieval English Culture and Institutions.

B. Old and Middle English Language.

For reference:
Quirk, R., and Wrenn, C. L., *An Old English grammar*, 2nd edition (Methuen).
Wardale, E. E., *An introduction to Middle English* (Routledge, paperback).

C. Study of Old and Middle English Texts.

Prescribed books:
Cassidy, F. G., and Ringler, R. N. (eds.), *Bright's old English grammar and reader*, 3rd edition (Holt, Rinehart and Winston).
Bennet, J. A. W., and Smithers, G. V. (eds.), *Early middle English verse and prose*, 2nd edition (O.U.P.).
Thomas, R. G. (ed.), *Ten miracle plays* (Arnold).
Gibbs, A. C. (ed.), *Middle English romances* (Arnold).
Silverstein, T. (ed.), *Medieval English lyrics* (Arnold).

AE72 Australian Literary Studies II.

Pre-requisite: AE01 English I or any other first-year unit to be approved by the Chairman of the Department.

The course will consist of two lecture periods (one hour each) each week, with one seminar of two hours each week.

Lectures: The first of the two lecture periods will regularly be used and the second occasionally, according to flexible needs.

Seminars: Students should enquire when enrolling about the available times for seminars. Unless otherwise determined the system of holding seminars at 10 a.m.-12 noon and 2-4 p.m. will be continued and provision will be made for at least one evening meeting for those who cannot fit in at any of these times.

This course is not available to students with exemption from lectures.

I. Poetry and Prose in General.

1. Elliott, B. R., and Mitchell, A. C. W. (eds.), *Bards in the wilderness. Adam Lindsay Gordon*, Colonial Poets series (ed. Elliott).
   Poetry of C. J. Brennan, J. S. Neilson, R. FitzGerald.
   Shapcott, T. W., *Australian poetry now* (Sun Books).
2. Fiction, early.
   Clarke, M., *His natural life* (Penguin) and *For the term of his natural life* (Introduction by Elliott) (Angus and Robertson).
   O'Reilly, J. B., *Moondyne* (Seal).
   Boldrewood, R., *Robbery under arms.*
   Hume, F., *Mystery of a Hansom cab.*
   Spence, C., *Clara Morison.*
   Newland, S., *Paving the way.*
3. Fiction, later.
   Furphy, J., *Such is life.*
   Stead, C., *For love alone.*
   Stow, R., *The merry-go-round in the sea.*
   White, P., *The tree of man.*
   Keneally, T., *The chant of Jimmy Blacksmith.*
   Hazzard, S., *The evening of the holiday; People in glass houses.*
4. Prose, descriptive and critical.
   Clark, M., *A colonial city*, ed. Hergenhan (Queensland U.P.). (This book is available in multiple copies at the Barr Smith Library.)
   Barnes, J., *The writer in Australia* (M.U.P.).

II. More Specialised Topics.

1. Regional Study.
   In connection with *Clara Morison* and *Paving the way*, a selection of early and later South Australian verse will be provided to constitute the core of a limited regional study.
   Supplementary reading will also be indicated in K. E. Fitzpatrick, *Australian explorers* (Worlds' Classics).
2. Short story.
   Lawson, H., *Selected stories*, ed. Matthews (Seal).
   Morrison, J., *Selected stories*, ed. Reid (Seal).
   White, P., *The burnt ones.*
   Moorhouse, F., *The Americans, baby.*
3. Literature of World War I.
   Laird, J. T. (ed.), *Other banners.*
   Boyd, M., *When blackbirds sing.*
   Allusion will also be made to F. Manning, *Her privates we*, and L. Mann, *Flesh in armour.*

Assessment will be continuous with essays and other class papers and a single three hour examination at the end of the course.

AE73 Australian Literary Studies III.

There will be available to selected students, after consultation with the Chairman of the Department, a course in Australian Literary Studies at third-year level, consisting basically of nine subjects or topics for extended study, with three major essays and such other class work as may be determined. Assessment will be continuous and the course will be completed with one examination of three hours and a fourth essay or a second three hour examination in its place.

Details of the course, with times of meetings will be available at the English Department office in December of the preceding year.

In order to qualify for admission a good performance in AE72 Australian Literary Studies II is advisable but all interested students should consult the Chairman of the Department before proceeding with enrolment.

This course is not available to students with exemption from lectures.

AE82 American Literature II.

Pre-requisite subject: AE01 English I.

The course consists of two lectures and one tutorial a week. It is not available to students with exemption from lectures.

PROSE:

Emerson, *Essays* (Signet).
Thoreau, *Walden* and *Civil disobedience* (Signet).
*Hawthorne, *The scarlet letter* (Penguin *or* Perennial Classics).
Melville, *Selected tales and poems* (Rinehart).
*Twain, *Huckleberry Finn.*
James, *The American, The Europeans.*
Fitzgerald, *The Great Gatsby, Tender is the night.*
Faulkner, *The sound and the fury.*
The essential Hemingway (Penguin).
Ellison, *Invisible man.*
Nabokov, *Lolita.*
Bellow, *Herzog.*
Kerouac, *On the road* (Penguin).
McCullers, *The ballad of the sad cafe.*
Cochrane (ed.), *The Penguin Book of American short stories.*

* Available in *Four classic American novels* (Signet).

POETRY:

Whitman, *Leaves of grass* (Modern Library).
Dickinson, *A choice of Emily Dickinson's verse* (Faber).
Frost, *Selected poems* (Rinehart).
Pound, *Selected poems* (Faber).
Stevens, *Selected poems* (Faber).
Crane, H., *Complete poems* (Anchor).
Cummings, *Selected poems* (Faber).
Penguin modern poets, Nos. 5 and 9.
Poulin (ed.), *Contemporary American poetry* (Houghton Mifflin).

DRAMA:

O'Neill, *The iceman cometh, Long days journey into night* (Cape).
Williams, *The glass menagerie, A streetcar named desire* (Penguin).
Miller, *The crucible, Death of a salesman.*
Albee, *Who's afraid of Virginia Woolf* (Penguin).
Kopit, *Indians* (Methuen).

AE92 Linguistics II.

Pre-requisite: A Division I Pass or better in any of: AE01 English I; AF01 French I *or* AF11 French IA; AG01 German I *or* AG11 German IA; AC11 Greek I *or* AC71 Greek IA; AC01 Latin I; QM01 Mathematics I *or* QM11 Mathematics IM; UA51 Music I; AL01 Philosophy I (before 1974); AL1H Introductory Philosophy IH *and* AL2H Logic and Argument IH; AY01 Psychology I.

The subject will consist of two lectures and one tutorial a week providing an introduction to (i) grammar and descriptive linguistics and (ii) historical and social linguistics.

The course may not be attempted externally.

Recommended preliminary reading:

Crystal, D., *Linguistics* (Penguin).
Palmer, F. R., *Grammar* (Penguin).
Bloomfield, L., *Language* (Allen and Unwin).
Chomsky, N., *Syntactic structures* (Mouton).
Lyons, J., *Chomsky* (Fontana).
Lyons, J., *Introduction to theoretical linguistics* (C.U.P.).

AE93 Linguistics III.

Pre-requisite subject: AE92 Linguistics II.

The subject will consist of one lecture and two tutorials or seminars a week. Lectures will provide a more detailed study of grammar, including problems in Transformational Grammar, 'Generative Phonology' and 'Generative Semantics', and will examine other systems of grammar: Glossematics, Tagmemics, the work of the 'London School', particularly M. A. K. Halliday, etc.

Tutorials will provide training in the more subtle discriminations of phonetics: patterns of stress, juncture and intonation. There will also be exercises in transformational grammar and direct involvement in the problems of language description. Seminars will give attention to problems raised by articles in current periodicals and provide opportunity from time to time for meetings with people expert in various fields related to language-study.

Assessment will be made in three ways:

(a) continuous assessment based on tutorial work and exercises,
(b) a three-hour examination at the end of the year,
(c) a long essay: most probably a grammatical analysis of a particular text or variety of language, not necessarily English.

Prescribed text:

Lyons, J., *Introduction to theoretical linguistics* (C.U.P.).

HONOURS DEGREE.

English Language and Literature for the Honours degree of Bachelor of Arts.

Students wishing to take honours should consult the Chairman of the Department before beginning the second year's work.

Before proceeding to the fourth and final year of honours work they will be required:

(a) to reach an acceptable standard in AE02 English II and AE03 English III,
(b) to complete such honours work as may be required in second- and third-year courses in English,
(c) to include in the nine courses required for their pass degree at least *four* from among those provided by the English Department, and to consult the Chairman of the Department about the selection of their other courses.

In special circumstances students may be accepted for honours after their second year.

AE99 Honours English Language and Literature.

The final examination, which will normally be taken at the end of the fourth year, will consist of the following papers:

(i) General Critical Paper, including passages for comment.
Five papers from those listed below, subject to the approval of the Chairman of the Department:
(ii) Old Norse.
(iii) Old English.
(iv) Middle English Special.
(v) Middle English General.
(vi) Special Period of English Literature (taken from the period before 1780).
(vii) Special Period of English Literature (taken from the period after 1780).
(viii) Special Author or Authors.
(ix) Special Topics.
(x) Special Topics.
(xi) The Novel.
(xii) Drama.
(xiii) American Literature.
(xiv) Australian Literature.
(xv) Commonwealth Literature.
(xvi) Continental Novel in Translation.

Before presenting themselves for examination in any of the papers numbered (ii), (iii) and (iv), students will be required to complete the course for AE88 Old and Middle English III.

Paper (v) will be compulsory for all students who have not completed AE87 Old and Middle English II. Paper (xiii) will *not* be available to students who have completed AE82 American Literature II. Paper (xiv) will *not* be available to students who have completed AE73 Australian Literary Studies III. Students may submit a long essay of not more than 12,000 words on a subject approved by the Chairman of the Department as an alternative to *one or two* of papers numbered (viii)-(xvi).

Not all courses are available every year, and some—e.g. (vi), (vii), (xi), (xii), (xvi)—are only available in alternate years. Students intending to proceed to fourth year honours should check at the beginning of their third year, and be prepared to attend lectures in a course of particular interest to them that will not be available in their fourth year. Information about special periods, topics, authors, and other matters, is available from the English Department.

FRENCH LANGUAGE AND LITERATURE.

There are seven courses in French for the Ordinary degree of Bachelor of Arts: AF11 French IA, AF01 French I, AF02 French II, AF12 French IIA, AF72 French IIB, AF03 French III and AF88 French IIIB. AF11 French IA assumes little or no previous knowledge of the language and is a first-year unit for the degree of B.A. The aim of the course is to provide a basic working knowledge of the written and spoken language to those students who have done little or no French at school and who wish to study the language at University, either for cultural reasons, or for more practical reasons, such as to acquire a reading knowledge of French for Honours or postgraduate work in another discipline. No subject is pre-requisite to AF01 French I, but a knowledge of French at the standard of the Matriculation examination is assumed and students are advised to attempt the course only if they have reached Grade D or higher in that examination or possess some other equivalent qualification. Students enrolled in AF01 French I for the first time will not be exempted from attendance at lectures and tutorials.

AF12 French IIA will be taken by students who have passed in AF11 French IA at Division I standard or higher. Students who pass AF12 French IIA will be qualified to enter AF03 French III in the following year. The sequence AF11 French IA, AF12 French IIA, AF03 French III will count as a sequence for the Ordinary degree.

AF72 French IIB may be taken as an additional course to AF02 French II, and may be taken either in second or third year, the only pre-requisite being a pass in AF01 French I at Division I standard or higher. AF72 French IIB does not by itself qualify for admission to AF03 French III, for which a pass in AF02 French II is required.

AF88 French IIIB may also be taken as an additional course to AF03 French III, and will normally be taken in third year, the pre-requisite being a pass in AF72 French IIB. The sequence AF01 French I, AF72 French IIB, AF88 French IIIB will count as a sequence for the Ordinary degree.

In AF02 French II and AF03 French III the lectures on the literature may be given in French.

All exercises set during the year form an integral part of the courses, and students may be refused permission to sit for the annual examination if their performance of the exercises has been unsatisfactory.

AF11 French IA.

N.B.: No previous knowledge of French is required.

1. LANGUAGE.

(a) Grammar, vocabulary, translation and writing of French.

(b) Speaking, aural comprehension, reading of simple texts.

(A major part of this section of the course will be conducted in the Language Laboratory.)

Prescribed text:

Bieler, A., and others, *Perspectives de France*, revised 1972 edition (Prentice-Hall).

Recommended reference books:

Murray, M. W., and Lentz, E. E., *A French vocabulary* (Blackie).

Mansion, J. E., *A grammar of present-day French* (Harrap).

Mansion, J. E., *Harrap's shorter French and English dictionary.*

2. MODERN FRANCE.

Background reading, illustrating the life and culture of contemporary France.

Prescribed text:

Harris, J., and Lévêque, A., *Basic French reader*, 3rd edition (Holt, Rinehart and Winston).

Recommended reference book:

Ardagh, J., *The new France* (Pelican).

3. LITERATURE AND THOUGHT.

Significant modern French authors, read partly in French, partly in translation, with alternative texts to suit special needs.

Prescribed texts:

Camus, *L'Etranger* (Methuen).

either:

(i) *Anthology of French poetry* (to be distributed).

(ii) Ionesco, *Three plays* (Heinemann).

or:

Brichant, C. (ed.), *French for the social sciences* (Prentice-Hall).

or:

Brichant, C. (ed.), *French for the sciences* (Prentice-Hall).

(This section of the course, held largely in tutorial groups during the latter part of the year, will be adapted to suit the specific needs of students from other disciplines, who wish to obtain a reading knowledge of French for Honours or postgraduate work in another subject.)

AF01 French I.

The course comprises:

1. Tuition in the speaking and writing of French by means of the Language Laboratory (1-2 hours a week), lectures on grammar (1 hour a week) and tutorials (1 hour a week);
2. Translation from English into French in the form of sentences, short dialogues, *thèmes d'imitation* based on Language Laboratory work;
3. Lectures on French literature and civilisation: 2 hours a week.

1. LANGUAGE.

Prescribed book:

Barrette, P., and Braun, T., *Second French* (Scott, Foresman).

The student should consult in the library:

Armstrong, L. E., *The phonetics of French* (Bell).

Mansion, J. E., *Harrap's standard French and English dictionary*, 2 vols.

Petit, C., *Dictionnaire français-anglais* and *Dictionnaire anglais-français* (Hachette).

Le Petit Larousse or *Le Nouveau Larousse universel*, 2 vols.

Le Petit Robert.

2. PASSAGES FOR TRANSLATION WILL BE DISTRIBUTED TO STUDENTS.

3(A). LITERATURE.

This will consist of a general introduction to contemporary French literature, based on the study of significant modern literary texts, chosen for the most part from works written since 1940. Some of the prescribed books will be treated *intensively*, for detailed textual commentary, others will be treated *more generally*, by the discussion of their ideas or literary qualities.

Prescribed books:

Textual study:

Davies, J. C. (ed.), *Contes modernes* (Cheshire).

Vercors, *Le Silence de la mer* (Macmillan).

Anthology of modern French poetry (to be distributed).

General study:

Camus, *L'Etranger* (Methuen).

Beauvoir, S., de, *Le Sang des autres* (Folio).

Sartre, *Huis Clos* (Methuen).

Ionesco, *Three plays* (Heinemann).

3(B). Civilisation.

Background lectures to the period of literature and texts which are to be studied. In addition, lectures will be given on such subjects as modern French Cinema (illustrated by the showing of films) and on daily life in modern France (illustrated by slides). There will also be lectures providing an elementary introduction to French history.

Prescribed book:

Ardagh, J., *The new France* (Pelican).

Reference books:

Parker, C. S., and Grigaut, P. L., *Initiation à la culture française* (Harper and Row).

Michaud, G., *Guide France* (Hachette).

AF02 French II.

Pre-requisite subject: AF01 French I at Division I standard or higher.

1. Translation from English into French.

Prescribed book:

Mansion, J. E., *A grammar of present-day French, with exercises* (Harrap).

Reference books: As for French I, together with:

Robert, P., *Dictionnaire alphabétique et analogique de la langue française*, 7 vols.

Bailly, R., *Dictionnaire des synonymes* (Larousse): *or*

Bénac, H., *Dictionnaire des synonymes* (Hachette).

Maquet, C., *Dictionnaire analogique* (Larousse).

Lacroix, U., *Dictionnaire des mots et des idées* (Nathan).

Le Grand Larousse encyclopédique, 10 vols.

Grevisse, M., *Le Bon usage* (Geuthner).

Hanse, J., *Dictionnaire des difficultés grammaticales et lexicologiques* (Baude).

2. Tuition in the speaking and writing of French by means of the Language Laboratory and in tutorials.

Prescribed texts:

Dayan, F., *Les formes verbales du Français—Grammar notes* and *Dialogues et exercices structuraux*, 2 vols. (University of Tasmania).

Helbling, R., and Barnett, A., *L'Actualité Française* and *Interviews. Tape study guide* (Holt, Rinehart and Winston).

Beauvoir, S., de, *Les belles images* (Folio).

3. Literature and Civilisation.

This study will consist of three parts:

(a) *A compulsory core course*, studied in first term for two hours a week, and consisting of lectures on French literature and civilisation of the 17th and 18th centuries.

Prescribed texts:

Corneille, *Le Cid* (Bordas).

Molière, *Le Tartuffe* (Bordas).

Racine, *Andromaque* (Bordas).

La Fayette, *La Princesse de Clèves* (Harrap).

Lagarde, A., and Michard, L., *XVIIe Siècle* and *XVIIIe Siècle* (Harrap).

(b) *Optional courses*: *two* will be selected by the student from the following range of lecture courses, each of 8-9 hours duration and offered in second or third term:

(i) *The Novel in the 18th century* (second term).
Prescribed texts:
Prévost, *Histoire du Chevalier des Grieux et de Manon Lescaut* (Garnier).
Laclos, *Les Liaisons dangereuses* (Garnier).
Voltaire, *Candide* (University of London Press).

(ii) *Myth in the Modern Theatre* (second term).
Prescribed texts:
Cocteau, *La Machine infernale* (Harrap).
Giraudoux, *Electre* (Methuen).
Beckett, *Fin de Partie* (Methuen).

(iii) *Poetry in the 17th century* (third term).
Prescribed texts:
Lagarde, A., and Michard, L., *XVIIe Siècle* (Harrap).
La Fontaine, *Fables*, 2 volumes (Bordas).

(iv) *The Novel in the 19th and 20th centuries* (third term).
Prescribed texts:
Constant, *Adolphe* (Garnier).
Stendhal, *Le Rouge et le Noir* (Garnier).
Proust, *Combray* in *Du côté de chez Swann* (Folio).

(v) *The Theme of War in Modern French Literature* (third term).
Prescribed texts:
Alain, *Mars ou la guerre jugée* (Gallimard).
Giraudoux, *La Guerre de Troie n'aura pas lieu* (University of London Press).
Prévert, *Paroles* (Folio).

N.B.: From the above options, students must select *at least one* of topics (i) and (iii).

(c) *Essay subject options*: any *one* of the following subjects is to be chosen for an essay of 3,000 words, prepared individually by the student under supervision and written in French. The essay subject is to be chosen by the beginning of second term, and submitted by the end of third term. It will count for 50 marks in the annual assessment.

List of topics and prescribed texts—1975:

(i) *The Theatre of Beaumarchais and Marivaux.*
Prescribed texts.
Beaumarchais, *Le Barbier de Séville* (Bordas).
Marivaux, *Le Jeu de l'amour et du hasard* (Bordas).

(ii) *Rousseau and Autobiography.*
Prescribed text:
Rousseau, *Les Confessions*, 1-6 (Livre de Poche).

(iii) *The Novels of Balzac and Zola.*
Prescribed texts:
Balzac, *Eugénie Grandet* (Garnier).
Zola, *La Fortune des Rougon* (Garnier-Flammarion).

(iv) *The Message of St. Exupéry.*
Prescribed texts:
St. Exupéry, *Terre des hommes* (Folio).
St. Exupéry, *Vol de Nuit* (Folio).

(v) *Malraux and the Roman Engagé.*
Prescribed texts:
Malraux, *Les Conquérants* (Folio).
Malraux, *La Condition humaine* (Livre de Poche-Université).

(vi) *Camus and the Novel of the Absurd.*
Prescribed texts:
Camus, *La Chute* (Folio).
Camus, *La Peste* (Methuen).

(vii) *Sartre, Simone de Beauvoir and Autobiography.*
Prescribed texts:
Sartre, *Les Mots* (Folio).
Beauvoir, S. de, *Mémoires d'une jeune fille rangée* (Folio).

AF12 French IIA.

Pre-requisite subject: AF11 French IA at Division I standard or higher.

1. French Grammar and Translation from English into French. (Two hours per week.)

Prescribed texts:
Barrette, P., and Braun, T., *Second French* (Scott, Foresman).
Dayan, F., *Les formes verbales du français—Grammar notes* and *Dialogues et exercices structuraux*, 2 vols. (Univ. of Tasmania).

Recommended Reference books:
Mansion, J. E., *Harrap's standard French and English Dictionary*, 2 vols.
Petit, C., *Dictionnaire français-anglais and Dictionnaire anglais-français* (Hachette).
Le Nouveau Larousse Universel, 2 vols.
Robert, P., *Dictionnaire alphabétique et analogique de la langue française*, 7 vols.
Grevisse, M., *Le Bon Usage* (Geuthner).

2. Tuition in the Speaking and Writing of French by means of the Language Laboratory and in tutorials. (Two hours per week.)

3. French Literature.

(a) Intensive study of some modern French fiction and poetry. (Two classes per week in first term.)

Prescribed texts:
Davies, J. C. (ed.), *Contes Modernes* (Cheshire).
Beauvoir, S. de, *Les Belles Images* (Folio).
Selection of French Poetry (to be distributed).

(b) Study of 17th and 18th century theatre and fiction, with illustrative texts. (One lecture per week in second term.)

Prescribed texts:
Voltaire, *Candide* (Univ. of London Press).
Molière, *Le Bourgeois Gentilhomme* (Bordas).
Beaumarchais, *Le Barbier de Séville* (Bordas).

(c) Study of 17th century poetry, with illustrative texts. (One lecture per week in third term.)

Prescribed texts:
Lagarde, A., and Michard, L., *XVIIe Siècle* (Harrap).
La Fontaine, *Fables*, 2 vols. (Bordas).

(d) *Essay Subject on 17th/18th century Literature*:

Students will choose an essay subject on *either* Molière *or* Voltaire, involving the supervised reading of further works by these authors. An essay of 3,000 words on the subject chosen will be submitted by the end of third term, and will count for 50 marks in the annual assessment.

Reference books for Literature Course:
Lough, J., *Introduction to 17th century France* (Longmans).
Lough, J., *Introduction to 18th century France* (Longmans).
Cayrou, G., *Le Français classique*; *or*
Dubois, J., and Lagane, R., *Dictionnaire de la langue française classique* (Berlin).
Haase, A., *Syntaxe française du XVIIe siècle* (Delagrave).
Grente, G., *Dictionnaire des lettres françaises* (XVIIe and XVIIIe siècles) (Fayard).

AF72 French IIB.

AF72 French IIB may be taken as an additional course to AF02 French II, the pre-requisite being a pass in AF01 French I at Division I standard or higher. AF72 French IIB does not by itself qualify for admission to AF03 French III, for which a pass in AF02 French II *or* AF12 French IIA is required. AF72 French IIB will also be taken by intending French Honours candidates in their second year of study.

This course consists of:

1. Compulsory Core Study. (Three hours per week.)

(a) *Outline of the History of the French Language—Grammar of Old and Middle French.*

Prescribed book:
Raynaud de Lage, G., *Introduction à l'ancien français* (S.E.D.E.S.).

Reference books:
Wartburg, W., von, *Evolution et structure de la langue française* (Francke).
Bruneau, C., *Petite histoire de la langue française*, 2 vols. (Colin).

(b) *Introduction to Medieval French Literature.*

Prescribed book:
Groult, P., and others, *Littérature française du moyen âge*, I: Textes, II: Notes et glossaire (Duculot). (The Department has copies of vols. I and II which students may borrow for the year.)

Reference book:
Bossuat, R., *Le Moyen Age* (del Duca).

2. Options.

Any *two* of the following topics are to be chosen:

(a) *Maistre Pierre Pathelin and Rabelais.*

Prescribed books:
Holbrook, R. T. (ed.), *Maistre Pierre Pathelin* (Champion).
Rabelais, *Oeuvres complètes*, ed. P. Jourda, tome I (Garnier).

Reference book:
Cruickshank, J., *French literature and its background*, 1. The sixteenth century (O.U.P.).

(b) *Sixteenth Century Poetry.*

Prescribed book:
Boase, A. (ed.), *The poetry of France*, vol. 1: 1400-1600 (Methuen, University, paperbacks).

Reference book:
Cruickshank, J., *French literature and its background*, 1. The sixteenth century (O.U.P.).

(c) *One* of the essay subject options for French II, as indicated under the heading: 3. *Literature and Civilisation*, Subsection (c), or any other essay subject approved by the Chairman of the French Department.

AF03 French III.

Pre-requisite subjects: AF02 French II *or* AF12 French IIA.

1. Translation from English into French.

Prescribed book:

Mansion, J. E., *A grammar of present-day French, with exercises* (Harrap).

Reference books: As for AF01 French I and AF02 French II.

2. Tuition in the speaking and writing of French by means of the Language Laboratory and in tutorials.

Prescribed texts:

Dayan, F., *Les formes verbales du français—Grammar notes* and *Dialogues et exercices structuraux*, 2 volumes (Univ. of Tasmania).

Dayan, F., *La phrase. Les modalités de l'expression*, Parts 1 and 2 (Univ. of Tasmania).

3. Literature and Civilisation.

This study will consist of three parts:

(a) *A compulsory core course*, studied in first term for two hours a week, and consisting of lectures on French literature and civilisation of the 19th and 20th centuries.

Prescribed texts:

Musset, *Lorenzaccio* (University of London Press).

Baudelaire, *Les Fleurs du Mal* (Garnier).

Gide, *La Symphonie pastorale* (Harrap).

Sartre, *Kean* (O.U.P.).

Lagarde, A., and Michard, L., *XIXe siècle* and *XXe siècle* (Harrap).

(b) *Optional courses* (second and third terms): *two* will be selected by the student from the range of optional lecture courses specified for AF02 French II:

Literature and Civilisation, Subsection (b), except for topics (i) and (iii), which may *not* be taken by AF03 French III students in 1975.

One of the two courses chosen in 1975 may consist of the following additional topic (for AF03 French III only):

Applied Linguistics. (One lecture and one tutorial per week in second term.)

Prescribed texts:

Pit Corder, S., *Introducing applied linguistics* (Penguin Education).

Politzer, R. L., *Teaching French: an introduction to applied linguistics*, 2nd edition (Ginn).

(c) *Essay subject options*: any *one* of a list of topics is to be chosen for an essay of 3,000 words, prepared individually by the student under supervision and written in French. The essay subject is to be chosen by the beginning of second term, and submitted by the end of third term. It will count for 50 marks in the annual assessment.

List of Topics and Prescribed texts—1975:

As for AF02 French II, *Literature and Civilisation*, Subsection (c), except for topic (i), which may *not* be taken by AF03 French III students in 1975.

Optional alternative:

Comparative Literature.

This course is available in 1975 to all students of AE03 English III, AF03 French III and AG03 German III. It will be taught on an interdisciplinary basis and is the equivalent of one-third of a subject. The course aims at providing a broadly based introduction to the study of comparative literature.

For AE03 French III, Comparative Literature students will take the full language work in French (oral and written) and a reduced amount of the normal work in French literature. Such students, instead of taking, in French Literature, the compulsory core course followed by two optional courses (in second and third terms) and one essay subject option, will take:

(a) *One half* of the compulsory core texts (1 hour a week in first term).

(b) One optional literature course (1 hour a week for one term—in second *or* third term).

(c) Comparative Literature course (1 hour a week for three terms).

NOTE: Comparative Literature students may *not* take as their optional course the course on Applied Linguistics.

The course which is entitled "Myth and Myth-Parody in Modern Literature" consists of the following topics:

(a) *Classical Myth.*
Pope, *The Dunciad* (Twickenham).
Sartre, J. P., *Les Mouches* (Livre de Poche).
Sartre, J. P., *The Flies* (Penguin 3 Plays).
Giraudoux, *Electra* (Livre de Poche).
Giraudoux, *Electra* (3 Plays, vol. 2, Hill and Wang).
O'Neill, E., *Mourning becomes Electra.*

(b) *Religious Quest and Parody.*
Melville, H., *Moby Dick* (Signet).
Kafka, F., *Das Schloss* (dtv) *The Castle* (Penguin).
Beckett, S., *Waiting for Godot* (Faber).
Beckett, S., *En attendant Godot* (Harrap).
Barth, J., *Giles Goat Boy* (Penguin).

(c) *Utopia and Anti-Utopia.*
Zamyatin, *We* (Dutton).
Huxley, *Brave new world* (Penguin).
Hesse, H., *The glass bead game* (Penguin).

There will be three introductory lectures on the theory and scope of studies in Comparative Literature. These will be based in part on S. Prawer, *Comparative literary studies* (Duckworth, London: required reading) and on selections from *Yearbook of comparative and general literature* (eds. H. Frenz, H. H. Remak and U. Weisstein, Indiana University). There will be a guest lecture by a member of the Classics Department on some of the classical background texts. There will also be a guest lecture by the Professor of Politics on aspects of Utopia.

AF88 French IIIB.

AF88 French IIIB may be taken as an additional course to AF03 French III, the pre-requisite being a pass in AF72 French IIB. AF88 French IIIB will also be taken by intending French Honours candidates in their third year of study.

This course consists of:

1 (A). HISTORY OF THE LANGUAGE.

Detailed study of the history of the language, with special reference to phonetics and syntax.

(B). UNSEEN TRANSLATION.

Unseen translation from Old and Middle French, with linguistic commentary.

Reference books:

Greimas, A. J., *Dictionnaire de l'ancien français* (Larousse).

Brunot, F., and Bruneau, C., *Précis de grammaire historique de la langue française* (Masson).

Bourciez, E., and J., *Phonétique française, étude historique* (Klincksieck).

Foulet, L., *Petite syntaxe de l'ancien français* (Champion).

Gougenheim, G., *Grammaire de la langue française au seizième siècle* (C.U.P.).

2. STUDY OF MEDIEVAL AND RENAISSANCE LITERARY TEXTS.

Prescribed texts:
Chrétien de Troyes, *Yvain*, ed. T. B. W. Reid (Manchester U.P.).
Aucassin et Nicolette, ed. M. Roques (Champion).
Twelve Fabliaux, ed. T. B. W. Reid (Manchester U.P.).
Villon, *Oeuvres*, eds. A. Longnon and L. Foulet (Champion).
Rabelais, *Oeuvres Complètes*, T. II, ed. P. Jourda (Garnier).

3. MODERN FRENCH POETRY AND DRAMA.

Prescribed texts:

Drama:
Giraudoux, *Intermezzo* (Harrap).
Sartre, *Les Séquestrés d'Altona* (University of London Press).
Beckett, *En attendant Godot* (Harrap).
Ionesco, *Les Chaises* and *La Leçon* in *Three plays* (Heinemann).
Genêt, *Le Balcon* (L'Arbalète).

Poetry:
Baudelaire, *Petits poèmes en prose* (Poésie-Gallimard).
Mallarmé, *Poésies* (Poésie-Gallimard).

HONOURS DEGREE.

AF99 French Language and Literature for the Honours degree of B.A.

Students intending to take Honours should consult the Professor before the beginning of their second year's work. It is also possible to take a combined Honours degree, consisting of French and another subject. For this also, students should consult the Professor of French before the beginning of the second year.

Honours students will be required (i) to take the courses AF02 French II and AF72 French IIB in their second year, and AF03 French III and AF88 French IIIB in their third year; (ii) to devote their fourth year entirely to advanced courses and exercises (including a 10,000 word thesis) in literature and philology. The marks obtained for the essays in both the third and the fourth years may be considered with the final examination results in determining the student's classification.

The fourth year courses will consist of the following:

1. SELECTED TEXTS—16TH CENTURY TO THE PRESENT DAY.

The literary study of selected texts from the 16th century to the present day, involving the following authors: Villon, Pascal, Diderot, Laclos, Chateaubriand, Alain.

Prescribed books:
Villon, *Oeuvres*, eds. A. Longnon and L. Foulet (Champion).
Diderot, *Jacques le fataliste* (Dell).
Laclos, *Les Liaisons dangereuses* (Classiques Garnier).
Chateaubriand, *Mémoires d'outre-tombe* (Bordas).
Alain, *Mars ou la guerre jugée* (Gallimard).

Either:

2(A). MEDIEVAL AND RENAISSANCE FRENCH LANGUAGE AND LITERATURE.

This will consist of the following:
(a) History of the language: lexicology.
(b) Unseen translation from Old and Middle French with linguistic commentary.
(c) Medieval and Renaissance texts.

Prescribed texts:

Aucassin et Nicolette, ed. M. Roques (Champion).
Twelve Fabliaux, ed. T. B. W. Reid (Manchester U.P.).
Rabelais, *Oeuvres Complètes*, T. II, ed. P. Jourda (Garnier).

Or:

(B). MODERN FRENCH POETRY AND DRAMA.

Prescribed texts:

Drama:

Giraudoux, *Intermezzo* (Harrap).
Sartre, *Les Séquestrés d'Altona* (University of London Press).
Beckett, *En attendant Godot* (Harrap).
Ionesco, *Les Chaises* and *La Leçon* in *Three plays* (Heinemann).
Genêt, *Le Balcon* (L'Arbalète).

Poetry:

Baudelaire, *Petits poèmes en prose* (Poésie-Gallimard).
Mallarmé, *Poésies* (Poésie-Gallimard).

3. OPTIONS.

The study of *one* special subject, chosen from a list which will be supplied at the beginning of the fourth year. Some of the subjects offered in 1975 will include:

Chrétien de Troyes, Racine, Racine devant la nouvelle critique, Rousseau, Baudelaire et ses contemporains, Rimbaud, Bernanos, Le Nouveau Roman, Le Cinéma Français, lexicography, linguistics, Pascal and the Jansenists.

Honours students should make themselves familiar with the following works:

Langlois, P., and Mareuil, A., *Guide bibliographique des études littéraires* (Hachette).
Bouvier, E., and Jourda, P., *Guide de l'étudiant en littérature française* (Presses universitaires).
Dupouy, A., *Géographie des lettres françaises* (Colin).
Genest, E., *Dictionnaire des citations françaises* (Nathan); *or*
Guerlac, O., *Les Citations françaises* (Colin).
Marouzeau, J., *Lexique de la terminologie linguistique* (Geuthner).
Marouzeau, J., *Précis de stylistique française* (Masson).
Cressot, M., *Le Style et ses techniques* (Presses universitaires).
Mornet, D., *Histoire de la clarté française* (Payot).
Le Bidois, G., et Le Bidois, R., *Syntaxe du français moderne*, 2 vols. (Picard).
Oster, P., *Nouveau dictionnaire de citations françaises* (Tchou/Hachette).
Colin, J. P., *Nouveau dictionnaire des difficultés du français* (Tchou/Hachette).
Vinay, J. P., et Darbelnet, J., *Stylistique comparée du français et de l'anglais* (Didier).

GEOGRAPHY.

FIRST YEAR.

AJ1H Physical Geography IH.

No pre-requisite. Not available to students with exemption from lectures. Two lectures and two hours tutorial/practical a week throughout the first half of the year.

The shape of the earth; distribution of continents and oceans; structure of the continents and major landforms; geomorphological methods.

The energy balance of the atmosphere and the earth's surface. The diurnal, seasonal and latitudinal imbalance of radiation; the role of the wind in correcting this imbalance; climatic zonation.

World distributions of main plant and animal groups; Wallace's Realms, floristic regions. Dispersion and invasions of continental and island populations. Origins and history of Australian biota.

References:

Barry, R. G., and Chorley, R. J., *Atmosphere, weather and climate* (Methuen University Paperbacks).

Darlington, P. J., *Biogeography of the southern end of the world* (McGraw-Hill, paperback).

Elton, C. S., *Ecology of invasions by animals and plants* (Methuen).

Flohn, H., *Climate and weather* (World Univ. Lib.).

Keast, A. (ed.), *Biogeography and ecology in Australia* (Junk).

Petterssen, S., *Introduction to meteorology*, 3rd edition (McGraw-Hill).

Robinson, H., *Biogeography* (McDonald and Evans).

AJ2H Human Geography IH.

No pre-requisite. Not available to students with exemption from lectures. Two lectures and two hours tutorial/practical a week throughout the second half of the year.

This course is concerned with man's role within his environment: although world population continues to grow, the earth, as man's habitat, is finite. In particular the course looks at fertility, mortality and migration as the components of population change together with the world patterns produced by their interaction. Thereafter, ways in which different populations attempt to deal with increased pressure upon resources are examined. This includes a consideration of the predicament of urban man in a rapidly urbanising world.

References:

Davis, K., *Cities—Their origin, growth and human impact* (Scientific American, Freeman).

Demko, G. J., and others, *Population geography: A reader* (McGraw-Hill).

Haggett, P., *Geography: A modern synthesis* (Harper).

Trewartha, G. T. A., *A geography of population: World patterns* (Wiley).

Wilson, M. G. A., *Population geography* (Nelson, Australia).

Zelinsky, W., and others (eds.), *Geography and a crowding world* (O.U.P.).

AJ71 Economic Geography I.

No pre-requisite. Not available to students with exemption from lectures. There will be two lectures and one tutorial a week throughout the year.

The main theme of this course is that whatever system man devises to satisfy his economic needs, it must attain a long-term equilibrium with the physical environment within which it functions and from which it draws some of its resources. The course begins with the examination of the biosphere as a system, and, after study of the basic demographic characteristics of mankind, it concludes with a study of man as an economic creature, organised into economic systems, seeking resources, and interacting with his physical environment.

References:

Strahler, A. N., *Physical geography*, 3rd edition (Wiley).
Strahler, A. N., and A. H., *Environmental geoscience: interaction between natural systems and man* (Wiley).
Scientific American, *The biosphere* (Freeman).
Trewartha, G. T., *A geography of population: world patterns* (Wiley).
Wilson, M. G. A., *Population geography* (Nelson).
National Research Council, *Committee on resources and man* (Freeman).
Zimmerman, E. W., *Introduction to world resources* (Harper).

SECOND YEAR.

Pre-requisites: AJ1H Physical Geography IH, AJ2H Human Geography IH, AJ01 Geography I (Division I, prior to 1974), or AJ71 Economic Geography I.

There are five half-subjects offered at this level. Any four of these may be taken. There will be one lecture a week and the equivalent of two hours for tutorials, practical classes or field work in each of the half-subjects AJ3H Biogeography and Climatology IIH, AJ4H Structural Geomorphology IIH, AJ5H Economic Geography IIH and AJ6H Social Geography IIH. Half-subject SB4H Ecology and Taxonomy IIH comprises two lectures and two practical periods a week but runs for only part of the year.

AJ3H Biogeography and Climatology IIH.

Productivity, biomass as a function of latitudinal variations in incoming radiation and precipitation. Ecosystem function; Hydrological cycles; Carbon cycle; Nitrogen cycle. Relation between energy balance and water balance in the world's climates.

References:

Odum, E. P., *Fundamentals of ecology* (Saunders).
Watt, K. E. J., *Principles of environmental science* (McGraw-Hill).
Petterssen, S., *Introduction to meteorology*, 3rd edition (McGraw-Hill).
Sellers, W. D., *Physical climatology* (Chicago U.P.).

AJ4H Geomorphology IIH.

The form of the land surface varies with the structure of the underlying crust, the processes responsible for shaping the surface and with variations in structure and process in time. This course is concerned primarily with the first of these three variables. Topics considered include the effects of joints, faults, folds and rock type on landform development. Volcanoes are also discussed. Examples are taken from a global canvas but particular attention is devoted to the Mount Lofty Ranges, the Flinders Ranges and Eyre Peninsula, each of which not only illustrates aspects of structural geomorphology but also offers opportunities for considering the total development of landforms and the methods used to analyse and explain geomorphological problems. A field camp will be held in the Flinders Ranges in addition to at least one day excursion in the Adelaide area.

References:

Holmes, A., *Principles of physical geology* (Nelson).
Jennings, J. N., *Karst* (A.N.U. Press).
Thornbury, W. D., *Principles of geomorphology* (Wiley).
Twidale, C. R., *Structural landforms* (A.N.U. Press).

AJ5H Economic Geography IIH.

This course treats the space-economy as a system and examines the various factors, economic, social, political and physical which influence the locations, patterns, and movements of economic phenomena.

References:

Chisholm, M., *Geography and economics* (Bell).

Eliot-Hurst, M. E., *Geography of economic behavior* (Prentice-Hall).

Estall, R. C., and Buchanan, R. O., *Industrial activity and economic geography* (Hutchinson).

Lloyd, P. E., and Dicken, P., *Location in space: a theoretical approach to economic geography* (Harper and Row).

AJ6H Social Geography IIH.

Social Geography is concerned with the patterns and processes that derive from man living in society. The major habitats are the country and the city and therefore this course is divided into two parts—the first dealing with Rural Geography, the second part dealing with Urban Geography.

The section on Rural Geography will concentrate on three broad topics: the characteristics of rural society, the evolution of rural settlement patterns and infra-structures, and the problems of contemporary rural settlements and the attempts of planners to solve these.

In the section on the city, sociological and ecological traditions relevant to the spatial organisation of industrial urban communities are reviewed. Next the residential differentiation of Western cities and the processes producing these patterns are considered. The other major theme involves an appraisal of the urban habitat, and the planning response to urban social problems.

References:

Albaum, M., *Geography and contemporay issues: studies of relevant problems* (Wiley).

Chisholm, M., *Rural settlement and land use.* (Hutchinson).

Clout, H. D., *Rural geography: an introductory survey* (Pergamon).

Herbert, D., *Urban geography. A social perspective* (David and Charles).

Pahl, R. E., *Patterns of urban life* (Longman).

SB4H Ecology and Taxonomy IIH.

This is a Geography half-subject given in the Department of Botany.

Pre-requisite: *Either* SZ71 Biology I *or* Botany I (SB1H General Biology IH and SB2H Plant Biology IH). It will follow the same timetable as that shown for SB02 Botany II but it will cover only one half of the Botany II course (details as under SB02 Botany II, Parts B and C).

THIRD YEAR.

Pre-requisites: In general, AJ12 Geography IIA or AJ02 Geography II (prior to 1974), but some third-year units require particular second-year half-subjects as pre-requisites.

AJ13 Geography IIIA consists of six units and AJ23 Geography IIIB consists of six other units not presented for AJ13 Geography IIIA. Students offering AJ13 Geography IIIA are expected to take two double unit courses and two single unit courses. Students offering AJ23 Geography IIIB in addition to AJ13 Geography IIIA may take any combinations to make six units, provided these have not been presented for AJ13 Geography IIIA. Students requiring a half-subject in Geography will take AJ8H Geography IIIH which consists of one double unit and one single unit.

Each double unit will run for two terms. There will be one lecture and one tutorial a week in each, and in addition there will be five days of field work or its equivalent in practical sessions. Each single unit will run for one term: there will be one lecture and one tutorial/practical hour a week.

With the consent of the Chairman of the Department, two of the six units may be taken in another faculty. (This will mean a double unit in Science or a half-subject in Economics.)

With the consent of the Chairman of the Department, students from other faculties may take one double unit without the listed pre-requisites.

The following double units will be offered in 1975 as staff and enrolments allow:

J320 AGRICULTURAL GEOGRAPHY:

A study of the roles of physical, economic, technological, and sociopolitical factors in causing areal variations in agriculture.

Text-books:

Found, W. C., *A theoretical approach to rural land use patterns* (Arnold).
Morgan, W. B., and Munton, R. J. C., *Agricultural geography* (Methuen).

J321 BIOGEOGRAPHY:

Community evolution, including evolution of atmosphere, hydrosphere, biosphere. Development and change in food chains with change of environment. Evolution of man; effect of man on species and communities. Management of natural resources.

A Field Camp will be held.

References:

Drake, E. T., *Evolution and environment* (Yale U.P.).
Laporte, L. F., *Ancient environments* (Prentice-Hall), Paperback.
McAlester, A. L., *History of life* (Prentice-Hall), Paperback.
Ucko, P. J., and Dimbleby, G. W., *The domestication and exploitation of plants and animals* (Duckworth), Paperback.
Watt, K. E. F., *Principles of environmental science* (McGraw-Hill).

J322 CARTOGRAPHY:

This course involves theoretically based investigations of the application of graphic and cartographic techniques to spatial problems and of the successful communication of graphic information.

References:

Robinson, A. H., and Sale, R. D., *Elements of cartography*, 3rd edition (Wiley).
Thrower, N. J. W., *Maps and man* (Prentice-Hall).
Keates, J. S., *Cartographic design and production* (Longmans).
Berry, B. J. L., and Marble, D. F., *Spatial analysis* (Prentice-Hall).
Gould, P., and White. R., *Mental maps* (Penguin).

J323 CLIMATOLOGY:

Further studies in the radiation balance of the atmosphere. The relation between upper tropospheric flow and surface weather development. The heat balance of the human body and the effect of clothing and housing on this balance. The climates of the continents.

A Field Camp will be held.

References:

Crowe, P. R., *Concepts in climatology* (Longmans).
Lowry, W. P., *Weather and life* (Academic Press).
Petterssen, S., *Introduction to meteorology*, 3rd edition (McGraw-Hill).
Sellers, W. D., *Physical climatology* (Chicago U.P.).
Trewartha, G., *The earth's problem climates* (Wisconsin U.P.).

J324 CULTURAL GEOGRAPHY:

The course studies the various ways in which culture influences how people see and use their environment and the interactions which occur when communities from different cultural backgrounds compete for the same land.

References:

Albaum, M. (ed.), *Geography and contemporary issues* (Wiley).
Banton, M., *Race relations* (Tavistock).
Gale, F., *Urban Aborigines* (A.N.U.).
Stoller, A. (ed.), *New faces: immigration and family life in Australia* (Cheshire).
Tuan, Yi-Fu, *Topophilia, a study of environmental perception, attitudes and values* (Prentice-Hall).
Wagner, P. L., and Mikesell, M. W. (eds.), *Readings in cultural geography* (Chicago U.P.).

J325 HISTORICAL GEOGRAPHY OF AUSTRALIA:

This course deals with the historical geography of Australia, the main phases of exploration and settlement of the continent, and the evolution of the space content in terms of land subdivision, agriculture and rural settlement, communications and urban centres. Attitudes and actions in the creation of the visual landscape are also considered, and special emphasis is placed on the making of the South Australian landscape.

References:

Jeans, D. N., *An historical geography of New South Wales to* 1901 (Reed Educational).
Meinig, D. W., *On the margins of the good earth* (Rand McNally).
Powell, J. M., *The public lands of Australia Felix* (O.U.P.).
Powell, J. M., and Williams, M. (eds.), *Australian space, Australian time* (O.U.P.).
Roberts, S. H., *The history of Australian land settlement* (M.U.P.).
Williams, M., *The making of the South Australian landscape* (Harcourt Brace).

J326 PROCESS GEOMORPHOLOGY:

The processes responsible for building the land surface are considered in this course. They include weathering, mass movements, and the work of running water, the wind, ice, glaciers and waves. Particular attention is given to the influence of climate, to the form and development of slopes, and to evolutionary aspects of landform development. Specific regions which illustrate the effects of various particular agents in shaping the land surface (e.g. the Simpson Desert, Eyre Peninsula, Great Basin of the western United States) are considered in some detail, but overall the course is problem-oriented.

A Field Camp will be held, probably on Eyre Peninsula, and there will be at least one excursion in the Adelaide area.

References:

Embleton, C., and King, C. A. M., *Glacial and periglacial geomorphology* (Arnold).
Guilcher, A., *Coastal and submarine morphology* (Methuen).
Morisawa, M., *Streams: their dynamics and morphology* (McGraw-Hill).

J327 Rural Settlement and Society:

The problems and policies involved in the change and re-organisation of rural settlement and society of the 'western' world are considered in this course. It will be concerned with rural depopulation, the 'urbanisation' of rural society and settlement, and the restructuring of the countryside.

References:

Clout, H. D., *Rural geography* (Pergamon).
Hewes, L., *The suitcase farming frontier* (Nebraska U.P.).
Smith, T. L., and Zopf, P. E., *The principles of inductive rural sociology* (F. A. Davis).
Whitby, M. C., and others, *Rural resource development* (Methuen).

J328 South and South-East Asia:

A geographical study of India, Pakistan and Bangladesh and the countries of S.E. Asia with particular reference to the economic and social development in recent years.

References:

Asian Development Bank, *S.E. Asia's economy in the 70's* (Longmans).
Fryer, D. W., *Emerging South-East Asia* (Philip).
Johnson, B. L. C., *South Asia* (Heinemann).
Spate, O. H. K., and Learmonth, A. M., *India and Pakistan* (Methuen).
Spencer, J. E., and Thomas, W. L., *Asia east by south*, 2nd edition (Wiley).

J329 Spatial Analysis:

This course is designed for students who have already had some training in Economic Geography. The theoretical bases of locational decisions and their implications for the spatial structure of the economy will be considered. Real-world application of these theories will also be discussed.

References:

Hoover, E. M., *An introduction to regional economics* (Knopf).
Nourse, H. O., *Regional economics* (McGraw-Hill).
Richardson, H. W., *Regional economics* (Weidenfeld and Nicolson).
Smith, D. M., *Industrial location* (Wiley).

J330 Urban Geography:

A comparative approach to urbanisation processes, patterns and attendant problems of city growth and structure in three settings: the Victorian city, the western metropolis, and the 'Third World' city.

References:

Berry, B. J. L., *The human consequences of urbanisation* (Papermac).
Berry, B. J. L., and Horton, F. E., *Geographic perspectives on urban systems* (Prentice-Hall).
Bourne, L. S. (ed.), *Internal structure of the city* (O.U.P.).
Breeze, G., *Urbanization in newly developing countries* (Prentice-Hall).
Briggs, A., *Victorian cities* (Pelican).
Juppenlatz, M., *Cities in transformation* (Queensland U.P.).
Yeates, M. H., and Garner, B. J., *The North American city* (Harper and Row).

The following single units will be offered in 1975 as staff and enrolments allow:

J331 Techniques:

One or more courses will be offered to deal with areas of technical expertise necessary within Geography, e.g. cartography, photogrammetry, statistics, surveying.

J332 Geographic Thought:

A history of the development of geographic thought from classical times to the present.

The subjects offered are:

AJ13 Geography IIIA.

Any six units. Students are expected to take two double unit courses and two single unit courses.

AJ23 Geography IIIB.

Any other six units not presented for AJ13 Geography IIIA.

AJ8H Geography IIIH (half-subject).

Students requiring a third-year half-subject in Geography will take one double unit and one single unit.

HONOURS DEGREE.

AJ99 Geography for the Honours degree of B.A.

Entry to Honours will depend on satisfactory performance in the work of the third year. Honours work includes seminars, written examinations and a field study of a selected geographical problem.

GERMAN LANGUAGE AND LITERATURE

AG01 German I, AG11 German IA, AG02 German II, AG12 German IIA and AG03 German III are subjects for the Ordinary degree of Bachelor of Arts.

AG87 German IIB and AG88 German IIIB are in principle for honours candidates only. See Syllabus AG99 German for the Honours Degree of B.A. See also AG02 German II (Part B), for special arrangements involving AG87 German IIB.

Students are required to attend tutorial classes.

AG01 German I.

N.B. It will be assumed that candidates have studied German to Leaving level.

A. LANGUAGE.

Prescribed texts:

Russon, L. J., *Complete German course* (Longmans).
Langenscheidts Handwörterbuch, ed. H. Messinger, 2 vols. (Langenscheidt) or *Langenscheidt's concise German dictionary*, 2 vols. (Hodder and Stoughton).

Recommended texts:

Duden, Rechtschreibung (latest edition).
Eggeling, H. F., *A dictionary of modern German prose usage* (O.U.P.).
Dickins, E. P., *German for advanced students* (O.U.P.).
Stopp, F. J., *A manual of modern German* (University Tutorial Press).
Wahrig, G., *Deutsches Wörterbuch* (Bertelsmann).

B. INTRODUCTION TO MODERN GERMANY.

Prescribed texts:

Koepke, W., *Die Deutschen: Vergangenheit und Gegenwart* (Holt, Rinehart and Winston).
Payne, J. P. (ed.), *Germany today: introductory studies* (Methuen).
Pickering, F. P. (ed.), *University German: a reader for arts students* (O.U.P.).

N.B. A selection of German newspapers will be available from the Department early in the year.

Recommended texts:

Adams, M. (ed.), *The German tradition* (Wiley).
Elliott, B. J., *Hitler and Germany* (Modern times series) (Longmans).
Remak, J. (ed.), *The Nazi years* (Prentice-Hall).
Leonhardt, R. W., *This Germany* (Pelican).
Pasley, M. (ed.), *Germany: A companion to German studies* (Methuen).
Waite, R. G. L. (ed.), *Hitler and Nazi Germany* (Holt, Rinehart and Winston).

C. INTRODUCTION TO MODERN GERMAN LITERATURE.

Prescribed texts:

Kafka, F., *Short stories* (O.U.P.).
Brecht, B., *Selected poems* (O.U.P.).
Weiss, P., *Marat* (Suhrkamp/Harcourt, Brace and World).
Böll, H., *Ende einer Dienstfahrt* (dtv 566).
Grass, G., *Katz und Maus* (Heinemann).
Ritchie, J. M. (ed.), *Periods in German literature* (Oswald Wolff).

Recommended texts:

Brecht, B., *Die Dreigroschenoper* (Suhrkamp).
Dürrenmatt, F., *Romulus der Grosse.*

D. PRACTICE IN CONVERSATION.

Practice in conversation, pronunciation, intonation, etc., is given in regular tutorial classes. *Candidates will also be required to work through a specified number of programmes in the language laboratory.* Attention is drawn to the German Club and the Goethe Society. Both bodies conduct their meetings in German. Details are posted in the Department.

AG02 German II.

Pre-requisite subject: AG01 German I at Division I standard or higher.

A. LANGUAGE.

Prescribed texts:

See German I, (a), plus:

Hammond, R. T., *Fortbildung in der deutschen Sprache*, Student's book (O.U.P.).

Page, J. F. (ed.), *Penguin German reader* (Penguin).

Pickering, F. P. (ed.), *University German: a reader for arts students* (O.U.P.).

B. STUDIES IN GERMAN LITERATURE, 1800-1900.

Prescribed texts:

Kleist, H., *Erzählungen* (dtv).

Tieck, L., *Der blonde Eckbert*; Brentano, C., *Geschichte vom braven Kasperl und dem schönen Annerl* (Blackwell).

Heine, H., *Selections*, ed. J. L. Sammons (Prentice-Hall).

Büchner, G., *Woyzeck* (Manchester U.P.).

Wagner, R., *Die Meistersinger von Nürnberg* (Reclam 5639).

Storm, T., *Der Schimmelreiter* (Methuen).

Keller, G., *Romeo und Julia auf dem Dorfe* (Harrap).

Fontane, T., *Frau Jenny Treibel* (Aufbau).

Hauptmann, G., *Vor Sonnenaufgang* (O.U.P.).

Brett-Evans, D. (ed.), *Makers of the twentieth century: Marx, Nietzsche, Freud* (Prentice-Hall).

Killy, W. (ed.), *Deutsches Lesebuch*, vols. 2 and 3: *Klassik und Romantik; Das* 19. *Jahrhundert* (Fischer Bücherei 992-93).

Recommended texts:

Eckart, R. (ed.), *Das Zeitalter des Imperialismus: Kaiserreich und erster Weltkrieg* 1871-1918 (Goldmanns gelbe Taschenbücher 1819).

Forster, L. (ed.), *Penguin book of German verse* (Penguin).

Gearey, J., and Schumann, W., (eds.), *Einführung in die deutsche Literatur* (Holt).

Ritchie, J. M. (ed.), *Periods in German literature* (Oswald Wolff).

Ritter, G. (ed.), 1871-1914: *Historisches Lesebuch* (Fischer Bücherei 834).

Ruland, R. (ed.), *Nationen im Aufbruch: Restauration und Fortschritt* 1815-1871 (Goldmanns gelbe Taschenbücher 1818).

Taylor, R. (ed.), *The intellectual tradition of modern Germany* (Bell).

Wuthenow, R. (ed.), *Epochen der deutschen Lyrik* 1830-1900 (dtv. 4022).

N.B. Candidates who have given evidence of a suitably high linguistic standard may be permitted to omit the appropriate part of (a) *Language* and to take as substitute AG87 German IIB(C) (i) *Poetry of the nineteenth century.*

C. ORAL TEST.

At the end of the year candidates must pass an oral test. This is an integral part of the annual examination in AG02 German II in which performance throughout the year will be taken into account. Practice in conversation, pronunciation, intonation, etc., is given in regular tutorial classes. *Candidates will also be required to work through a specified number of programmes in the language laboratory.* Attention is drawn to the German Club and the Goethe Society. Both bodies conduct their meetings in German. Details are posted in the Department.

AG03 German III.

1. LANGUAGE.

Prescribed text:

Tintenfisch 7 (Wagenbach).

Recommended texts:

Pickering, F. P. (ed.), *University German: a reader for arts students* (O.U.P.).

Schipporeit, L., *Tenses and time phrases in modern German* (Hueber).

2. STUDIES IN GERMAN LYRIC POETRY.

Members may choose either this course together with 3B below (Seminar series) *or* Comparative Literature: see below.

Prescribed texts:

Bridgwater, P. (ed.), *Twentieth century German verse* (Penguin).

Forster, L. (ed.), *Penguin book of German verse* (Penguin).

Prawer, S. S. (ed.), *Seventeen modern German poets* (O.U.P.).

Recommended texts:

Gray, R. D., *An introduction to German poetry* (C.U.P.).

Prawer, S. S., *German lyric poetry* (Routledge).

Pfeiffer, J., *Wege zur Dichtung* (Wittig).

Pfeiffer, J., *Umgang mit Dichtung* (Meiner).

Wiese, B. von, (ed.), *Die deutsche Lyrik,* 2 vols. (Bagel).

3. STUDIES IN TWENTIETH CENTURY GERMAN PROSE.

The course will consist of *thirteen lectures* on the texts in A below and *thirteen concurrent seminars* on B below.

A. General series. All members will take this part of the course.

Prescribed texts:

Rilke, R. M., *Die Aufzeichnungen des Malte Laurids Brigge* (Insel).

Mann, T., *Tod in Venedig* (O.U.P.).

Böll, H., *Ende einer Dienstfahrt* (dtv 566).

Kafka, F., *Der Prozess* (Fischer Bücherei 676).

Killy, W. (ed.), *Deutsches Lesebuch* 4 (Fischer Bücherei 994).

B. Seminar series. Members may choose *either* this series together with Studies in Lyric Poetry (2, above) *or* Comparative Literature: see below.

Prescribed texts:

Döblin, A., *Berlin Alexanderplatz* (dtv 295).

Wolf, C., *Nachdenken über Christa T.* (Luchterhand).

Handke, P., *Der kurze Brief zum langen Abschied* (Suhrkamp Paperback st. 172).

Plenzdorf, U., *Die neuen Leiden des jungen W.* (Suhrkamp, book version).

4. STUDIES IN GERMAN LITERATURE, 1760-1805.

Prescribed texts:

Lessing, *Minna von Barnhelm* (Blackwell).
Goethe, *Die Leiden des jungen Werthers* (Blackwell).
Goethe, *Hermann und Dorothea* (dtv GA6).
Goethe, *Faust*, ed. Trunz.
Schiller, *Die Räuber* (Rowohlt).
Schiller, *Wallenstein* (Blackwell).
Killy, W. (ed.), *Deutsches Lesebuch*, vols. 1-2 (Fischer Bücherei 991-992).

Recommended texts:

Von Hofe, H. H., *Faust: Leben, Legende and Literatur* (Holt, Rinehart and Winston).
Gray, R. D., *Goethe: a critical introduction* (C.U.P.).
Mason, G. R., *From Gottsched to Hebbel* (Harrap).
Taylor, R. (ed.), *The intellectual tradition of modern Germany*, 2 vols. (Bell).

5. ORAL TEST.

At the end of the year candidates must pass an oral test. This is an integral part of the annual examination in AG03 German III in which performance throughout the year will be taken into account. Practice in conversation, pronunciation, intonation, etc., is given in regular tutorial classes. Attention is also drawn to the German Club and the Goethe Society. Both bodies conduct their meetings in German. Details are posted in the Department.

Optional alternative:

COMPARATIVE LITERATURE.

This course is available in 1975 to all students of AE03 English III, AF03 French III and AG03 German III. It will be taught on an interdisciplinary basis and is the equivalent of one-third of a subject. The course aims at providing a broadly based introduction to the study of comparative literature.

The course which is entitled "Myth and Myth-Parody in Modern Literature" consists of the following topics:

(a) *Classical Myth.*

Pope, *The Dunciad* (Twickenham).
Sartre, J. P., *Les Mouches* (Livre de Poche).
Sartre, J. P., *The Flies* (Penguin 3 Plays).
Giraudoux, *Electra* (Livre de Poche).
Giraudoux, *Electra* (3 Plays, vol. 2, Hill and Wang).
O'Neill, E., *Mourning becomes Electra.*

(b) *Religious Quest and Parody.*

Melville, H., *Moby Dick* (Signet).
Kafka, F., *Das Schloss* (dtv) *The Castle* (Penguin).
Beckett, S., *Waiting for Godot* (Faber).
Beckett, S., *En attendant Godot* (Harrap).
Barth, J., *Giles Goat Boy* (Penguin).

(c) *Utopia and Anti-Utopia.*

Zamyatin, *We* (Dutton).
Huxley, *Brave new world* (Penguin).
Hesse, H., *The glass bead game* (Penguin).

There will be three introductory lectures on the theory and scope of studies in Comparative Literature. These will be based in part on S. Prawer, *Comparative literary studies* (Duckworth, London: required reading) and on selections from *Yearbook of comparative and general literature* (eds. H. Frenz, H. H. Remak and U. Weisstein, Indiana University). There will be a guest lecture by a member of the Classics Department on some of the classical background texts. There will also be a guest lecture by the Professor of Politics on aspects of Utopia.

AG11 German IA.

N.B. No previous knowledge of German is required.

A. LANGUAGE: GRAMMAR, GENERAL TRANSLATION AND COMPOSITION.

Prescribed texts:

Langenscheidts Handwörterbuch, ed. H. Messinger, 2 vols. (Langenscheidt) or *Langenscheidt's concise German dictionary*, 2 vols. (Hodder and Stoughton).

Lloyd, A. L., and Schmitt, A. R., *Deutsch und Deutschland heute* (text and tapes) (Nostrand and Reinhold).

Recommended texts:

Eggeling, H. F., *A dictionary of modern German prose usage* (O.U.P.).

Russon, L. J., *Complete German course* (Longmans).

Stopp, F. J., *A manual of modern German* (University Tutorial Press).

B. LANGUAGE: READING AND SPECIAL TRANSLATION.

Prescribed texts:

Von Hofe, H. H., *Im Wandel der Jahre*, 4th edition (Holt, Rinehart and Winston).

Vail, V. H., and Sparks, K., *Der Weg zum Lesen: a German structural reader* (Harcourt, Brace and World).

C. INTRODUCTION TO MODERN GERMAN LITERATURE.

Prescribed texts:

Brecht, *Kalendergeschichten* (Rowohlt TB R-G776).

Böll, H., *Dr. Murkes gesammeltes Schweigen* (Harrap).

Dürrenmatt, *Der Besuch der alten Dame* (Methuen).

D. ORAL TEST.

At the end of the year candidates must pass an oral test. This is an integral part of the annual examination in AG11 German IA in which performance throughout the year will be taken into account. Practice in conversation, pronunciation, intonation, etc., is given in regular tutorial classes. *Candidates are advised that they must devote a total of at least two hours weekly to independent work in the language laboratory.* Attention is also drawn to the German Club and the Goethe Society. Both bodies conduct their meetings in German. Details are posted in the Department.

AG12 German IIA.

Pre-requisite subject: AG11 German IA at Division I standard or higher.

A. LANGUAGE.

Translation, composition and essay writing.

Prescribed texts:

As for AG01 German I, part (A) plus:

Lechner, M., *Tonbandübungen für Fortgeschrittene* (Hueber).

Recommended texts:

As for AG01 German I, part (A).

B. INTRODUCTION TO MODERN GERMANY.

Prescribed texts:

As for AG01 German I, part (B).

Recommended texts:

As for AG01 German I, part (B).

C. GERMAN LITERATURE OF THE NINETEENTH CENTURY.

Prescribed texts:

As for AG02 German II, part (B) omitting texts by Kleist, Tieck, Brentano and Hauptmann.

Recommended texts:

As for AG02 German II, part (B).

D. ORAL TEST.

At the end of the year, candidates must pass an oral test. This is an integral part of the annual examination in AG12 German IIA in which performance throughout the year will be taken into account. Practice in conversation, pronunciation, intonation, etc., is given in regular tutorial classes. *Candidates will also be required to work through a specified number of programmes in the language laboratory.* Attention is also drawn to the German Club and the Goethe Society. Both bodies conduct their meetings in German. Details are posted in the Department.

AG87 German IIB.

ADVANCED GERMAN LANGUAGE AND LITERATURE I.

GENERAL:

Prescribed texts:

Conrady, K. O., *Einführung in die neuere deutsche Literaturwissenschaft* (rororo 252-3).

Penguin companion to literature, vol. 2: *European* (Penguin).

A. STUDIES IN AUSTRIAN LITERATURE.

Prescribed texts:

Schnitzler, A., *Professor Bernhardi* (Pergamon).
Hofmannsthal, H. von, *Der Schwierige* (C.U.P.).
Kraus, K., *Selections* (An anthology will be issued by the Department).
Musil, R., *Die Verwirrungen des Zöglings Törless* (rororo 400).
Broch, H., *Pasenow* (Bibliothek Suhrkamp).
Doderer, H., von, *Die Posaunen von Jericho* (Arche).
Roth, J., *Die Kapuzinergruft* (Harrap).
Horváth, Ö., *Geschichten aus dem Wienerwald* (Bibliothek Suhrkamp).
Hochwälder, F., *Das heilige Experiment* (Harrap).
Bernhard, T., *Prosa* (Ed. Suhrkamp 213).
Kohn, H., *The Habsburg Empire* 1804-1918 (Anvil Original).

B. INTRODUCTION TO CULTURAL HISTORY.

Prescribed texts:

Nibelungenlied, ed. A. T. Hatto (Penguin Classics).
Gottfried von Straßburg, *Tristan*, ed. A. T. Hatto (Penguin Classics).
Wolfram von Eschenbach, *Parzival*, ed. H. M. Mustard and C. E. Passage (Vintage Books: Random House).
Heer, F., *The medieval world* (Mentor).
Huizinga, J., *The waning of the middle ages* (Pelican).
Pasley, M. (ed.), *Germany: a companion to German studies* (Methuen).

Recommended texts:

Clark, K., *Civilisation* (John Murray).
Runciman, S., *A history of the crusades*, 3 vols. (Penguin).
Southern, R. W., *The making of the middle ages* (Yale U.P.).
McEvedy, C., *The Penguin atlas of medieval history* (Penguin).

C. (i) Poetry of the nineteenth century.

(ii) Comparative studies in the short story.

Details of these courses are available in the Department from December 1974.

D. Advanced Language I.

Details of this course are available in the Department from December 1974.

E. Honours seminar.

Beginning in second term, members of the course are required to attend the weekly meetings of the honours seminar, the programme for which will be available from third term 1974: all members will present *at least* one paper in the course of the year.

AG88 German IIIB.

Advanced German Language and Literature II.

A. Twentieth century poetry.

Prescribed texts:

George, S., *Selections* (an anthology will be issued by the Department).
Hofmannsthal, H. von, *Gedichte und kleine Dramen* (Insel).
Trakl, G., *Dichtungen* (Otto Müller).
Brecht, B., *Gedichte* (Suhrkamp).
Sachs, N., *Ausgewählte Gedichte* (Suhrkamp).
Bobrowski, J., *Selections* (an anthology will be issued by the Department).
Biermann, W., *Mit Marx–und Engelszungen* (Wagenbach).
Pinthus, K. (ed.), *Menschheitsdämmerung* (Rowohlt).
Höllerer, W., *Poetik des modernen Gedichts* (Rowohlt).
Friedrich, H., *Die Struktur der modernen Lyrik* (Rowohlt).

B. Seventeenth century literature.

Prescribed texts:

Hederer, E. (ed.), *Deutsche Dichtung des Barock* (Hanser).
Grimmelshausen, C. von, *Der abenteuerliche Simplicissimus* (Reclam).

C. Literature and society in the nineteenth century.

Prescribed texts:

Heine, H., *Selections*, ed. J. L. Sammons (Prentice-Hall).
Grabbe, C., *Napoleon oder die hundert Tage* (Reclam).
Nietzsche, F., *Selections* (distributed by the Department).
Ruland, R. (ed.), *Nationen im Aufbruch: Restauration und Fortschritt* 1815-1871 (Goldmanns gelbe Taschenbücher 1818).
Wuthenow, R. (ed.), *Epochen der deutschen Lyrik* 1830-1900 (dtv 4022).
Hermand, J. (ed.), *Das junge Deutschland: Texte und Dokumente* (Reclam 8703-7).
Bramsted, E., *Aristocracy and the middle classes: social types in German literature* 1830-1900 (Phoenix Books, University of Chicago Press).
Mann, G., *Deutsche Geschichte des* 19. *und* 20. *Jahrhunderts* (Fischer).

D. Studies in drama from the middle ages to the "sturm und drang".

Prescribed texts:

Das Donaueschinger Passionsspiel (copies available in the Department).
Sachs, H., *Der fahrende Schuler im Paradeis; Das heisse Eisen* (Reclam 7627).
Bidermann, J., *Cenodoxus* (copies available in the Department).
Lenz, J. M. R., *Werke und Schriften* (Rowohlt TB).

E. STUDIES IN GERMAN PROSE 1960-1973.

Prescribed texts:

Enzensberger, H. M., *Einzelheiten I and II* (ed. Suhrkamp 63, 87).
Grass, G., *Hundejahre* (rororo).
Schmidt, A., *Orpheus* (*Erzz*) (Fischer).
Walser, M., *Das Einhorn* (Fischer).
Becker, J., *Umgebungen* (Suhrkamp).
Tintenfisch 7 (Wagenbach).

F. ADVANCED LANGUAGE II.

Details of this course are available in the Department from December 1974.

G. HONOURS SEMINAR.

See AG87 German IIB (E).

HONOURS DEGREE.

AG99 German for the Honours degree of B.A.

Before entering the final honours year candidates for the honours degree in German must (i) pass AG01 German I *or* AG11 German IA; AG02 German II *or* AG12 German IIA; AG87 German IIB, AG03 German III, and AG88 German IIIB, at appropriately high standard; (ii) pass in three other subjects as indicated in Schedules—Degree of B.A., Schedule III: The Honours Degree.

During the final year students will write a dissertation on some aspect of German literature or language. Choice of subject must be made not later than the beginning of the third term in the preceding year after consultation with the Professor of German. Students must also attend the following courses:

(a) Advanced language III.

(b) Twentieth century German poetry. See AG88 German IIIB (A).

(c) Studies in drama from the Middle Ages to the *Sturm und Drang*. See AG88 German IIIB (D).

(d) Studies in German prose 1960-1973. See AG88 German IIIB (E).

(e) Honours Seminar. See AG87 German IIB (E).

Students may obtain the permission of the Faculty of Arts to combine German with another subject for the Honours degree. They should consult the Professor of German as soon as possible, ideally before entering AG87 German IIB, so that a suitably modified course can be arranged.

AG74 Science German.

This subject is open to members of staff, research students and those honours students required by their Departments to take the course in Science German. It consists of two lectures weekly throughout the year. Its aim is to ensure fluency in reading German and in translation from German into English. *No previous knowledge of the language is required.*

Text-books:

Rosenberg-Rodgers, A., and Horwood, E. K., *German for science students*, 3rd edition (Cheshire).

De Vries, Louis, *German-English science dictionary* (McGraw-Hlil).

HISTORY

There are six subjects in History; a seventh subject, AH89 History IIIS, is available only to students enrolled for the Honours School in History. A student proceeding to a degree must pass in AH01 History IA *or* AH31 History IB *or* AH41 History IC *or* AP01 Politics I before he may take AH02 History II; and in AH02 History II before he may take AH03 History IIIA *or* AH13 History IIIB *or* AH89 History IIIS.

AH01 History IA.

RENAISSANCE, REFORMATION AND REVOLUTION 1350-1650.

No pre-requisite subject.

A first-year course: not available to students with exemption from lectures.

Introductory reading:

Hay, D., *Mediaeval centuries* (Methuen, paperback).

Spitz, L. W., *The Renaissance* (Rand McNally, paperback).

Elliott, J. H., *Europe divided*, 1559-1598 (Fontana paperback).

Elton, G. R., *Reformation Europe*, 1517-1559 (Fontana paperback).

Friedrich, C. J., *The age of the Baroque* (Harper paperback).

A fuller reading list will be available from the office of the Department of History in February.

AH31 History IB.

REVOLUTIONARY EUROPE 1780-1870.

No pre-requisite subject.

A first-year course: available to approved students with exemption from lectures.

Introductory reading:

Hobsbawn, E. J., *The age of revolution* 1789-1848 (Weidenfeld and Nicolson).

Thomson, D., *Europe since Napoleon* (Penguin).

A fuller reading list will be available from the office of the Department of History in February.

AH41 History IC.

THE UNITED STATES: COLONIES TO NATION 1608-1877.

No pre-requisite subject.

A first-year course: not available to students with exemption from lectures.

Introductory reading:

Degler, C., *Out of our past* (Harper).

Boorstin, D., *The Americans: the colonial experience* (Pelican).

Jordan, W. D., *White over black* (Pelican).

Gatell, F. O., Goodman, P., and Weinstein, A. (eds.), *The growth of American politics* (Oxford).

Goodman, P (ed.), *Essays in American colonial history* (Holt, Rinehart and Winston).

Gatell, F. O. (ed.), *Essays on Jacksonian America* (Holt, Rinehart and Winston).

Unger, I. (ed.), *Essays on the Civil War and reconstruction* (Holt, Rinehart and Winston).

Greene, J. P. (ed.), *The reinterpretation of the American revolution* (Harper).

Blum, J. M., and others, *The national experience* (Harcourt Brace Jovanovich).

AH02 History II.

Pre-requisite: Pass in AH01 History IA *or* AH31 History IB *or* AH41 History IC *or* AP01 Politics I.

Options will be offered, as staff and enrolments allow, from among the following:

A. South Asian History.

A study of the history and civilisation of the Indian subcontinent (India, Pakistan, Bangladesh) emphasising social and political developments in the nineteenth and twentieth centuries.

This option is available to approved students with exemption from lectures.

Introductory reading:

A history of India, vol. 1, by R. Thapar (Pelican).

A history of India, vol. 2, by T. G. P. Spear (Pelican).

Srinivas, M. N., *Social change in modern India* (California U.P.).

McLane, J. R. (ed.), *The political awakening in India* (Prentice-Hall).

B. Modern East Asian History.

A study of East Asian history in the nineteenth and twentieth centuries.

Introductory reading:

Reischauer, E. O., Fairbank, J. K., and Craig, A. M., *East Asia: the modern transformation* (George Allen and Unwin).

Bianco, L., *Origins of the Chinese revolution* (O.U.P.).

Beasley, W. G., *The modern history of Japan* (Weidenfeld and Nicolson).

C. Modern South East Asian History.

A study of South East Asian history in the nineteenth and twentieth centuries within which special options will permit the study of the history of one country in depth.

Introductory reading:

Bastin, J., and Benda, H., *A history of modern South East Asia* (Prentice-Hall).

In search of South-East Asia: a modern history, ed. D. J. Steinberg (Praeger).

Legge, J. D., *Indonesia* (Prentice-Hall).

Allen, R. H. S., *Malaysia: prospect and retrospect* (O.U.P.).

Chesneaux, J., *The Vietnamese nation: contribution to a history* (Current Book Distributors).

D. Medieval History.

Introductory reading:

Lyon, B., *The origins of the Middle Ages* (Norton).

Lopez, R. S., *The commercial revolution of the Middle Ages* 950-1350 (Prentice-Hall).

White, L., *Medieval technology and social change* (Clarendon).

E. Modern Russian History.

Introductory reading:

Kochan, L., *The making of modern Russia* (Pelican).

F. MATERIAL FOUNDATIONS OF THE MODERN WORLD: BRITAIN, RUSSIA AND GERMANY: NINETEENTH AND TWENTIETH CENTURIES.

Introductory reading:

Court, W. H. B., *A concise economic history of Britain* 1750 *to recent times* (C.U.P.).

Deane, P., *The first Industrial Revolution* (C.U.P.).

Stolper, G., *The German economy,* 1870 *to the present* (Weidenfeld and Nicolson).

Nove, A., *An economic history of the U.S.S.R.* (Pelican).

Woodruff, W., *The impact of Western man: a study of Europe's role in the world economy* 1750-1960 (Macmillan).

Barber, W. J., *A history of economic thought* (Pelican).

Cambridge economic history of Europe, vol. 6.

G. CULTURE IN VICTORIAN ENGLAND.

A study of the interaction between industrialism and culture in England 1840-1918.

Source material may be found not only in historical writing, but also in literature, painting, music, architecture and other arts.

Introductory reading:

Houghton, W. E., *The Victorian frame of mind* (Yale).

Clark, K. M., *The Gothic revival* (Pelican).

Hilton, T., *The pre-Raphaelites* (Thames and Hudson).

Jordon, R. F., *Victorian Architecture* (Pelican).

Gilbert and Sullivan, *The Savoy operas* (Papermac).

Hauser, A., *The social history of art,* vol. IV (Routledge).

Rowell, G. (ed.), *Nineteenth century plays* (O.U.P. Paperback).

Pevsner, N., *Sources of modern architecture and design* (Thames and Hudson Paperback).

J. AFRICAN HISTORY.

Introductory reading:

Davidson, B., *Old Africa rediscovered* (Longmans).

Davidson, B., *The Africans* (Longmans).

Oliver, R. A., and Atmore, A., *Africa since* 1800 (C.U.P.).

Hatch, J., *Africa emergent* (Secker and Warburg).

K. AUSTRALIAN HISTORY: GOLD RUSH TO GREAT DEPRESSION.

A study of the history of Australia from 1850 to the 1930s.

Introductory reading:

Alexander, F., *Australia since Federation* (Nelson).

Blainey, G., *The tyranny of distance* (Sun Books).

Crawford, R. M., *Australia* (Hutchinson).

Glynn, S., *Urbanization in Australian history,* 1788-1900 (Nelson).

Gollan, R., *Radical and working class politics* (M.U.P.).

Hancock, W. K. *Australia* (Jacaranda Press).

Shaw, A. G. L., *The story of Australia* (Faber).

Spate, O. H. K., *Australia* (Benn).

Ward, R. *The Australian legend* (O.U.P.).

Younger, R. M., *Australia and the Australians* (Rigby).

For all subjects listed above, fuller reading lists will be available from the office of the Department of History in February.

AH03 History IIIA.

Pre-requisite: Pass in AH02 History II.

One of the following options not already passed as AH02 History II *or* AH13 History IIIB.

Options will be offered, as staff and enrolments allow, from among the following:

A. South Asian History.

B. Modern East Asian History.

C. Modern South East Asian History.

D. Medieval History.

E. Modern Russian History.

F. Material Foundations of the Modern World: Britain, Russia and Germany: nineteenth and twentieth centuries.

G. Culture in Victorian England.

J. African History.

K. Australian History: Gold Rush to Great Depression.

The syllabus in each of the subjects listed for AH03 History IIIA will be similar to that of the corresponding subject in AH02 History II; but students taking AH03 History IIIA will be required to undertake an additional study relating to the material of the subject.

AH13 History IIIB.

Pre-requisite: Pass in AH02 History II.

One of the following options not already passed as AH02 History II *or* AH03 History IIIA.

Options will be offered, as staff and enrolments allow, from among the following:

A. South Asian History.

B. Modern East Asian History.

C. Modern South East Asian History.

D. Medieval History.

E. Modern Russian History.

F. Material Foundations of the Modern World: Britain, Russia and Germany: nineteenth and twentieth centuries.

G. Culture in Victorian England.

J. African History.

K. Australian History: Gold Rush to Great Depression.

The syllabus in each of the subjects listed for AH13 History IIIB will be similar to that of the corresponding subject in AH02 History II; but students taking AH13 History IIIB will be required to undertake an additional study relating to the material of the subject.

HISTORY FOR THE HONOURS DEGREE OF B.A.

A student wishing to join the Honours School should consult the Chairman of the History department. Normal entry to Honours will be at the beginning of third year.

Pre-requisites: AH01 History IA *or* AH31 History IB *or* AH41 History IC *or* AP01 Politics I; AH02 History II.

In their third year Honours students will take:

(1) AH03 History IIIA, and (2) AH89 History IIIS.

A student who has special reasons for wishing to complete Part III of a subject other than History should seek the permission of the Chairman of the Department to take that subject instead of AH03 History IIIA; such permission will not normally be given to a student who has not passed in AH01 History IA *or* AH31 History IB *or* AH41 History IC.

In special circumstances Arts graduates may apply to be allowed to enter Final Honours History.

AH89 History IIIS.

Available only to students who have the permission of the Chairman of the Department to enter the Honours course. In 1975 the syllabus will be in two parts, which will run concurrently throughout the academic year:

(a) An historical study, in which special emphasis will be placed on historiographical problems. In consultation with the Chairman of the Department, Honours students may select:

either

(i) Modern East Asian History (China and Japan).

or

(ii) French History from the Revolution of 1848 to the end of the First World War.

(b) A wider study of historiography and of some practical aspects of the craft of history.

AH99 History Final Honours.

Entry to Final Honours will depend on satisfactory performance in the work of the third year. Final Honours work includes the writing of a thesis, and two special subjects:

(a) Approaches to the Past: Archaeology, Prehistory and History: this subject will be taken by all Final Honours students.

(b) A special subject: students may choose from a list of subjects to be offered by members of staff in 1975. The list will be available during the first term.

Honours students will also be required to take a general essay paper in the final examination.

MUSIC.
(FOR THE DEGREE OF BACHELOR OF ARTS)

All students are encouraged to participate in the practical work of the Department (e.g. choir; orchestra; chamber music). Those who have ability as performers may also apply for admission as 'single study' students in voice or instrument.

UA61 Music IA.

No previous knowledge of music is required.

The course consists of three hours lectures/seminars a week.

1. MUSIC THEORY:

Elements of notation, terminology, and formal analysis.

2. MUSIC IN WESTERN SOCIETY:

A study of selected areas in music history, taking into account the general cultural background of the other arts.

Text-book:

Karolyi, O., *Introducing Music* (Pelican).

Reference books:

Allen, W. D., *Philosophies of music history* (Dover).
Apel, W., *The Harvard dictionary of music* (Heinemann).
Crocker, R. L., *A history of musical style* (McGraw-Hill).
Einstein, A., *Music in the romantic era* (Dent).
Grout, D. J., *A history of western music* (Dent).
Lang, P. H., *Music in Western Civilisation* (Dent).
Newman, J., *Renaissance music* (Prentice-Hall).
Palisca, C. V., *Baroque music* (Prentice-Hall).
Pauly, R. G., *Music in the classical period* (Prentice-Hall).
Sachs, C., *The rise of music in the ancient world* (Norton).
Salzman, E., *Twentieth century music* (Prentice-Hall).
Seay, A., *Music in the mediaeval world* (Prentice-Hall).
Westrup, J. A., *An introduction to musical history* (Norton).

UA51 Music I.

It will be assumed that music will have been studied to Leaving level.

The course consists of three hours lectures/seminars a week.

1. MUSIC THEORY:

Principles of tonal harmony from Bach to Beethoven.

2. MUSIC IN WESTERN SOCIETY:

A study of selected areas in music history, taking into account the general cultural background of the other arts.

Text-book:

Goldman, R. F., *Harmony in Western music* (Norton).

Reference books:

See UA61 Music IA above.

UA52 Music II.

Pre-requisite subject: UA51 Music I at Division I standard or higher; or UA61 Music IA, with permission of the Chairman of the Department.

The course consists of four hours lectures/seminars a week.

1. MUSIC THEORY:
   Analysis and style study.
2. HISTORY OF MUSIC:
   (Terms I and III only). A choice of topics within the 18th and 19th centuries.
3. PRACTICAL WORK:
   (a) During Term II, a choice of workshops/seminars in *one* of the following areas: electronic music; ethnomusicology (if available); music in education.

or

   (b) Individual instruction throughout the year in voice or instrument (subject to audition).

Text-books:

Baines, A., *Musical instruments through the ages* (Pelican).

Benade, A. H., *Horns, strings, and harmony* (Anchor Books).

Hardy, G., and Fish, A., *Music Literature: a workbook for analysis*, vol. I (Dodd).

Reference books:

Abraham, G. E. H., *A hundred years of music* (Duckworth).

Bukofzer, M. F., *Music in the baroque era* (Dent).

Cooper, M., *French music from the death of Berlioz to the death of Fauré* (O.U.P.).

Dart, T., *The interpretation of music* (Hutchinson).

Donington, R., *The instruments of music* (Methuen-University paperbacks).

Einstein, A., *Music in the romantic era* (Dent).

La Rue, J., *Guidelines for style analysis* (Norton).

Wood, A., *The physics of music* (Methuen-University paperbacks).

UA53 Music III.

Pre-requisite subject: a Pass in UA52 Music II.

The course consists of twelve hours a week during the *first four weeks* of *two* terms.

PROJECTS:

Two projects, one in each of *two terms*, chosen from the Department's Project Programme (see B.Mus. syllabuses under 'Faculty of Music').

Projects are studied from a broad perspective which covers, as well as specific considerations of music theory and music history, the related musicological implications of aesthetics, philosophy and sociology. In addition to the written assignments within each project (e.g. style studies through analysis and applied techniques of harmony and counterpoint; essays, etc.) students are encouraged, where appropriate, to present short programmes within the context of performance practice.

Intensive course work for each Project lasts four weeks, in the first half of a term, when a Project group meets for a total of 48 hours group work for each Project. After the intensive group work, a student continues his study in the various fields which have been discussed: for instance he prepares a recital programme, composition and/or research papers relating to the various topics covered by the Project. During this time the Project leader remains available for consultation. A folio of work for the Project is submitted for examination at the end of the year.

READING LISTS:

Reading lists for each Project are provided by the Department. There are no set text-books.

MUSIC FOR THE HONOURS DEGREE OF B.A.

UA68 Music IIIS.

Available only to students who have the permission of the Chairman of the Department to enter the Honours course.

The course consists of one two-hour seminar throughout the year; *plus* twelve hours a week during the *first four weeks* of *one* term.

PRELIMINARY HONOURS:

Preliminary Honours work in a chosen area: ethnomusicology (if available); musicology; music in education.

PROJECT:

One project (*additional* to the requirements of UA53 Music III) chosen from the Department's Project Programme (see B.Mus. syllabuses under 'Faculty of Music').

UA69 Music for the Honours degree of B.A.

Students intending to take Honours should consult the Chairman of the Department before the beginning of their second year's work.

Pre-requisite subjects: UA51 Music I, UA52 Music II, UA53 Music III and UA68 Music IIIS.

Candidates will complete research assignments as directed during the year.

1. ETHNOMUSICOLOGY (if available).

Syllabus: A course of seminars and individual tuition in the theoretical background to ethnomusicology, including field techniques, transcription, analytical procedures, performance techniques; or

2. HISTORICAL MUSICOLOGY.

Syllabus: A course of seminars and individual tuition in: paleography: selected theoretical writings; editorial practice; musicological method (analytical bibliography, source evaluation, periodisation of musical terminology); or

3. SYSTEMATIC MUSICOLOGY.

Syllabus: A course of seminars and individual tuition in: advanced acoustics; psycho-acoustics; music physiology; advanced music aesthetics; music philosophy; information theory.

4. MUSIC IN EDUCATION.

A course of workshops in creative music, and improvisation; and a comprehensive study of more advanced teaching methods, including associated work in electronics. Part of this work will involve students taking projects into primary and secondary schools.

DRAMA.
(FOR THE DEGREE OF BACHELOR OF ARTS)

UA11 Drama I.

UA11 Drama I is a subject for the Ordinary degree of Bachelor of Arts.

The course will consist of one lecture a week in the history and development of theatre arts and one studio session a week in the theory and practice of drama.

Preliminary reading could include:

Bentley, E., *The playwright as thinker* (Harcourt Brace).
Brockett, O. G., *The theatre, an introduction* (Rinehart).
Cole, T. (ed.), *Actors on acting* (Crown).
Craig, E. G., *The art of theatre* (Heinemann Educational).
Nagler, A., *Source book in theatrical history* (Dover).
Nicoll, A., *World drama* (Cambridge).
Styan, J. L., *The elements of drama* (Cambridge).
Williams, R., *Drama in performance* (Penguin).

PHILOSOPHY.

There are four half-subjects and five subjects for the Ordinary degree of B.A.

FIRST YEAR.

There are no pre-requisites for first-year half-subjects, which are to be completed in one year and are not normally available to students with exemption from lectures.

There are three half-subjects and students may enrol in any number of them. Each half-subject is made up of three options, one from each term. There are nine options offered. Assessment is by an aggregate over the options.

There is one lecture each week and one tutorial each fortnight in each half-subject.

Students who might continue with Philosophy should consult the calendar for pre-requisites in later years.

The options are as follows:

L101 Logic A: First term.

The nature of logic, and propositional logic.

Text:

Lemmon, E. J., *Beginning logic*, ch. 1-2 (Nelson). No pre-requisite.

L102 Informal Argument: First term.

Text:

Wilson, J. B., *Language and the pursuit of truth* (Cambridge U.P.).

L103 Ethics: First term.

Text:

Frankena, W. K., *Ethics* (Prentice-Hall, Foundations of Philosophy).

L104 Logic B: Second term.

Pre-requisite: Logic A.

Predicate logic. Proofs and translations. If time permits also non-standard propositional logics.

Text:

Lemmon, E. J., *Beginning logic*, ch. 3.

L105 Knowing and Explaining: Second term.

Are all our beliefs interrelated? Is there a special class of rock bottom, indubitable truths? What is it to explain? Is the difference between scientific and historical explanations one of degree or of kind?

Text:

Quine, W. V. O., and Ullian, J. S., *The web of belief* (Random House).

L106 Concepts of Freedom: Second term.

A study of the classical problem of freewill and determinism, existentialist conception of a free person and, briefly, of concepts of political freedom.

Text:

Berofsky, B. (ed.), *Freewill and determinism* (Harper and Row).

L107 Logic C: Third term.

Pre-requisite: Logic B.

Further predicate logic. Identity, definite descriptions, classes and relations.

Text:

Lemmon, E. J., *Beginning logic*, ch. 4 and Appendix B.

L108 Problems and Paradoxes: Third term.

A study of some paradoxical problems in philosophy: some paradoxes of motion, the flow of time, fatalism, egoism. The wider bearing of these on the methods of philosophy will be discussed.

L109 MIND AND GOD: Third term.

Part of this option will be on the nature of mind. Part will be on the assessment of religious claims.

Texts:

Campbell, K. K., *Body and mind* (Macmillan, Problems in Philosophy Series).

Hick, J. (ed.), *The existence of God* (Macmillan, Problems in Philosophy Series).

The subjects offered are:

AL2H Logic IH.

The two Logic options: L101 Logic A, L104 Logic B and one other option.

AL1H Philosophy IH(A).

Three first-year options freely chosen, except that Logic options in later terms require earlier Logic options to have been completed.

AL3H Philosophy IH(B).

For students enrolling in two first-year Philosophy half-subjects, excluding AL2H Logic IH, or for students enrolling in all three first-year Philosophy half-subjects.

Three options not presented for AL1H Philosophy IH(A), except that Logic options in later terms require earlier Logic options to have been completed.

SECOND YEAR.

The Department offers eleven term-long options, each normally two lectures and one tutorial a week. They are not normally available to students with exemption from lectures. There are two subjects each consisting of three options. Assessment is by an aggregate over the three options. Options may have a special pre-requisite stated in their description.

The options are as follows:

L201 LOGIC: First term.

Pre-requisite: AL2H Logic and Argument IH, A and B options in 1974; or AL01 Philosophy I before 1974. Students may not count toward their degree both this course and the logic part of Philosophy II prior to 1974.

A rigorous treatment of first order logic both as a tool for statement of mathematical theories and as an example of formal description of grammar, meaning, and inference. Such topics as: Object language and metalanguage, Sets and Cantor's theorem, proof by induction, prenex normal form, models and validity, derivability and completeness, formal semantics and meaning in natural languages, Identity and operators, simple examples of axiomatic theories, Axiomatic treatments of logic.

Text:

Mates, B., *Elementary logic* (O.U.P.).

L202 FREEWILL AND DETERMINISM: First term.

Text:

Berofsky, B. (ed.), *Freewill and determinism* (Harper and Row).

L203 PHILOSOPHY OF RELIGION: First term.

The course is designed (1) to give students some understanding of the nature of religions and (2) to examine critically some of the claims made by the prevailing Western Religion, Christianity.

Topics include Eastern Religions, Mysticism, Miracles and the Problem of Evil.

Preliminary reading:

Smith, H., *The religions of man* (Harper).

Texts:

Swinburne, R., *The concept of miracle* (Macmillan).

Yandell, K. E. (ed.), *God, man and religion* (McGraw-Hill).

L204 Ethics: Ancient and Modern: First and Second terms.

This is a double option no part of which may be taken without the other. Subjects of examination will be the topics discussed in the following books:

Hare, R. M., *Language of morals* (O.U.P.).
Hare, R. M., *Freedom and reason* (O.U.P.).
Aristotle, *Nicomachean ethics*, trans. Ostwald (Library of Liberal Arts, Bobbs-Merrill).
MacIntyre, A. C., *A short history of ethics* (Routledge).
Walsh, J. J., and Shapiro, H. L. (eds.), *Aristotle's ethics: issues and interpretations* (Wadsworth).
Hudson, W. D., *Modern moral philosophy* (Macmillan Students Edition).

L205 Modal Logic: Second term.

Pre-requisite: Logic options or AL02 Philosophy II Logic.

Propositional modal systems, entailment, quantifiers, descriptions, and identity.

Text:

Hughes, G. E., and Cresswell, M. J., *Introduction to modal logic* (Methuen).

L206 Philosophy of Mind: Second term.

Text:

Rosenthal, D. M. (ed.), *Materialism and the mind-body problem* (Prentice-Hall).

L207 Epistemology: Problems and Methods: Second term.

Texts:

Aune, B., *Rationalism, empiricism and pragmatism* (Random House).
Landesman, C. (ed.), *Foundations of knowledge* (Prentice-Hall).
Berkeley, G., *The principles of human knowledge* (Fontana Books).

L208 Advanced Logic: Third term.

Conclusion of syllabus for Logic and further study of the prospectus of first order theories.

Text:

Margaris, A., *First order mathematical logic* (Xerox College Pub.).

L209 Philosophy of Science: Third term.

This will be a non-technical introduction. Topics raised will be the justification of non-deductive (i.e. inductive) arguments, and the nature of scientific laws, explanations and theories.

Texts:

Hempel, C. G., *Philosophy of natural science* (Prentice-Hall).
Swinburne, R. (ed.), *The justification of induction* (O.U.P.).

L210 Political Philosophy and Philosophy of Social Science: Third term.

The course considers the nature of explanation in the social sciences, and the question of value freedom; theories of democracy, liberty and civil disobedience.

Texts:

Ryan, A., *The philosophy of the social sciences* (Macmillan Student Editions).
Raphael, D. D., *Problems of political philosophy* (Macmillan Student Editions).

L211 Moral Philosophy: Third term.

There will be lectures on Ethical Naturalism, Subjectivism and Objectivism, Kant's Moral Philosophy, and other topics.

Texts:

Foot, P. (ed.), *Theories of ethics* (O.U.P., Readings in Philosophy).
Paton, H. J., *The moral law* (Hutchinson's University Library).

The subjects offered are:

AL02 Philosophy II.

Pre-requisite: *Either*

(a) Division I pass or better in one of AL1H Introductory Philosophy IH or AL2H Logic and Argument IH and a Division II pass or better in the other; *or*

(b) Division I pass or better in AL01 Philosophy I before 1974.

One option each term. The subject is completed in one year.

AL22 Logic II.

Pre-requisite: *Either*

(a) Division I pass or better in AL2H Logic and Argument IH (students must have taken either ABD or ABE in this course); *or*

(b) Division I pass or better in AL01 Philosophy I before 1974.

The subject consists of three term-long courses, each two lectures and one tutorial a week. Assessment is by an aggregate over the courses. The courses are the options L201, L205 and L208. No option counted toward AL02 Philosophy II, AL03 Philosophy IIIA or AL13 Philosophy IIIB may count as a course for AL22 Logic II.

The subject is completed in one year and is not normally available to students with exemption from lectures.

THIRD YEAR.

The Department of Philosophy offer term-long options, each normally two lectures and one tutorial a week. Any student takes a third-year subject by taking one option in each term. Assessment is by an aggregate over the three options. The subject is completed in one year and is not normally available to students with exemption from lectures.

A student may take both AL03 Philosophy IIIA and AL13 Philosophy IIIB. No student enrols in IIIB unless he has passed IIIA or is currently undertaking it. No option may count towards both IIIA and IIIB.

Options are selected from the following list and from the list offered for Second Year. No option counted towards AL02 Philosophy II, AL22 Logic II or AL23 Logic III may count towards IIIA or IIIB. Students taking AL02 Philosophy II options as part of IIIA or IIIB will be required to undertake additional study relating to the material of the subject.

Options may have a special pre-requisite stated in their description.

Each third-year subject includes one seminar or equivalent written project on a topic approved by the Department. The Department will offer three seminars, one in each term. The seminar replaces the tutorial in the term in which it is taken. Seminars meet weekly for 1½ hours.

The options are as follows:

Second-year options, and:

L301 ANCIENT PHILOSOPHY: Third term.

The subjects offered are:

AL03 Philosophy IIIA.

One option each term. The subject is completed in one year.

AL13 Philosophy IIIB.

For students who have passed AL03 Philosophy IIIA *or* who enrol concurrently for AL03 Philosophy IIIA.

Three options not presented for AL03 Philosophy IIIA or any other subject given by the Department of Philosophy.

AL23 Logic III.

Pre-requisite: As for AL22 Logic II.

The course is as for AL22 Logic II.

Students taking these courses as AL23 Logic III will be required to undertake additional study relating to the material of the courses.

AL4H Philosophy IIIH.

Pre-requisite: As for AL03 Philosophy IIIA.

This half-subject is available for students who wish to take it together with SB3H Social Biology IIIH. Intending students should consult the Chairman of the Department.

HONOURS DEGREE.

AL99 Philosophy for the Honours degree of B.A.

Pre-requisite subjects: AL01 Philosophy I (before 1974), AL02 Philosophy II and AL03 Philosophy IIIA.

Besides satisfying the requirements set out in Schedule III of the degree of Bachelor of Arts, a candidate should have included the Logic option in his course in AL02 Philosophy II or should have passed a Logic examination of equivalent standard.

Courses and texts will be decided at the beginning of each year. Prospective Honours students should consult with the Chairman of the Department before the end of January.

PHYSICS.
(FOR THE DEGREE OF BACHELOR OF ARTS)

SP9H Physics, Man and Society IH.

This half-subject, given by members of the Departments of Physics and Mathematical Physics, is intended primarily for students of the humanities and social sciences.

It cannot be counted as a subject towards the degree of Bachelor of Science in the Faculty of Science, and only one of SP01 Physics I and SP9H Physics, Man and Society IH, can be counted towards a degree.

The course is non-mathematical in character and no previous knowledge of physics is assumed. It is designed to provide an understanding of some of the principal currents of thought in physics and of the scientific background to some of the philosophical, political and social issues that confront society. The course will consist of a limited number of topics which will be developed in lectures, tutorials, reading assignments and essays. There will be an average of one lecture a week and a tutorial every second week throughout the year. There will be no formal laboratory work.

At least three distinct topics will be offered each year. Each topic occupies one term and the half-subject comprises three topics. In 1975 the topics will be selected from the following: at least the first three will be given. Full details may be obtained from the Departments.

A. The Impact of Physics.

The topic will discuss the nature and status of some of the great discoveries of physics. Particular attention will be paid to the question of how the ideas of physics have or have not passed into the current of human thought and as to how those ideas have influenced man's interpretation and understanding of himself, both as an individual and as a member of society.

B. Matter and Anti-Matter.

The fundamental constituents of matter, the elementary particles and their anti-particles, will be studied, with emphasis on the basic symmetry principles and consequent conservation laws. The social and political implications of the funding of expensive scientific projects, such as accelerators to study the elementary particles, will be discussed.

C. Space, Time and Relativity.

The contributions of Galileo, Newton, Einstein and others to our understanding of space, time and motion. Cosmology.

D. Light—Waves or Particles?

This topic stresses the historical development of man's ideas about the nature of light leading to a discussion of recent thought about uncertainty and determinism.

E. The Realm of the Atom.

An introduction to the basic ideas of quantum theory. Topics to be discussed include the particle and wave aspects of light and matter, the indeterminacy relations, quantisation, the probabilistic nature of the fundamental laws and some philosophical positions concerning the nature of man's knowledge of the atomic world.

F. People and Energy.

Our technological society is based on concepts developed by science. One of these concepts is energy. This unit will discuss the way in which the concept of energy developed, the reasons for the rapidly accelerated growth in the demand for energy and the prospects for maintaining energy supplies.

G. The Sea and the Sky.

Origin and composition of the atmosphere and the oceans. Elementary meteorology. Solar radiation and its interaction with the atmosphere. The origins of life. Man's interaction with the atmosphere and the oceans. The possibility of extra-terrestrial life.

Text-books:
To be advised.

For syllabuses of SP01 Physics I, SP02 Physics II and SP03 Physics III see under the degree of B.Sc. in the Faculty of Science.

POLITICS.

Five courses are offered in this Department: AP01 Politics I, AP32 Politics IIA, AP42 Politics IIB, AP03 Politics IIIA and AP13 Politics IIIB.

The books recommended are not intended to be an exhaustive list; they are suggestions as to how the lectures should be supplemented.

Essays and written exercises are regarded as an integral part of the courses.

AP01 Politics I.

DEMOCRATIC POLITICS.

No pre-requisite.

A first-year subject—available to approved students with exemption from lectures with the approval of the Department of Politics.

This course comprises two sections—a study of Australian society and its political system and an introduction to political theory.

Introductory notes and reading lists will be available at the office of the Politics Department on 28 January, 1975, and should be collected by intending students as soon as possible thereafter.

Recommended books:

°Emy, H. V., *Politics of Australian democracy* (Macmillan).
°Encel, S., *Equality and authority* (Cheshire).
°Kariel, H. S. (ed.), *The frontiers of democratic theory* (Random).
°Macpherson, C. B., *Democratic theory* (Clarendon).
°Macpherson, C. B., *The real world of democracy* (Oxford).
°Marx, K., and Engels, F., *The communist manifesto* (Penguin).
°Mayer, H., and Nelson, H., *Australian politics* (Cheshire).
Mill, J. S., *Utilitarianism, liberty and representative government* (Everyman).
°Playford, J. D., and Kirsner, D., *Australian capitalism—towards a socialist critique* (Penguin).
Rousseau, J. J., *The social contract* (Everyman).
*Strachey, J., *The challenge of democracy* (Encounter).
*Wheelwright, E. L., and Buckley, K., *The political economy of Australian capitalism* (Australia and New Zealand Book Co.).

Books marked * are available in paperback editions.

AP32 Politics IIA.

Pre-requisite: Pass in AP01 Politics I. Other pre-requisites for particular options are cited below, and in special cases alternative pre-requisites may be accepted by the Chairman of the Department.

All second-year subjects will be available to approved students with exemption from lectures.

Options will be offered, as staff and enrolments allow, from among the following:

A. Asian Political Anthropology.
B. Australian Politics and Society.
C. British Politics.
D. Chinese Politics.
E. Contemporary Social Theory.
F. International Politics.
G. Marxism-Leninism.
J. Political Sociology.
K. Political Theory and American Politics.
L. Problems of Political Philosophy.
M. Problems of Social Change.
N. The State in Social and Economic Life.

In addition, students wishing to take the new third-year half-subject SB3H Social Biology IIIH, may combine that with the half-subject AP1H Political Sociology IIIH.

A. Asian Political Anthropology.

Pre-requisites: Any Politics subject (apart from Asian Politics, *or* the Asian Politics part of AP32 Politics IIA or AP42 Politics IIB), AA01 Anthropology I, *or* AQ12 Asian Development II, AJ13 Geography III (South and South-East Asia) *or* any of those units of AH02 History II, AH03 History IIIA and AH13 History IIIB named A, B, C, D, E, *or* F.

A preliminary reading list and course guide will be available at the Politics Department on 6 January 1975.

Village political behaviour in South and South-East Asia forms the principal subject matter of this course. Among the topics covered are: power and social structure; patterns of land tenure; patron-client ties; factionalism; communalism; peasant revolutionary movements; millenial movements and cargo cults; the social and political impact of the Green Revolution; patterns of linkage between the local level and the national and international levels.

Recommended books:

*Shanin, T. (ed.), *Peasants and peasant societies* (Penguin).

*Potter, J. M., Diaz, M., and Foster, G. (eds.), *Peasant society: A reader* (Little, Brown).

*Wolf, E. R., *Peasants* (Prentice-Hall).

*Wolf, E. R., *Peasant wars of the twentieth century* (Harper).

Markandaya, K., *Nectar in a sieve* (New American Library).

*Bailey, F. G., *Politics and social change* (Oxford).

*Geertz, C., *Agricultural involution* (Campus).

Beteille, A., *Caste, class and power* (California U.P.).

Barth, F., *Political leadership among Swat Pathans* (Humanities).

*Leach, E. R., *Political systems of highland Burma* (Athlone).

*Selden, M., *The Yenan way* (Harvard U.P.).

*Emy, H. V., *Politics of Australian democracy* (Macmillan).

Books marked * are available in paperback editions.

B. Australian Politics and Society.

Pre-requisites: Any Politics subject *or* EE71 Social Economics *or* EE1G Macro-economics IH and EE2G Microeconomics IH *or* LL32 Constitutional Law II *or* the option in AH02 History II, AH03 History IIIA *or* AH13 History IIIB called "Australian History".

This course involves the study of the Australian political system and its relationship to the Australian socio-economic environment and culture. A preliminary reading list and course guide will be available at the Politics Department on 6 January 1975.

Some useful texts:

Mayer, H., and Nelson, H. (eds.), *Australian politics: A third reader* (Cheshire).

Davies, A. F., *Australian democracy* (Longmans).

Crisp, L. F., *Australian national government* (Longmans).

Blewett, N., and Jaensch, D., *Playford to Dunstan* (Cheshire).

Mayer, H. (ed.), *Australia's political pattern* (Cheshire).

Wilkes, J. (ed.), *Parliament, bureaucracy, citizens: who runs Australia?* (Angus and Robertson).

Playford, J. D., and Kirsner, D. (eds.), *Australian capitalism* (Penguin).

Southern, M. (ed.), *Australia in the seventies* (Penguin).

Encel, S., *Equality and authority* (Cheshire).

Campbell, E. M., and Whitmore, H., *Freedom in Australia* (Sydney U.P.).

Butler, D. E., *The Canberra model* (Cheshire).

Solomon, D. H., *Australia's government and parliament* (Nelson).

Wheelwright, E. L., and Buckley, K. (eds.), *The political economy of Australian capitalism* (A.N.Z. Book Co.).

C. British Politics.

Pre-requisites: Any Politics subject (apart from European Politics *or* the European Politics part of AP32 Politics IIA or AP42 Politics IIB) *or* AH01 History IA *or* AH31 History IB *or* AH41 History IC *or* AA01 Anthropology I *or* LL11 Constitutional Law I *or* EE71 Social Economics *or* EE1G Macroeconomics IH and EE2G Microeconomics IH.

A study in depth of the political system and political culture of Britain and its relationship to its socio-economic environment and to British political ideas. Some contemporary British political issues will be examined. This course will not be offered before 1976.

Some useful references:

*Rose, R., *Politics in England today*, 1974 edition (Faber).
*Blondel, J., *Voters, parties and leaders*, 1974 edition (Penguin).
*Hanson, A. H., and Walles, M., *Governing Britain* (Fontana).
*Butler, D. E., and Stokes, D. E., *Political change in Britain* (Penguin).
*Verney, D. V., *British government and politics*, 2nd edition (Harper).
*Mackintosh, J. P., *The government and politics of Britain* (Hutchinson).
*Birch, A. H., *The British system of government*, 2nd edition (Allen and Unwin).
*Rose, R., *Studies in British politics*, 2nd edition (Macmillan).
*Butterworth, E., and Weir, D. (eds.), *The sociology of modern Britain* (Fontana).
*Beer, S. H., *Modern British politics* (Faber).
*Urry, J., and Wakeford, J. (eds.), *Power in Britain* (Heinemann).

Books marked * are available in paperback editions.

D. Chinese Politics.

Pre-requisites: Any Politics subject (apart from Asian Politics, *or* the Asian Politics part of AP32 Politics IIA *or* AP42 Politics IIB).

A course outline and preliminary reading list will be available on 20 January 1975 at the Politics Department Office.

(a) A general survey of the Chinese revolution, its origins, its course, its transformation of Chinese agriculture, industry, administration, education, culture, foreign policy, etc.

(b) A study of political life in China today, with a view to isolating the basic ideological assumptions held by the Chinese and ascertaining how far they are applied in practice.

(c) An analysis of the thought of Mao Tse-tung, with special reference to its relevance—and the relevance of the whole modern Chinese experience—to other societies, including our own.

Suggested reading:

Alley, R., *Travels in China*, 1966-1971 (New World Press, Peking).
Belden, J., *China shakes the world* (Gollancz).
Buchanan, K. McP., *The transformation of the Chinese earth* (Bell).
Chen, J., *Mao and the Chinese revolution* (O.U.P.).
Chesneaux, J., *Peasant revolts in China*, 1840-1949 (Thames and Hudson).
Greene, F., *A curtain of ignorance* (Cape).
Han Suyin, *China in the year* 2001 (Penguin).
Han Suyin, *The crippled tree*, also her *A mortal flower* and *Birdless summer* (Cape).
Hinton, W., *Fanshen* (Monthly Review).
Hunter, N., *Shanghai journal* (Praeger).
Hunter, D., and N., *We the Chinese* (Praeger).
Chou Shu-jen, *Selected stories of Lu Hsun*, eds. D. and N. Hunter. (Foreign Languages Press, Peking).
Mao Tse-tung, *Selected works*, 4 vols. (Foreign Languages Press, Peking).
Myrdal, J., *Report from a Chinese village* (Heinemann).
Myrdal, J., *China: the revolution continued* (Chatto and Windus).
Needham, J., *Science and civilisation in China* (C.U.P.).
Robinson, J., *The cultural revolution in China* (Penguin).
Snow, E., *Red star over China* (Gollancz).
Snow, E., *Red China today* (Penguin).
Wheelwright, E. L., and McFarlane, B. J., *The Chinese road to socialism* (Penguin).

E. Contemporary Social Theory.

Pre-requisites: Any other Politics subject (with the exception of the pre-1974 AP03 Politics IIIA—Industrial Society and Theories of Community) *or* the option in AH02 History II, AH03 History IIIA *or* AH13 History IIIB called 'Culture in Victorian England'.

The course is concerned with the nature and problems of social life in modern industrial societies. In particular, certain radical views of human freedom, autonomy or authenticity, and the kinds of social re-organisation which they entail, will be considered. There will also be a section on feminism: An analysis of the theories of feminism and the assumptions they contest. The theories will be also used as pointers to specify investigations of the position of women, past and present. The prescriptions for change and the predictions for the future will be examined. It is intended to examine some of the theories and concepts investigated in this course in conjunction with appropriate novels.

Preliminary reading:

Atkinson, D., *Orthodox consensus and radical alternative* (Heinemann).
Birnbaum, N., *Towards a critical sociology* (O.U.P.).
Cranston, M. W. (ed.), *The new left* (Bodley Head).
*Dahl, R. A., *After the revolution* (Yale U.P.).
Fromm, E. (ed.), *Socialist humanism* (Doubleday).
*Goodman, P., *Utopian essays and practical proposals* (Vintage).
*Howe, I., *Politics and the novel* (Avon).
*Illich, I. D., *De-schooling society* (Penguin).
*Illich, I. D., *Celebrations of awareness* (Penguin).
*Laing, R. D., *The politics of experience* (Pelican).
Lukes, S., *Individualism* (Blackwell).
*Marcuse, H., *An essay on liberation* (Pelican).
*Roszak, T., *The making of a counter-culture* (Faber).
Skinner, B. F., *Beyond freedom and dignity* (Knopf).
*Tönnies, F., *Community and society* (Harper).
Trilling, L., *Sincerity and authenticity* (Harvard U.P.).
*Beauvoir, S. de, *The second sex* (Penguin).
Engels, F., *The origins of the family, private property and the state.*
Duncan, G. C., *Marx and Mill* (C.U.P.).
Figes, E., *Patriarchal attitudes* (Faber).
*Firestone, S., *The dialectic of sex* (Cape).
*Friedan, B., *The feminine mystique* (Penguin).
Mews, H., *Frail vessels* (Athlone).
Mill, J. S., *On the subjection of women*
*Mitchell, J., *Woman's estate* (Penguin).
*Rowbotham, S., *Women, resistance and revolution* (Allen Lane).
Wood, E. M., *Mind and politics* (California U.P.).

Books marked * are available in paperback editions.

F. International Politics.

Pre-requisites: Any other Politics subject (with the exception of the pre-1974 AP13 Politics IIIB) *or* EE71 Social Economics I *or* EE01 Economics I *or* AH02 History II (Asian).

The subject will be divided into three sections:

(a) An analysis of contemporary international relations between advanced Western societies and the countries of South-East Asia and Latin America, including the phenomenon of imperialism.

(b) Problems of social and economic development in the "third world", and attempted solutions, including a comparative study of Vietnam, Philippines, Indonesia and China.

(c) The relationships between the major powers as a backdrop to the issues raised in (a) and (b).

Recommended books:

*Rhodes, R. I., *Imperialism and underdevelopment—a reader* (Monthly Review).
*Hayter, T., *Aid as imperialism* (Penguin).
*Jalée, P., *The pillage of the third world* (Monthly Review).
*Baran, P. A., and Sweezy, P. M., *Monopoly capital* (Pelican).
*Magdoff, H., *The age of imperialism* (Monthly Review).
*Uphoff, N. T., and Ilchman, W. F. (eds.), *The political economy of development* (California U.P.).
*Marr, D. G., *Vietnamese anti-colonialism* (California U.P.).
*Wei, Y., *Communist China: a system-functional analysis* (Merrill).
*Wheelwright, E. L., and McFarlane, B., *The Chinese road to socialism* (Pelican).
*Chai, W., *The new politics of communist China* (Goodyear).
*Myint, H., *Southeast Asia's economy* (Penguin).
*Friedman, E., and Selden, M. (eds.), *America's Asia* (Pantheon).
*Fox, D. M. (ed.), *The politics of U.S. foreign policy making: a reader* (Goodyear).
*Kim, Y. H., *Twenty years of crisis* (Prentice-Hall).
*Ferguson, Y., and Welker, W., *Continuing issues in international politics* (Goodyear).
*Clark, G. J., *In fear of China* (Lansdowne).
*Horowitz, D., *From Yalta to Vietnam* (Penguin).
*Playford, J. D., and Kirsner, D., *Australian capitalism*, 2nd edition (Penguin).

Books marked * are available in paperback editions.

G. Marxism-Leninism.

Pre-requisites: Any Politics subject.

This course provides a comprehensive, systematic and critical introduction to the thought of Karl Marx, Lenin and of other important Marxists. A detailed course outline and reading guide will be available from the Politics Department Office on 28 January 1975.

Background reading:

Marx and Engels, *Selected works*, 2 vols. (Foreign Languages Publishing House).
Marx, Engels, Lenin, *On historical materialism* (Progress Publishers).
Marx, Engels, Lenin, *On scientific communism* (Progress Publishers).
Lenin, *Selected works*.
*Tucker, R. C. (ed.), *The Marx-Engels reader* (Norton).
*Bottomore, T. B., and Rubel, M. (eds.), *Karl Marx: selected writings in sociology and social philosophy* (Penguin).
*Feuer, L. S. (ed.), *Marx and Engels: basic writings on politics and philosophy* (Fontana).
*McLellan, D. S., *Karl Marx: his life and thought* (Macmillan).

Books marked * are available in paperback editions.

J. Political Sociology.

Pre-requisites: Any Politics subject (apart from AP1H Political Sociology IIIH) *or* AH01 History IA *or* AH31 History IB *or* AH41 History IC *or* EE71 Social Economics I *or* AA01 Anthropology I *or* AL01 Philosophy I (before 1974) *or* AL1H Introductory Philosophy IH *and* AL2H Logic and Argument IH.

This course will examine theoretical and empirical approaches to the political aspects of sociology. It will examine the nature of sociology and sociological method including the problem of objectivity and values. The various concepts of social order will be studied and in both these fields attention will be paid to the contribution of the classical sociologists, particularly Durkheim and Weber.

The more empirically-based section of the course will deal with political socialisation, political culture; aspects of class; community power; social change; modernisation and revolution. Field-work projects are encouraged as an integral part of the course and lectures in survey method will be provided.

Recommended texts:

*Worsley, P. (ed.), *Introducing sociology* (Penguin).
*Worsley, P. (ed.), *Modern sociology—introductory readings* (Penguin).
*Worsley, P. (ed.), *Problems of modern society* (Penguin).
Castles, F. G., and others, *Decisions, organisation and society* (Penguin).

Further reading:

*Almond, G. A., and Coleman, J. S. (eds.), *Politics of the developing areas* (Princeton U.P.).
*Almond, G. A., and Verba, S., *Civic culture* (Little Brown).
*Apter, D., *Politics of modernisation* (Chicago U.P.).
*Aron, R., *Main currents in sociological thought,* vol. 2 (Penguin).
*Berger, P., *An invitation to sociology* (Penguin).
*Bottomore, T. B., *Elites and society* (Penguin).
*Bottomore, T. B., *Sociology* (Allen and Unwin).
*Cohen, P., *Modern social theory* (Heinemann).
*Coser, L. A., *Political sociology* (Harper).
*Dahrendorf, R., *Class and class conflict in an industrial society* (Routledge).
Davies, A. F., and Encel, S., *Australian society* (Cheshire).
*Dawson, R. E., and Prewitt, K., *Political socialisation* (Little Brown).
*Johnson, C., *Revolutionary change* (London U.P.).
*Lipset, S. M., *Political man* (Mercury).
*Mills, C. W., *The sociological imagination* (Penguin).
*Moser, C. A., and Kalton, G., *Survey methods in social investigation* (Heinemann).
*Olsen, M. E., *Power in societies* (Macmillan).
*Pizzorno, A. (ed.), *Political sociology* (Penguin).
*Pye, L. W., and Verba, S., *Political culture and political development* (Princeton U.P.).
*Rex, J., *Key problems of sociological theory* (Routledge).
*Rush, M., and Althoff, P., *An introduction to political sociology* (Nelson).
*Stacey, M., *Methods of social research* (Pergamon).

Books marked * are available in paperback editions.

K. Political Theory and American Politics.

Pre-requisites: Any Politics subject (apart from the American Politics part of AP32 Politics IIA *or* AP42 Politics IIB) *or* AH41 History IC (American History 1608-1877).

The emphasis will be on American political ideas, particularly those connected with majority and minority rights, the American association of democracy and free enterprise and on the American science of politics in the twentieth century. Particular attention will be paid to the background of American constitutionalism, Jeffersonian and Madisonian democracy and the development of judicial thought. A number of lectures will be devoted to the current monopoly stage of American capitalism.

Suggested reading:

The Federalist Papers; ed. and introd, by Beloff (Blackwell's Text edition).
*Baran, P. A., and Sweezy, P. M., *Monopoly capital* (Pelican).
*Paine, T., *Common sense and the American crisis* (Doubleday Dolphin).
*McKenzie, W. J. M., *Politics and social science* (Pelican).
*Zeitlin, M. (ed.), *American society, inc.* (Markham).
The New York Times (Week in Review).

Books marked * are available in paperback editions.

A detailed reading list for First Term will be available on 6 January 1975 in the Politics Department Office.

L. Problems of Political Philosophy.

Pre-requisites: Any Politics subject *or* AH01 History IA *or* AH31 History IB *or* AH41 History IC *or* AL01 Philosophy I (before 1974) *or* AL1H Introductory Philosophy IH *and* AL2H Logic and Argument IH.

In this course a number of selected concepts and political theories will be examined through the works of major political thinkers. No attempt, however, will be made to trace historical continuities. Among concepts and theories to be considered are: power and society, liberty and authority, the theory of elites, violence and politics, human rights, equality, class, justice, property, revolution, democracy, conservatism, state and society, human nature and politics. Attention will be focussed on the debates and problems engendered by a discussion of these concepts and theories. In particular the contrast between the Marxist approach to the problems raised, and that of liberal philosophy will be pointed.

Basic reading:

*Plato, *The republic.*
*Aristotle, *Politics.*
*Machiavelli, N., *The prince.*
*Hobbes, T., *Leviathan.*
*Locke, J., *Second treatise on government*
*Rousseau, J. J., *The social contract*
*Burke, E., *Reflections on the French revolution.*
*Paine, T., *The rights of man.*
*Mill, J. S., *On liberty.*
Hegel, F., *The philosophy of right*
Marx and Engels, *Selected works.*
Tolstoi, L. N., *The kingdom of God is within you.*
*Fanon, F., *The wretched of the earth* (MacGibbon and Kee).
*Michels, R., *Political parties* (Free Press).
*Oakeshott, M. J., *Rationalism in politics* (Methuen).

Books marked * are available in paperback editions.

M. Problems of Social Change.

Pre-requisites: Any Politics subject.

This course is basically concerned with problems involved in the transition from capitalism to socialism. It is divided in two parts.

(a) A study of the thought of Lenin, Trotsky, Gramsci and Mao.

(b) A study of particular transitional societies, such as the Soviet Union and China.

A detailed course-outline and reading guide will be available from the Politics Department Office on 28 January 1975.

Background reading:

Part (a):

Lenin, *Selected works* (Progress Publishers).
*Trotsky, *History of the Russian revolution,* 3 vols. (Sphere).
*Trotsky, *The permanent revolution* (Pathfinder).
*Trotsky, *The transitional programme for socialist revolution* (Pathfinder).
*Gramsci, *Selections from the prison notebooks* (Lawrence and Wishart).
*Gramsci, *The modern prince and the other writings* (New World).
*Mao, *Selected works,* 4 vols. (Foreign Languages Press, Peking).

Part (b):

*Sweezy, P. M., and Bettelheim, C., *On the transition to socialism* (Monthly Review).
*Wheelwright, E. L., and McFarlane, B., *The Chinese road to socialism* (Penguin).

Books marked * are available in paperback editions.

N. The State in Social and Economic Life.

Pre-requisites: Any other Politics subject.

This course starts from the assumption that no account of the history of political thought, nor any survey of contemporary social theory is complete without a close study of the role of the State. The same may be said of the study of Australian politics. For this reason the course "state in social and economic life" is offered to those students who want additional material of a more concrete kind, with a current affairs emphasis, to complement their studies of theoretical political science.

The syllabus aims at an examination of two main aspects, which will be studied concurrently: (a) how the state actually operates in relation to social classes and problems of planning in capitalist, communist and third world countries; (b) how the role of the state has been perceived in the writings of the great political thinkers and practitioners.

The course is divided into three terms. In *first* term, the evolution of capitalist society is surveyed and the role of the state in promoting this is highlighted. Special reference is then made to debates about the extent of state intervention in political and economic life. The term concludes, after a brief reference to Nazi Germany, with a discussion of the role of the State in the main arenas of Social Democracy in Australia and Sweden. In *second* term, the analysis shifts to the role of the state in communist states—USSR, China and Eastern Europe. The current problems of combining plan and market, proletarian dictatorship and democracy, centralisation and decentralisation etc., are examined, remembering that these are all societies in transition from capitalism to socialism. In *third* term, the role of the State in the underdeveloped countries is discussed. The centre of attention here is on the construction of a State-capitalist model and the conflict between the nation-state and the multinational corporations.

This course will not be offered before 1976.

Introductory reading:

Recommended books:

*Robinson, J., *Freedom and necessity* (Allen and Unwin).
*Heilbroner, R. L., *The making of economic society* (Prentice-Hall).
*Lenin, V. I., *State and revolution* (any edition).
Macpherson, C. B., *Democratic theory* (Clarendon).

First term:

Miliband, R., *The state in capitalist society* (Weidenfeld and Nicolson).
*Parkin, F., *Class, inequality and political order* (Paladin).
*Myrdal, G., *Beyond the welfare state* (Bantam).
Catley, R., and McFarlane, B., *From tweedledum to tweedledee: a critique of Labor's social model* (ANZ).
Playford, J. D., *Neo-capitalism in Australia* (Arena Publications).
Culyer, A. J., *The economics of social policy* (Martin Robertson).

Second term:

Sweezy, P. M., and Bettelheim, C., *On the transition to socialism* (Monthly Review).
Deutscher, I., *Ironies of history: essays on contemporary communism* (O.U.P.).
Lavigne, M., *The European socialist economies* (Martin Robertson).
Brus, W., *The economics and politics of socialism* (Routledge).
*Wheelwright, E. L., and McFarlane, B., *The Chinese road to socialism* (Pelican).

Third term:

Bhagwati, J. N. (ed.), *Economics and world order* (Macmillan).
*Rhodes, R. I. (ed.), *Imperialism and under-development: a reader* (Monthly Review).
*Bernstein, H. (ed.), *Underdevelopment and development: the third world today*, Part V esp. (Penguin Interdisciplinary Readings).
Myrdal, G., *The challenge of world poverty* (Pelican).
*Wheelwright, E. L., *Radical political economy*, Parts 4 and 5 (ANZ).

Books marked * are available in paperback editions.

AP42 Politics IIB.

Pre-requisites: As for the subjects in AP32 Politics IIA or, alternatively, a pass in AP32 Politics IIA. In special cases, other pre-requisites may be accepted by the Chairman of the Department for a particular option, or for any option.

All subjects will be available to approved students with exemption from lectures.

One of the following options not already passed, or currently being taken, as AP32 Politics IIA *or* AP03 Politics IIIA *or* AP13 Politics IIIB.

A. Asian Political Anthropology.

Not available to students who have already passed Asian Politics *or* the Asian Politics component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

B. Australian Politics and Society.

C. British Politics.

Not available to students who have already passed European Politics *or* the European Politics component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

D. Chinese Politics.

Not available to students who have already passed Asian Politics *or* the Asian Politics component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

E. Contemporary Social Theory.

Not available to students who have already passed the pre-1974 AP03 Politics IIIA.

F. International Politics.

Not available to students who have already passed the pre-1974 AP13 Politics IIIB.

G. Marxism-Leninism.

J. Political Sociology.

Not available to students who have already passed the Political Sociology component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

K. Political Theory and American Politics.

Not available to students who have already passed the American Politics component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

L. Problems of Political Philosophy.

M. Problems of Social Change.

N. The State in Social and Economic Life.

AP03 Politics IIIA.

Pre-requisite: Pass in AP32 Politics IIA *or* AP42 Politics IIB, or other subjects accepted by the Chairman of the Department. Alternative pre-requisites to International Politics: Asian History *or* International Law.

One of the following options not already passed, or currently being taken, as AP32 Politics IIA *or* AP42 Politics IIB *or* AP13 Politics IIIB. Certain of the options will be available to approved students with exemption from lectures.

Options will be offered, as staff and enrolments allow, from among the following:

A. Asian Political Anthropology.

Not available to students who have already passed Asian Politics *or* the Asian Politics component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

B. Australian Politics and Society.

C. BRITISH POLITICS.
Not available to students who have already passed European Politics *or* the European Politics component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

D. CHINESE POLITICS.
Not available to students who have already passed Asian Politics *or* the Asian Politics component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

E. CONTEMPORARY SOCIAL THEORY.
Not available to students who have already passed the pre-1974 AP03 Politics IIIA.

F. INTERNATIONAL POLITICS.
Not available to students who have already passed the pre-1974 AP13 Politics IIIB.

G. MARXISM-LENINISM.

J. POLITICAL SOCIOLOGY.
Not available to students who have already passed the Political Sociology component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

K. POLITICAL THEORY AND AMERICAN POLITICS.
Not available to students who have already passed the American Politics component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

L. PROBLEMS OF POLITICAL PHILOSOPHY.

M. PROBLEMS OF SOCIAL CHANGE.

N. THE STATE IN SOCIAL AND ECONOMIC LIFE.

The syllabus in each of the subjects listed for AP03 Politics IIIA will be similar to that of the corresponding subject in AP32 Politics IIA *or* AP42 Politics IIB; but students taking AP03 Politics IIIA will be required to undertake additional work relating to the material of the subject.

AP13 Politics IIIB.

Pre-requisites: Pass in AP32 Politics IIA *or* AP42 Politics IIB *or* AP03 Politics IIIA, or other subjects accepted by the Chairman of the Department. Alternative pre-requisites to International Politics: Asian History *or* International Law.

One of the following options not already passed, or currently being taken, as AP32 Politics IIA *or* AP42 Politics IIB *or* AP03 Politics IIIA.

Options will be offered as staff and enrolments allow, from among the following:

A. ASIAN POLITICAL ANTHROPOLOGY.
Not available to students who have already passed Asian Politics *or* the Asian Politics component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

B. AUSTRALIAN POLITICS AND SOCIETY.

C. BRITISH POLITICS.
Not available to students who have already passed European Politics *or* the European Politics component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

D. CHINESE POLITICS.
Not available to students who have already passed Asian Politics *or* the Asian Politics component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

E. Contemporary Social Theory.
Not available to students who have already passed the pre-1974 AP03 Politics IIIA.

F. International Politics.
Not available to students who have already passed the pre-1974 AP13 Politics IIIB.

G. Marxism-Leninism.

J. Political Sociology.
Not available to students who have already passed the Political Sociology component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

K. Political Theory and American Politics.
Not available to students who have already passed the American Politics component of the pre-1974 AP32 Politics IIA *or* AP42 Politics IIB.

L. Problems of Political Philosophy.

M. Problems of Social Change.

N. The State in Social and Economic Life.

The syllabus in each of the subjects listed for AP13 Politics IIIB will be similar to that of the corresponding subject in AP32 Politics IIA *or* AP42 Politics IIB; but students taking AP13 Politics IIIB will be required to undertake additional work relating to the material of the subject.

AP1H Political Sociology IIIH.

This half-subject course will only be available to students taking the half-subject SB3H Social Biology IIIH. It will consist of one lecture and one tutorial per week. Topics will include: sociological method, socialisation, social stratification, authoritarianism, deviance, urbanisation, industrialisation. Not available to students who have previously taken Political Sociology as IIA, IIB, IIIA or IIIB.

Recommended reading:
*Worsley, P., *Introducing sociology* (Penguin).
*Worsley, P., *Modern sociology* (Penguin).
*Worsley, P., *Problems of modern society* (Penguin).

HONOURS DEGREE.

AP99 Politics for the Honours degree of B.A.

Students intending to take Honours should consult the Professor during their third year. They will be required to undertake such thesis and seminar work as may be required by the Chairman of the Department. Students are expected to submit some 35,000 words of written work.

PSYCHOLOGY.

In 1975 there will be five courses in Psychology for the Ordinary degree of Bachelor of Arts: AY01 Psychology I, AY02 Psychology II, AY23 Psychology III, AY1H Psychology IIIH(A), and AY2H Psychology IIIH(B).

AY01 Psychology I.

This course provides a survey of the main fields of modern experimental psychology, and qualifies the student to take further psychology subjects. The topics covered are learning, perception, physiological psychology, personality, social psychology, thinking and language, elementary descriptive and inferential statistics.

The course is made up of three lectures, one tutorial and a one hour laboratory assignment each week. In addition students are required to spend periods not exceeding a total of five hours in the year as participants in psychological experiments.

Preliminary and parallel reading:

Psychology today: an introduction (CRM Books).

Calder, N., *Mind of man* (BBC).

References:

Butcher, H. J., *Human intelligence: its nature and assessment* (Methuen).

Deese, J. E., *Psycholinguistics* (Allyn and Bacon).

Geiwitz, P. J., *Non-freudian personality theories* (Brooks-Cole).

Hochberg, J. E., *Perception* (Prentice-Hall).

Mann, L., *Social psychology* (Wiley).

Millenson, J. R., *Principles of behavioral analysis* (Macmillan).

Miller, G. A., *Psychology, the science of mental life* (Penguin Books).

Munn, N., and others, *Introduction to psychology*, 3rd edition (Houghton Mifflin).

Mussen, P. H., *The psychological development of the child* (Prentice-Hall).

Runyon, R. P., and Haber, A., *Fundamentals of behavioral statistics* (Addison-Wesley).

Thompson, R. F., *Foundations of physiological psychology* (Harper and Row).

Butter, C. M., *Neuropsychology: The study of brain and behaviour* (Brooks-Cole).

Tyler, L. E., *Tests and measurements* (Prentice-Hall).

Approximately 20 *Scientific American* off-prints will be recommended in lectures during the year.

AY02 Psychology II.

Pre-requisite subject: AY01 Psychology I at Division I standard or higher.

The course comprises: (i) Theory: three lectures and one tutorial a week; (ii) Laboratory: an average of two hours a week for about 18 weeks spread throughout Terms I, II, and III; (iii) Demonstrations, films, and visits to institutions at times when no practical work is scheduled.

The course is oriented towards the controlled study of human and animal behaviour, both individual and social, and is concerned also with possibilities for the wider application of contemporary psychological theories.

Reference books: Students are expected to retain AY01 Psychology I text-books.

Reference will also be made to the following books. (An indication of the relative emphasis placed on each will be given at the preliminary meeting of the class.)

Bickman, L., and Henchy, T., *Beyond the laboratory: field research in social psychology* (McGraw-Hill).

Campbell, B. A., and Church, R. M. (eds.), *Punishment and aversive behaviour* (Appleton-Century-Crofts).

Corso, J. F., *The experimental psychology of sensory behavior* (Holt, Rinehart and Winston).

Goldstein, H., and others (eds.), *Controversial issues in learning* (Appleton-Century-Crofts).

Haber, R. N., *Contemporary theory and research in visual perception* (Holt, Rinehart and Winston).

Hilgard, E. R., and Bower, G. H., *Theories of learning*, 3rd edition (Appleton-Century-Crofts).

Honig, W. K., *Operant behaviour* (Appleton-Century-Crofts).

Nevin, J. A., and Reynolds, G. S., *The study of behaviour* (Scott, Foreman).

Pribram, K. H., *Languages of the brain* (Prentice-Hall).

Runyon, R. P., and Haber, A., *Fundamentals of behavioural statistics* (Addison-Wesley).

Sidowski, J. B. (ed.), *Experimental methods and instrumentation in psychology* (McGraw-Hill).

Thompson, R. F., *Foundations of physiological psychology* (Harper and Row).

Welford, A. T., *Fundamentals of skill* (Methuen).

THIRD-YEAR SUBJECTS IN PSYCHOLOGY.

Pre-requisite subject: AY02 Psychology II.

Third-year Psychology is organised on an optional unit basis, certain units being designated as single-units and others as double-units. A single-unit normally consists of 12 lectures and six tutorial classes, offered within one term. A double-unit normally consists of 24 lectures and 12 tutorial classes offered over three terms (one lecture a week). All units, with the exception of Y304 Psychological Statistics, also include practical work either in the laboratory or in the field, and essays, or both.

Units are combined to form the subject AY23 Psychology III or the half-subjects AY1H Psychology IIIH(A) and AY2H Psychology IIIH(B). A particular double-unit or up to two single-units may also form part of any other scheduled third-year subject which is offered by another department (such as a Science IIIM subject), provided the Head/Chairman of that department and of the Psychology Department approve.

Either AY23 Psychology III or both AY1H Psychology IIIH(A) and AY2H Psychology IIIH(B) may be offered as pre-requisite subjects for Honours Psychology and for the Diploma in Applied Psychology.

The single-unit Y304 Psychological Statistics will be assessed during the May examination period. All double-units will be assessed by assignments during the year and by examination in November. Each single-unit will be assessed by assignments during the course and by an examination which will be held in the examination period following the completion of the unit.

Units offered in 1975.

At least 3 double-units and 3 single-units will be offered. The following units will be included, subject to availability of staff. The books listed are suggestions for preliminary reading, to aid students in their selection of units. More detailed information about the available units, booklets, etc. will be available from the Department in February.

Y301 HUMAN PERCEPTION AND PERFORMANCE (double-unit).

Decision processes in perception, attention and memory; measurement and applications in human performance.

Legge, D., *Skills* (Penguin).

Corso, J. F., *The experimental psychology of sensory behaviour*, paperback edition, chs. 7, 11, 12, 13 and 14 (Holt, Rinehart and Winston).

Y302 PERSONALITY (double-unit).

Personality assessment and human relations.

Lanyon, R. I., and Goodstein, L. D., *Personality assessment* (Wiley).

Swenson, C. H., *Introduction to interpersonal relations* (Scott Foresman).

Y303 SOCIAL PSYCHOLOGY (double-unit).

Aronson, E., *The social animal* (Freeman).

Lindzey, G., and Aronson, E. (eds.), *The handbook of social psychology*, 2nd edition, vol. I, ch. 1 and vol. II, ch. 1 (Addison-Wesley).

Y304 PSYCHOLOGICAL STATISTICS (single-unit, term 1).

The uses in psychology of analysis of variance, and of parametric statistics.

Y305 ENVIRONMENTAL PSYCHOLOGY (single-unit, term 2).

Barker, R. G., *On the nature of the environment*, Journal of Social Issues, 1963, vol. XIX, pp. 17-38.

Craik, K. H., *Environmental psychology* in Newcomb, T. M. (ed.), *New directions in psychology*, No. 4 (Holt, Rinehart and Winston).

Y306 PHYSIOLOGICAL PSYCHOLOGY (single-unit, term 2).

This unit cannot be taken with Y305 Environmental Psychology because of timetable restrictions.

The primary topic will be physiological mechanisms in perception.

Y307 ANIMAL BEHAVIOUR (single-unit, term 3).

Scott, J. P., *Animal behavior* (Doubleday Anchor, paperback).

Additional units may be offered.

The subjects offered are:

AY23 Psychology III.

This subject consists of two double-units, the single-unit Y304 Psychological Statistics, and a further single-unit, selected from those offered by the Department.

AY1H Psychology IIIH(A).

This half-subject consists of the single-unit Y304 Psychological Statistics and one double-unit or two further single-units.

AY2H Psychology IIIH(B).

This half-subject consists of one double-unit and one single-unit not including Y304 Psychological Statistics nor units taken as part of any other course. AY2H Psychology IIIH(B) is available only to students who have already passed the unit Y304 Psychological Statistics.

HONOURS DEGREE.

AY99 Psychology for the Honours degree of B.A.

Pre-requisite subjects: AY01 Psychology I, AY02 Psychology II, and *either* AY23 Psychology III *or* both AY1H Psychology IIIH(A) and AY2H Psychology IIIH(B).

Candidates are required to give their full attendance for an entire academic year to a special course of study in the psychological laboratory. The course will include lectures and discussions on advanced topics. It will also involve the writing of a substantial essay and the presentation of a dissertation embodying the results of, and a survey of the literature relevant to, a research investigation carried out under the supervision of a member of the staff of the Department.

ADDITIONAL SUBJECT.

The Psychology Department also provides syllabus AY79 Psychology for the Honours degree of B.Med.Sc. (see under Faculty of Medicine).

SOCIAL BIOLOGY.

(FOR THE DEGREE OF BACHELOR OF ARTS)

SB3H Social Biology IIIH.

Pre-requisite subjects: Two second-year half-subjects in Anthropology *or* two second-year half-subjects in Geography *or* the subject AY02 Psychology II *and* one of SJ02 Genetics II, SS02 Physiology II and SZ02 Zoology II. A student who has not passed *either* SJ02 Genetics II *or* AY02 Psychology II must have passed QT7H Statistics IH or another mathematical subject. A student who has not passed SJ02 Genetics II must have passed SJ7H Genetics and Human Variation IH.

SB3H Social Biology IIIH is a third-year half-subject which can be taken in combination with any of the following third-year half-subjects: AJ8H Geography IIIH, AP1H Political Sociology IIIH, AY1H Psychology IIIH(A), and AY2H Psychology IIIH(B).

The course will examine problems such as social stratification, migration, education and racial differences in the light of scientific argument about genetic diversity and the determination of behavioural patterns.

Preliminary reading:

Pringle, J. W. S. (ed.), *Biology and the human sciences* (O.U.P.).

Fuller, W. (ed.), *The social impact of modern biology* (Routledge and Kegan Paul).

Berger, P. L., *Invitation to sociology* (Pelican).

Text-books:

Young, J. Z., *An introduction to the study of man* (Clarendon Press or Oxford Paperback).

Dobzhansky, T., *Mankind evolving* (Yale U.P.).

Reference books:

Beteille, A. (ed.), *Social inequality* (Penguin).

Dyer, K. F., *The biology of racial integration* (Scientechnica).

Ehrman, L., and others (eds.), *Genetics environment and behaviour* (Academic Press).

Harrison, G. A., and Boyce, A. J. (eds.), *The structure of human populations* (O.U.P.).

Hudson, L. (ed.), *The ecology of human intelligence* (Penguin).

Montagu, A., *Man and aggression*, 2nd edition (O.U.P.).

Shipman, M. D., *The limitations of social research* (Longman).

OF THE

DIPLOMA IN APPLIED PSYCHOLOGY

REGULATIONS

1. There shall be a postgraduate Diploma in Applied Psychology.

†2. A candidate for admission to the course for the diploma shall:

(a) have qualified for admission to a degree of the University or to a degree of another university accepted for the purpose by the University, and

(b) have obtained the approval of the Head of Department of Psychology.

*2A. Subject to the approval of the Council, the Faculty may in special cases and subject to such conditions (if any) as it may see fit to impose in each case accept as a candidate for the diploma a person who does not hold a degree of a university but has given evidence satisfactory to the Faculty of his fitness to undertake work for the diploma.

3. To qualify for the diploma a candidate shall satisfactorily complete a course of full-time study extending over at least one year, or of part-time study extending over at least two years.

4. The preliminary work, the course of study to be undertaken, the examinations to be passed and the fees to be paid by candidates shall be prescribed in the schedules approved by the Council. Such schedules shall take effect as from the date of approval by the Council or such other date as the Council shall determine and shall be published in the next University Calendar which is issued after that approval has been given.

5. A candidate who desires that the examinations which he has passed in the University or elsewhere should be counted *pro tanto* for the Diploma in Applied Psychology, may on written application be granted such exemption from the requirements of these regulations as the Council shall determine.

6. There shall be three classifications of pass at an annual examination in any subject for the Diploma: Pass with Distinction, Pass with Credit, and Pass. The names of candidates within each classification shall be arranged in alphabetical order.

* Allowed 28 February, 1974.
† Amendment awaiting allowance at time of printing.

7. (a) A candidate who fails to pass the examination in any subject or who fails to complete satisfactorily the prescribed practical work, and who desires to take the subject or practical work again, shall again attend such lectures and satisfactorily do such written and practical work as the professor or lecturer concerned may prescribe, unless specifically exempted therefrom after written application to the Academic Registrar for such exemption.

(b) A candidate who has twice failed to pass the examination in any subject or who has twice failed to complete satisfactorily the prescribed practical work, may not enrol for that subject or practical work again except by special permission of the Faculty of Arts to be obtained in writing from the Academic Registrar and then only under such conditions as may be prescribed.

(c) For the purpose of this regulation, a candidate who has enrolled for at least two terms in an academic year and who is refused permission to sit for examination owing to unsatisfactory attendance or work, or who fails to attend all or part of an annual examination (or supplementary examination if granted) without a reason accepted by the Head of the Department of Psychology as adequate, shall be deemed to have failed to pass the examination.

8. A candidate who complies with the foregoing conditions and satisfies the examiners shall be awarded the Diploma in Applied Psychology.

Regulations allowed 17 December, 1970.

SCHEDULES

(Made by the Council under Regulation 4.)

NOTE: Syllabuses of the subjects for the Diploma in Applied Psychology are published below, immediately after the regulations and schedules of the diploma. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I: PRELIMINARY WORK

1. Preliminary work must be completed before commencement of the diploma course of study.

2. A candidate who holds an Honours degree of B.A. or B.Sc. in Psychology, or an Ordinary degree of B.A. or B.Sc. with Psychology as a third-year subject, will satisfy the requirements of this schedule.

3. Any other graduate will satisfy the requirements of this schedule if he satisfies the Head of the Department of Psychology that his experience in psychology is equivalent to a three-year university sequence in psychology, and is of a kind which will enable him to understand and profit from the course of study for the diploma. If a graduate does not so satisfy the Head of the Department, the preliminary work necessary to satisfy the requirements of this schedule will be prescribed by the Head of the Department of Psychology.

Schedule II: Course of Study

1. A candidate for the Diploma in Applied Psychology shall regularly attend lectures and seminars, do such written work as may be prescribed, and pass examination in the following subjects (unless exempted under regulations 5 or 7(a)).

(a) Developmental Psychology
(b) Human Skills
(c) Occupational Psychology
(d) Personality and Social Relations
(e) Psychopathology
(f) Statistics and Methodology
(g) Educational Psychology II may be presented in place of any two of the subjects (a) to (e) above.

Schedule III: Practical Work

1. A candidate shall complete satisfactorily the prescribed practical work, which in the case of part-time students will be undertaken mainly during the second year of the course. The practical work will include:

(a) Practical work in applied psychology for a total of at least two hundred hours.
(b) A written report on either a research investigation or a critical survey on a topic within the field of applied psychology, chosen by himself and approved by the Head of the Department of Psychology.

OF THE

DIPLOMA IN APPLIED PSYCHOLOGY

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Arts: A.

The second letter identifies the department teaching the subject: Psychology: Y.

The first digit 0–7, identifies each of the eight subjects for the diploma.

The second digit 4, indicates that it is a subject for either the Diploma in Applied Psychology or the Diploma in Education.

DIPLOMA IN APPLIED PSYCHOLOGY

The course is intended primarily for graduates of the Faculty of Arts or the Faculty of Science who have either an Honours Degree in Psychology or an Ordinary Degree with Psychology as a major subject. Graduates who do not have either of these qualifications but who satisfy the Chairman of the Department of Psychology that they have an equivalent standard of attainment in psychology may also be permitted to proceed to the course.

All students on the course are expected to develop research skills, and some students may be encouraged to pursue their research interests for a higher degree.

The course will normally be completed in two years of part-time study. It includes lectures, demonstrations, and discussions on the subjects of study listed below, together with one seminar or practical work session a week throughout the course, and lectures on special topics.

The subjects of study 1-5 below are normally examined in the first year of the course, and subjects 6 and 8 below in the second year. Assessment of students will be made on the basis of attendance and essays, exercises or tests during the year, as well as by examination at the end of the year. Assessment of subject 7 below is on the basis of practical work undertaken during any year of enrolment for the diploma.

The subjects of study are:

1. AY04 Developmental Psychology.
2. AY14 Human Skills.
3. AY24 Occupational Psychology.
4. AY34 Personality and Social Relations.
5. AY44 Psychopathology.
6. AY54 Statistics and Methodology.
7. AY64 Practical Work.
8. AY74 Research Investigation or Critical Survey.

AD30 Educational Psychology II may be taken in place of any two of the subjects 1 to 5 above.

AY04 Developmental Psychology.

Lectures will be given for one term, with one two-hour session a week. Topics will include: Changes in individual capacity and personality through the life-span, from childhood to old age.

AY14 Human Skills.

Lectures will be given for one term, with one two-hour session a week. Topics will include: Basic principles of human performance; the nature of skill, and implications for the design of machines and of working environments; methods of job-analysis; fatigue and boredom.

AY24 Occupational Psychology.

Lectures will be given for one term, with one two-hour session a week; a series of practical work exercises is also required. Topics will include: Factors affecting performance in occupational settings, such as: motivation; vocational guidance, personnel selection and training; managerial organisation.

AY34 Personality and Social Relations.

Lectures will be given for one term, with one two-hour session a week. Topics will include: (a) The study of human adjustment and creative behaviour. (b) Interpersonal relationships in small group situations.

AY44 Psychopathology.

Lectures will be given for one term, with one two-hour session a week. Topics will include: Psychosis, neurosis and personality disorders, and their causation; the role of interpersonal perception, communication and transaction in the development and maintenance of disorder; psychotherapy.

AY54 Statistics and Methodology.

Lectures will be given for three terms, with one two-hour session a week, and these will normally be attended during the second year of the part-time course. Topics will include: Basic statistical procedures; complex experimental designs; analysis of data from non-experimental intact groups; evaluating the effects of actions taken in the field; uses of regression and covariance; factor analysis; the study of individual cases; the construction of psychological tests, and the study of their reliability, validity, and utility; the design of questionnaires, and the design and conduct of social surveys.

AY64 Practical Work.

Practical work in applied psychology will be required for a total of not less than two hundred hours. This will normally be undertaken both in the form of practical demonstrations and exercises in the Psychology Department, and in work in conjunction with agencies co-operating with the Department. Practical work in the Department would include experience in psychological testing, interviewing, and casework. Assessment will be made on the basis of attendance and work during the period of enrolment for the diploma.

AY74 Research Investigation or Critical Survey.

A written report will be required of either a research investigation or a critical survey on a topic within the field of applied psychology, chosen by the student and approved by the Chairman of the Department of Psychology.

AD30 Educational Psychology II.

For syllabus see the Advanced Diploma in Education.

Students presenting this subject for the Diploma in Applied Psychology will be required to complete additional practical work exercises.

OF THE

DIPLOMA IN LIBRARY STUDIES

REGULATIONS

1. There shall be a postgraduate Diploma in Library Studies.

*2. Except as provided for in regulation 3, a candidate for admission to the course for the diploma must be qualified for admission to a degree of the University of Adelaide or another university accepted for the purpose by the University of Adelaide.

3. Subject to the approval of the Council, the Faculty may in special cases and subject to such conditions (if any) as it may impose in each case, accept as a candidate for the diploma a person who does not hold a degree of a university but has given evidence satisfactory to the Faculty of his fitness to undertake work for the diploma.

4. To qualify for the diploma a candidate shall satisfactorily complete a course of full-time study extending over at least one year or of part-time study extending over at least two years.

5. The course of study to be undertaken, the examinations to be passed and the fees to be paid by candidates shall be prescribed in schedules approved by the Council. Such schedules shall take effect as from the date of approval by the Council or such other date as the Council shall determine and shall be published in the next University Calendar which is issued after that approval has been given.

6. A candidate who desires that the examinations which he has passed in the University or elsewhere should be counted for the Diploma in Library Studies, may on written application be granted such exemption from the requirements of these regulations as the Council shall determine.

7. There shall be three classifications of pass at an annual examination in any subject for the diploma: Pass with Distinction, Pass with Credit, and Pass. The names of the candidates in each classification shall be arranged in alphabetical order.

* Amendment awaiting allowance at time of printing.

8. (a) A candidate who fails to pass the examination in any subject or who fails to complete satisfactorily the prescribed practical work, and who desires to take the subject or practical work again, shall again attend such lectures and satisfactorily do such written and practical work as may be prescribed, unless specifically exempted therefrom after written application to the Academic Registrar for such exemption.

(b) A candidate who has twice failed to pass the examination in any subject or who has twice failed to complete satisfactorily the prescribed practical work, may not enrol for that subject or practical work again except by special permission of the Faculty of Arts to be obtained in writing from the Academic Registrar and then only under such conditions as may be prescribed.

(c) For the purpose of this regulation, a candidate who is refused permission to sit for examination owing to unsatisfactory attendance or work, or who fails to attend all or part of a final examination (or supplementary examination if granted) without a reason accepted by the Faculty of Arts as adequate, shall be deemed to have failed to pass the examination.

9. A candidate who complies with the foregoing conditions and satisfied the examiners shall be awarded the Diploma in Library Studies.

10. The maximum number of candidates who may be enrolled in any course for the diploma shall be determined from time to time by the Council on the recommendation of the Faculty of Arts; and nothing in these regulations shall be held to bind the Council to provide any or all the courses in any year if for any reason the Council decides to suspend it or them.

11. These regulations shall come into force at a date to be determined by the Council.*

Regulations allowed 28 February, 1974.

* The Council authorised the regulations to come into force on 1 January, 1975.

SCHEDULES

(Made by the Council under Regulation 5.)

NOTE: Syllabuses of the subjects for the Diploma in Library Studies are published below, immediately after the regulations and schedules of the diploma. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I: COURSES OF STUDY

A candidate will be expected to attend lectures regularly and, unless exempted therefrom by the Faculty of Arts, shall do such written, practical and tutorial work as may be prescribed, pass

examinations, and satisfactorily complete a special assignment. Compulsory subject units, a number of optional units from which (with any additional units that may be offered) an approved selection may be made, the hours of classwork required each week for each unit and the academic term or terms in which each may be taken by approved full-time or part-time students are scheduled below. Not every optional unit will necessarily be offered every year.

Syllabus Number	Subject Units	First Term. Hours a week	Second Term. Hours a week	Third Term. Hours a week
	Compulsory Units			
AB05	Introduction to Library Studies	2		
AB15	Bibliographical Organisation I	3	3	
AB25	Reference Service and Resources	2		
AB35	Academic and Research Library Management	2	2	
AB45	Library Applications of Computing I ..	2		
AB55	Research Methods			3
AB65	Special Assignment	To be completed in Third Term or Summer Vacation.		
	Optional Units, Groups I, II and III			
	One First Term unit shall be taken.			
	Three Second Term units shall be taken, of which at least one shall be taken from Group I.			
	Three Third Term units shall be taken, of which at least one shall be taken from Group I.			
	Group I			
AB75	Social Science Bibliography I		3	
AB85	Humanities Bibliography I		3	
AB95	Pure and Applied Science Bibliography I ..		3	
AB06	Social Science Bibliography II			3
AB16	Humanities Bibliography II..			3
AB26	Pure and Applied Science Bibliography II			3
	Group II			
AB36	Library History	3		
AB46	Book Production and Book Arts	3	3	
AB56	Library Applications of Computing II ..		3	
AB66	Bibliographical Organisation II			3
AB76	Library Planning			3
	Group III			
	Examples of relevant degree subjects which may be available to students with the prerequisite subjects:			
QA7H	Computing IH	3	3	3
QA03	Computing Science III. Choice of one of the two units offered each term.	3	3	3
QT7H	Statistics IH	3	3	3
EC2H	Introduction to Operations Research IIIH	1½	1½	1½
EC3H	Information Systems and Data Processing IIIH	1½	1½	1½
EC23	Industrial Sociology III	3	3	3

OF THE

DIPLOMA IN LIBRARY STUDIES

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Arts: A.

The second letter identifies the Diploma in Library Studies: B.

The first digit 0-9, identifies each of the subject units for the diploma.

The second digit 5 or 6, indicates that it is a subject for the Diploma in Library Studies.

DIPLOMA IN LIBRARY STUDIES.

COMPULSORY SUBJECT UNITS.

AB05 Introduction to Library Studies.

(First term—two hours a week.)

Topics include: communication in society; the media, and print in particular; the library in relation to society and communication, both past and present; the provision, functions and services of various types of library; the role of the librarian; the status and problems of the profession of librarianship.

The following list of readings and references may be supplemented when the course begins.

Benge, R. C., *Libraries and cultural change* (Bingley).

Burkett. J. (ed.), *Trends in special librarianship* (Bingley).

Collison, R. L., 30,000 *libraries: a practical guide* (Dickenson).

Enright, B. J., *New media and the library in education* (Bingley).

Gates, J. K., *Introduction to librarianship* (McGraw-Hill).

Johnson, E. D., *Communication: an introduction to the history of writing, printing, books and libraries*, 4th edition (Scarecrow Press).

Kujoth, J. S., *Libraries, readers and book selection* (Scarecrow Press).

Schramm, W. L. (ed.), *The process and effects of mass communication* (Illinois U.P.).

Shaffer, D. E., *The maturity of librarianship as a profession* (Scarecrow Press).

Shera, J. H., *Libraries and the organization of knowledge* (Cheshire).

Simon, O., *Introduction to typography*, 2nd edition (Faber).

Steinberg, S. H., *Five hundred years of printing* (Penguin).

Williams, B. J. S., *Miniaturised communications* (Library Association).

AB15 Bibliographical Organisation I.

(First and second terms—three hours a week.)

An introduction to the selection, acquisition, cataloguing, classification, indexing and circulation of library materials. Alternative methods, including applications of mechanisation, are considered critically.

AB25 Reference Service and Resources.

(First term—two hours a week.)

An introductory course concerned with the objectives of reference service in libraries, the sources of information, and the methods of meeting the needs of library users for information.

The following list of readings and references may be supplemented when the course begins.

Cheney, F. N., *Fundamental reference sources* (American Library Association).

Collison, R. L., *Bibliographies, subject and national*, 3rd edition (Cheshire).

Galvin, T. J., *Current problems in reference service* (Bowker).

Galvin, T. J., *Problems in reference service* (Bowker).

Grogan, D. J., *Case studies in reference work* (Cheshire).

Katz, W. A., *Introduction to reference work* (McGraw-Hill).

Walford, A. J. (ed.), *Guide to reference material*, 2nd-3rd edition (Library Association).

Winchell, C. M., *Guide to reference books*, 8th edition *with* Supplements 1-3 (American Library Association).

Ziskind, S., *Reference readiness* (Bingley).

AB35 Academic and Research Library Management.

(First and second terms—two hours a week.)

Organisation and management methods with particular reference to a library in an academic or research environment; historical development of forms of library organisation; the relevance of modern theory and practice; policy formulation; evaluative techniques; programme development; budget planning and financial management; personnel policies and management (classification, recruitment, training and evaluation); communication methods; supervision and interpersonal relationships; industrial relations; introducing and managing automation programmes; organising and administering library functions (acquisition, cataloguing, reader services, etc.).

The following list of readings and references may be supplemented when the course begins.

Balnaves, J., *Australian libraries* (Cheshire).
Drucker, P. F., *The practice of management* (Pan).
Fielding, F. D. O., *Australian university library administration* (Australia and New Zealand Book Co.).
Licklider, J. C. R., *Libraries of the future* (M.I.T. Press).
Reynolds, M. M. (ed.), *Reader in the academic library* (NCR Microcard Editions).
Rogers, R. D., and Weber, D. C., *University library administration* (Wilson).
Simon, H. A., *The shape of automation for men and management* (Harper and Row).
Wasserman, P., and Bundy, M. L. (eds.,) *Reader in library administration* (NCR Microcard Editions).
Wilson, L. R., and Tauber, M. F., *The university library*, 2nd edition (Columbia U.P.).

AB45 Library Applications of Computing I.

(First term—two hours a week.)

An introductory course. Topics include: the historical and theoretical background to storage, retrieval and dissemination of information; systems of information science for librarianship; the types of computerised operations applicable to librarianship, their special elements and common elements. A synthesis of the relevant special studies from the other compulsory introductory courses.

AB55 Research Methods.

(Third term—three hours a week.)

The principles and scientific procedures for planning, designing, conducting and reporting research. Their relationship to the student's special assignment and to his later role as a librarian assisting research workers, and perhaps as a librarian engaged in research projects.

The following list of readings and references may be supplemented when the course begins.

Bundy, M. L., and Wasserman, P. (eds.), *Reader in research methods for librarianship* (NCR Microcard Editions).
Goldhor, H., *An introduction to scientific research in librarianship* (Illini Union Bookstore).
Conference on Library Surveys, Columbia University, 1965, *Library surveys* (Columbia U.P.).

AB65 Special Assignment.

(Third term or summer vacation.)

The student's original investigation of a topic or problem, and presentation of the result. Any one of a number of approaches is possible, the following being merely examples: a substantial essay or bibliography; a management study, an inquiry into an aspect of library service; a directory or other reference aid; an audio-visual aid; a computing project; an architectural brief for a library building.

Approval to undertake the assignment to be sought during second term.

GROUP I SUBJECT UNITS.

AB75 Social Science Bibliography I.

(Second term—three hours a week.)

Pre-requisite: AB25 Reference Service and Resources.

Subject bibliography, reference work, collection building in the social sciences. An outline of the literature of several areas of the social sciences and some of the landmark books, the bibliographical apparatus, and information sources and services.

AB06 Social Science Bibliography II.

(Third term—three hours a week.)

Pre-requisite: AB75 Social Science Bibliography I.

An extension of AB75 Social Science Bibliography I, at a more advanced and specialised level.

The following list of readings and references may be supplemented when the courses begin.

Campbell, E. M., and MacDougall, D., *Legal research: materials and methods* (Law Book Co.).

Hoselitz, B. F., *Reader's guide to the social sciences*, revised edition (Free Press).

Lewis, P. R., *The literature of the social sciences* (Library Association).

Schmeckebier, L. F., *Government publications and their use*, 2nd revised edition (Brookings Institution).

Stevens, R. E., *Reference books in the social sciences and humanities*, 2nd edition (Illini Union Bookstore).

Walford, A. J. (ed.), *Guide to reference material*, 2nd edition, vol. 2 (Library Association).

White, C. M., *Sources of information in the social sciences: a guide to the literature*, 2nd revised edition (American Library Association).

AB85 Humanities Bibliography I.

(Second term—three hours a week.)

Pre-requisite: AB25 Reference Service and Resources.

Subject bibliography, reference work, collection building in the humanities. An outline of the literature of several areas of the humanities and some of the landmark books, the bibliographical apparatus, and information sources and services.

AB16 Humanities Bibliography II.

(Third term—three hours a week.)

Pre-requisite: AB85 Humanities Bibliography I.

An extension of AB85 Humanities Bibliography I, at a more advanced and specialised level.

The following list of readings and references may be supplemented when the courses begin.

Asheim, L., *The humanities and the library* (American Library Association).

Bryant, E. T., *Music* (Bingley).

Walford, A. J. (ed.), *Guide to reference material*, 2nd edition, vol. 3 (Library Association).

AB95 Pure and Applied Science Bibliography I.
(Second term—three hours a week.)

Pre-requisite: AB25 Reference Service and Resources.

Subject bibliography, reference work, collection building in pure and applied science.

An outline of the literature of several areas in pure and applied science and some of the landmark books, the bibliographical apparatus, and information sources and services.

AB26 Pure and Applied Science Bibliography II.
(Third term—three hours a week.)

Pre-requisite: AB95 Pure and Applied Science Bibliography I.

An extension of AB95 Pure and Applied Science Bibliography I, at a more advanced and specialised level.

The following list of readings and references may be supplemented when the courses begin.

Medical reference works, 1679-1966, Supplement 1, compiled by Mary V. Clark (Medical Library Association).

Grogan, D. J., *Science and technology: an introduction to the literature*, 2nd edition (Bingley).

Hanson, C. W., *Introduction to science-information work* (Aslib).

Lasworth, E. J., *Reference sources in science and technology* (Scarecrow Press).

Malinowsky, H. R., *Science and engineering reference sources* (Libraries Unlimited).

Sherrod, J., and Hodina, A. (eds.), *Reader in science information* (NCR Microcard Editions).

Thornton, J. L., *Scientific books, libraries and collectors*, 3rd revised edition (Library Association).

Walford, A. J. (ed.), *Guide to reference material*, 3rd edition, vol. 1 (Library Association).

GROUP II SUBJECT UNITS.

AB36 Library History.
(First term—three hours a week.)

An outline of the major developments in library history, with special attention to the 19th and 20th centuries. The evolution of the different types of library, and the research library in particular. Some account of the history, resources, contribution and interests of a number of the major libraries of various countries including Australia.

The following lists of readings and references may be supplemented when the course begins.

Balnaves, J., *Australian libraries* (Cheshire).

Brough, K. J., *Scholar's workshop* (Illinois U.P.).

Esdaile, A. J. K., *National libraries of the world*, 2nd edition (Library Association).

Harris, M. H. (ed.), *Reader in American library history* (NCR Microcard Editions).

Johns, A. W., *Special libraries: development of the concept, the organizations and their services* (Scarecrow Press).

Rothstein, S., *The development of reference services through academic traditions, public library practice and special librarianship* (Association of College and Research Libraries).

Thornton, J. L., *Selected readings in the history of librarianship*, 2nd edition (Library Association).

AB46 Book Production and Book Arts.

(First and second terms—three hours a week.)

An outline of the history and techniques of printing and other graphic processes from the earliest times to the present; the format of the book; publishing; analytical bibliography; textual study.

The following list of readings and references may be supplemented when the course begins.

Bowers, F. T., *Bibliography and textual criticism* (Clarendon Press).
Bowers, F. T., *Principles of bibliographical description* (Russell).
Gaskell, P., *A new introduction to bibliography* (Clarendon Press).
Jennett, S., *The making of books*, 5th edition (Faber).
Johnson, E. D., *Communication: an introduction to the history of writing, printing, books and libraries*, 4th edition (Scarecrow Press).
Mumby, F. A., and Norrie, I., *Publishing and bookselling*, 5th edition (Bowker).
Robinson, A. M. L., *Systematic bibliography*, 3rd edition (Bingley).
Simon, O., *Introduction to typography*, 2nd edition (Faber).
Steinberg, S. H., *Five hundred years of printing*, revised edition (Penguin).

AB56 Library Applications of Computing II.

(Second term—three hours a week.)

Pre-requisite: a pass in AB45 Library Applications of Computing I.

Ability to write computer programmes desirable.

An extension of the pre-requisite study, involving more advanced theory and practice, with some concentration on particular problems confronting libraries.

The following list of readings and references may be supplemented when the courses begin.

Artandi, S., *An introduction to computers in information science*, 2nd edition (Scarecrow Press).
Becker, J., (ed.), *Interlibrary communications and information networks* (American Library Association).
Becker, J., and Hayes, R. M., *Information storage and retrieval* (Wiley).
Eyre, J., and Tonks, P., *Computers and systems* (Bingley).
Foskett, D. J. (ed.), *Library systems and information services* (Crosby Lockwood).
Hayes, R. M., and Becker, J., *Handbook of data processing for libraries* (Becker and Hayes).
Heiliger, E. M., and Henderson, P. B., *Library automation* (McGraw-Hill).
Kaplan, L. (ed.), *Reader in library services and the computer* (NCR Microcard Editions).
Kent, A., *Information analysis and retrieval* (Becker and Hayes).
Lancaster, F. W., *Information retrieval systems: characteristics, testing and evaluation* (Wiley).
Reynolds, M. M. (ed.), *Reader in library cooperation* (NCR Microcard Editions).
Vickery, B. C., *Techniques of information retrieval* (Butterworth).

AB66 Bibliographical Organisation II.

(Second term—three hours a week.)

An extension of AB15 Bibliographical Organisation I, providing more advanced and specialised study and practice.

The following list of readings and references may be supplemented when the courses begin.

American Library Association, *Anglo-American cataloguing rules*, North American text (Chicago).
Applebaum, E. L. (ed.), *Reader in technical services* (NCR Microcard Editions).
Broadus, R. N., *Selecting materials for libraries* (Wilson).

Carter, M. D., and Bonk, W. J., *Building library collections*, 3rd edition (Scarecrow Press).
Dunkin, P. S., *Cataloging U.S.A.* (American Library Association).
Ford, S., *Acquisition of library materials* (American Library Association).
Foskett, A. C., *The subject approach to information*, 2nd edition (Bingley).
Fry (George) and Associates, Inc., *Study of circulation control systems* (American Library Association).
Haines, H. E., *Living with books: the art of book selection*, 2nd edition (Columbia U.P.).
McNally, P., *Non-book materials* (Sun Books, paperback).
Melcher, D., *Melcher on acquisition* (American Library Association).
Olding, R. K., *Readings in library cataloguing* (Cheshire).
Osborn, A. D., *Serial publications*, 2nd edition (American Library Association).
Painter, A. F. (ed.), *Reader in classification and descriptive cataloging* (NCR Microcard Editions).
Tauber, M. F., and Associates, *Technical services in libraries* (Columbia U.P.).
U.S.A. Library of Congress. Information Systems Office. M.A.R.C. manuals, 2nd edition (American Library Association).

AB76 Library Planning.

(Third term—three hours a week.)

An outline of principles in planning libraries in relation to such considerations as purpose, environmental, relationship to other libraries and organisations, finance, size, organisational and physical structure, and architectural considerations.

The following list of readings and references may be supplemented when the course begins.

Ellsworth, R. E., *Academic library buildings* (Colorado Associated U.P.).
Metcalf, K. D., *Planning academic and research library buildings* (McGraw-Hill).
Thompson, G., *Planning and design of library buildings* (Architectural Press).

GROUP III SUBJECT UNITS.

QA7H Computing IH.

Equivalent to one unit in each of the three terms. For syllabus see under Faculty of Mathematical Sciences.

QA03 Computing Science III.

Choice may be made of one of the two units offered in each term. For syllabus see under Faculty of Mathematical Sciences.

QT7H Statistics IH.

Equivalent to one unit in each of the three terms. For syllabus see under Faculty of Mathematical Sciences.

EC2H Introduction to Operations Research IIIH.

Equivalent to one unit in each of the three terms. For syllabus see under Faculty of Economics.

EC3H Information Systems and Data Processing IIIH.

Equivalent to one unit in each of the three terms. For syllabus see under Faculty of Economics.

EC23 Industrial Sociology III.

Equivalent to two units in each of the three terms. For syllabus see under Faculty of Economics.

OF THE

DIPLOMA IN EDUCATION

REGULATIONS

[NOTE: These regulations came into force on 1 January, 1962.]

1. There shall be a postgraduate Diploma in Education.

†2. Except as provided for in regulation 3 a candidate for admission to the course for the diploma shall have qualified for admission to a degree of the University or to a degree of another university accepted for the purpose by the University.

*3. Subject to the approval of the Council, the Faculty may in special cases and subject to such conditions (if any) as it may see fit to impose in each case accept as a candidate for the diploma a person who does not hold a degree of a university but has given evidence satisfactory to the Faculty of his fitness to undertake work for the diploma.

4. To qualify for the diploma a candidate shall:

(a) satisfactorily complete a course of full-time study extending over at least one year or of part-time study extending over at least two years; and

(b) satisfy the University in a course of practical teaching.

5. The course of study and the fees to be paid by the candidate shall be prescribed in schedules which shall be drawn up from time to time by the Faculty of Arts and approved by the Council. Such schedules shall take effect as from the date of approval by the Council or such other date as the Council shall determine and shall be published in the next University Calendar which is issued after that approval has been given.

6. A candidate who desires that the examinations which he has passed in the University or in another university should be counted *pro tanto* for the Diploma in Education, may on written application be granted such exemption from the requirements of these regulations as the Council shall determine.

* Allowed 28 February, 1974.
† Allowed 28 February, 1974, and amendment awaiting allowance at time of printing.

7. A candidate for the diploma by part-time study who desires that his experience as a teacher should exempt him from a course of practical teaching may on written application be granted such exemption provided that he satisfies the University that he is a proficient teacher.

8. A candidate who has twice failed to pass the examination in any subject or division of a subject may not enrol for the subject again except by special permission of the Faculty and then only under such conditions as the Faculty may prescribe.

For the purpose of this regulation a candidate who is refused permission to sit for examination, or who fails, without a reason accepted by the Dean as adequate, to attend all or part of an annual examination (or supplementary examination if granted) after having enrolled for at least two terms in that year, shall be deemed to have failed to pass the examination.

9. A candidate who complies with the foregoing conditions and satisfies the examiners shall be awarded the Diploma in Education.

10.* These regulations shall come into force, and all existing regulations shall be repealed, on 1 January, 1962. However, a student who matriculated in the University on or before 31 March, 1960, may at his option complete the course for the diploma under the regulations in force in 1960 provided that he satisfies the requirements of regulation 3 of those regulations by 28 February, 1966.

Regulations allowed 16 March, 1961.
* Amended 4 April, 1963.

SCHEDULES

(Made by the Council under Regulation 5.)

NOTE: Syllabuses of the subjects for the Diploma in Education are published below, immediately after the regulations and schedules of the diploma. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I: COURSES OF STUDY

A candidate shall, unless exempted therefrom by the Faculty, regularly attend lectures, do such written and tutorial work as may be prescribed, and pass examinations in the following subjects:

Theory of Education I;
History of Education I;
Sociology of Education I;
Educational Psychology I;
Practical Teaching and Methodology;

provided that a part-time teaching candidate who has had practical teaching experience and who is enrolled in Practical Teaching and

Methodology may apply in writing by 31 March to the Faculty of Arts, through the Academic Registrar, for exemption from attendance at classes, tutorials, supervised teaching practice and examinations in this subject.

Such an application (which is *in addition* to enrolment for the subject) should be accompanied by a statement giving full details of teaching experience including dates, names and addresses of schools, and names of head teachers. The University will in due course seek a report on the candidate's competence as a teacher.

The Academic Registrar will inform each candidate by 31 July whether his or her application for exemption has been granted.

OF THE

DIPLOMA IN EDUCATION

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Arts: A.

The second letter identifies the department teaching the subject:
Education: D.

The first digit 0–3, identifies each of the four subjects for the diploma.

The second digit 4, indicates that it is a subject for either the Diploma in Education or the Diploma in Applied Psychology.

DIPLOMA IN EDUCATION.

The course for the diploma is a single, composite course of full-time study lasting for one year and requiring the whole of a candidate's time to be devoted to it. The work consists of reading, attendance at a number of tutorial and seminar classes each week, such practical and written exercises as may be prescribed, visits to schools and other institutions, periods of supervised teaching practice, and attendance at lecture courses.

Each of the lecture courses consists of one lecture a week.

AD04 Theory of Education I.

The following books, or chapters in books, should be read:

Plato, *The republic,* particularly sections 9 - 14 and 18 - 28 in F. M. Cornford's edition.

Rousseau, J. J., *Emile.*

Arnold, M., *Culture and anarchy.*

Mill, J. S., *On liberty.*

O'Connor, D. J., *An introduction to the philosophy of education* (Routledge).

Gribble, J., *Introduction to the philosophy of education* (Allyn and Bacon).

Peters, R. S., *Ethics and education* (Allen and Unwin).

Archambault, R. D. (ed.), *Philosophical analysis and education* (Routledge).

Hirst, P. H., and Peters, R. S., *The logic of education* (Routledge).

Nash, P., *Models of man* (Wiley).

Dearden, R. F., and others, *Education and the development of reason* (Routledge).

Peters, R. S. (ed.), *The philosophy of education* (O.U.P.).

White, J. P., *Towards a compulsory curriculum* (Routledge).

Peters, R. S. (ed.), *The concept of education* (Routledge).

AD14 History of Education I.

The course comprises three topics: Education in Australia; education in antiquity and in the middle ages; secondary education in England from the renaissance to the present day.

Among the books recommended for reading in connection with the course, the following are of special importance:

Cleverley, J., and Lawry, J. (eds.), *Australian education in the twentieth century* (Longmans).

Turney, C. (ed.), *Pioneers of Australian education,* vols. 1 and 2 (Sydney U.P.).

Hyams, B. K., and Bessant, B., *Schools for the people* (Longmans).

Australian Schools Commission Interim Committee. *Schools in Australia* (A.G.P.S.).

Schoenheimen, H. P., *Good Australian schools* (Victorian Technical Teachers Assoc.).

South Australia. Committee of enquiry into education in South Australia. *Education in South Australia* (Karmel Committee) (S.A. Govt. Pr.).

Lawson, M. D., and Petersen, R. C., *Progressive education: an introduction* (Angus and Robertson).

Childe, V. G., *What happened in history* (Penguin/Pelican).

Koestler, A., *The sleepwalkers* (Penguin).

Marrou, H. I., *The history of education in antiquity* (Sheed and Ward).

Knowles, D., *The evolution of medieval thought* (Longmans).

Augustine of Hippo, *Confessions,* Books I-X (Dent/Everyman, Penguin, various other PB editions).

Brown, P., *The world of late antiquity* (Thames and Hudson).
Bolgar, R. R., *The classical heritage and its beneficiaries* (C.U.P.).
Brooke, C., *The twelfth century Renaissance* (Thames and Hudson).
Leff, G., *Paris and Oxford Universities in the thirteenth and fourteenth centuries* (John Wiley).
Kristeller, P. O., *Renaissance thought, the classic, scholastic and humanistic strains* (Harper Torchbooks).
Curtis, M. H., *Oxford and Cambridge in transition*, 1558-1642, *an essay on changing relations between the English universities and English society* (O.U.P.).
Charlton, K., *Education in Renaissance England* (Routledge).
Vincent, W. A. L., *The grammar schools, their continuing tradition*, 1660-1714 (John Murray).
Newsome, D., *Godliness and good learning* (John Murray).
Cruickshank, M., *Church and state in English education*, 1870 to the *present day* (Macmillan).
Banks, O., *Parity and prestige in English secondary education* (Routledge).

AD24 Sociology of Education I.

This is an introductory course and, although its principal aim is to indicate the relationship between education and its social setting, a special emphasis is placed on theoretical sociology before discussing the educational implications of the subject. A large proportion of the time is devoted to the study of the concept of social class, the nature of social stratification in Australia and the relationship between social class and educational opportunity. The reading list is given below but a number of topics will be discussed for which there is no adequate reference in readily available texts (e.g. one of such topics is concerned with the influence of sociologist's own theoretical orientation on the way in which he applies the subject to the solution of educational problems). Students will also be referred to articles in sociological and educational journals.

Bottomore, T. B., *Sociology: a guide to problems and literature* (Unwin).
Berger, P. L., *Invitation to sociology: a humanistic perspective* (Penguin).
Young, M. F. D., *Knowledge and control: New directions for the sociology of education* (Collier-Macmillan).
Hudson, L., *The cult of the fact* (Cape).
Bottomore, T. B., *Classes in modern society* (Allen and Unwin).
Tumin, M. M., *Social stratification* (Prentice-Hall).
Davis, A., *Social class influences on learning* (Harvard).
Fensham, P. J. (ed.), *Rights and inequality in Australian education* (Cheshire).
Henderson, R. F., and others, *People in poverty: a Melbourne survey* (Cheshire).
Riessman, F., *The culturally deprived child* (Harper).
Hoggart, R., *The uses of literacy* (Penguin).
Jackson, B., and Marsden, D., *Education and the working class* (Penguin).
Halsey, A. H., and others, *Education, economy and society* (Free Press).
Davies, A. F., and Encel, S., *Australian society: a sociological introduction* (Cheshire).
Davies, A. F., *Images of class: an Australian study* (Sydney U.P.).
Katz, F. M., and Browne, R. K., *Sociology of education* (Macmillan).
Partridge, P. H., *Society, schools and progress in Australia* (Pergamon).
Horne, D., *The education of young Donald* (Penguin).
Pedley, R., *The comprehensive school* (Penguin).
Ford, J., *Social class and the comprehensive school* (Routledge).
Cox, C. B., and Dyson, A. E., *Fight for education* and *The crisis in education* (Black Paper I and II. The Critical Quarterly Society).
Jackson, B., *Streaming: an education system in miniature* (Routledge).

Zweig, F., *The student in the age of anxiety* (Heinemann).
Hodgkinson, H. L., *Education in social and cultural perspectives* (Prentice-Hall).
Hodgkinson, H. L., *Education, interaction, and social change* (Prentice-Hall).
Harris, R.Mc.L., and others, *Isolation and education: Educational aspirations and achievements in rural Australia* (S.A. Educ. Dept.).
Smolicz, J. J., and Wiseman, R., *European migrants and their children: Interaction, assimilation, education* (Quarterly Review of Australian Education, vol. 4, 1971, No. 2 (June) and No. 3 (September)).
Melbourne studies in education 1968-1969 (M.U.P.).
Melbourne studies in education 1972 (M.U.P.).
Etzioni, A., *Modern organizations* (Prentice-Hall).
Josephson, E., and M., *Man alone* (Dell).
Israel, J., *Alienation from Marx to modern sociology* (Allyn and Bacon).
Durkheim, E., *Suicide* (Routledge).
Durkheim, E., *The division of labour* (Free Press).
Gerth, H. H., and Mills, C. W., *From Max Weber* (Routledge).
Bottomore, T. B., *Karl Marx: Early writings* (Watts).
Sennett, R., *Classic essays on the culture of cities* (Appleton-Century-Crofts).
Fischer, E., *Marx in his own words* (Allen Lane).
Wolff, K. (ed.), *The sociology of George Simmel* (Free Press).
Nisbett, R., *The sociological tradition* (Heinemann).
Reimer, E., *School is dead* (Penguin).
Freire, P., *The pedagogy of the oppressed* (Penguin).
Freire, P., *Cultural action for freedom* (Penguin).
Illich, I., *Celebration of awareness* (Calder and Boyars).
Illich, I., *Deschooling society* (Calder and Boyars).

AD34 Educational Psychology I.

The following books should be read as early as possible in the course to provide useful background material:

Stones, E., *An introduction to educational psychology* (Methuen).
Bradley, J. I., and McClelland, J. N., *Basic statistical concepts: a self-instructional text* (Scott, Foresman and Co.).

During the course students will be required also to read a number of articles from journals of pschology and educational psychology and the following books or selected portions of them:

McGrath, J. E., *Social psychology: a brief introduction* (Holt, Rinehart and Winston).
Secord, P. F., and Backman, C. W., *Social psychology* (McGraw-Hill).
Peel, E. A., *The nature of adolescent judgement* (Staples Press).
Hudson, L., *Contrary imaginations* (Penguin).
Ausubel, D. P., *Educational psychology: a cognitive view* (Holt, Rinehart, Winston).
Butcher, H. J., *Human intelligence, its nature and assessment* (Methuen).
Wiseman, S. (ed.), *Intelligence and ability* (Penguin).
Wason, P. C., and Johnson-Laird, P. N. (eds.), *Thinking and reasoning* (Penguin).
Reichmann, W. J., *Use and abuse of statistics* (Penguin).
Boyle, D. G., *A students' guide to Piaget* (Pergamon)
Furth, H. G., *Piaget for teachers* (Prentice-Hall).
Heim, A., *Intelligence and personality* (Pelican).

Holt, J. C., *How children learn* (Pelican).
Piaget, J., *Science of education and the psychology of the child* (Longmans).
Eysenck, H., *Race, intelligence and education* (Sun Books).
Gilchrist, M., *The psychology of creativity* (M.U.P.).
Vernon, P. E., *Creativity* (Penguin).
MacGinitie, W. H., and Ball, S. *Readings in psychological foundations of education* (McGraw-Hill).
Bruner, J. S., *The relevance of education* (Allen and Unwin).
Mann, L., *Social psychology* (Wiley).
Morrison, A., and McIntyre, D. (eds.), *Social psychology of teaching* (Penguin).

AD44 Practical Teaching and Methodology.

The prescribed period of supervised teaching practice extends over an aggregate of nine weeks.

There will be classes and seminars on the methods of presenting the several school subjects.

OF THE

ADVANCED DIPLOMA IN EDUCATION

REGULATIONS

1. There shall be a postgraduate Advanced Diploma in Education.

†2. A candidate for admission to the course for the diploma shall:

(a) have been admitted to a degree of the University or to a degree of another university accepted for the purpose by the University;

(b) hold the Diploma in Education of the University or a qualication accepted by the University as equivalent; and

(c) have completed such other work as may be prescribed in the schedules.

*2A. Subject to the approval of the Council the Faculty may, in special cases and subject to such conditions (if any) as it may impose in each case, accept as a candidate for the diploma a person who does not hold a degree of a university but has given evidence satisfactory to the Faculty of his fitness to undertake work for the diploma.

3. To qualify for the diploma a candidate shall satisfactorily complete a course of full-time study extending over at least one year or of part-time study extending over at least two years.

4. Schedules defining the course of study and prescribing the fees to be paid by candidates shall be drawn up from time to time by the Faculty of Arts and shall be approved by the Council. Such schedules shall take effect as from the date of approval by the Council or such other date as the Council shall determine and shall be published in the next University Calendar which is issued after that approval has been given.

5. A candidate who desires that the examinations which he has passed in the University or in another university should be counted *pro tanto* for the Advanced Diploma in Education, may on written application be granted such exemption from the requirements of these regulations as the Council shall determine.

* Allowed 28 February, 1974.
† Amendment awaiting allowance at time of printing.

6. A candidate who complies with the foregoing conditions and satisfies the examiners shall be awarded the Advanced Diploma in Education.

7. A candidate who passes the examinations in all the course work subjects prescribed for the degree of Master of Education shall on written application be awarded the Advanced Diploma in Education.

Regulations allowed 21 December, 1972.

SCHEDULES

(Made by the Council under Regulation 4.)

NOTE: Syllabuses of the subjects for the Advanced Diploma in Education are published below, immediately after the regulations and schedules of the diploma. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I: COURSES OF STUDY

1. A candidate shall, unless exempted therefrom by the Faculty of Arts, regularly attend lectures, do such written and tutorial work as may be prescribed, and pass examinations in *one* of the following *groups* of subjects:

Group A:

Theory of Education II
Sociology of Education II
Educational Psychology II
History of Education II; *or*
Comparative Education; *or*
History and Sociology of Science

Group B—Advanced Curriculum Studies in English:

Linguistics II

Two papers, not already passed, from those listed under Honours English Language and Literature

A special topic, related to English curriculum development and approved by the Chairman of the Department of Education, which will be the subject of an essay of approximately 12,000 words.

2. Before being admitted to the Group B courses of study in clause 1 a candidate shall (a) have passed in English III or hold an Honours degree in English or other qualifications in English acceptable to the Chairmen of the Departments of Education and English and (b) have had at least one year's experience of teaching approved by the Chairman of the Department of Education.

OF THE

ADVANCED DIPLOMA IN EDUCATION

AND OF THE DEGREE OF

MASTER OF EDUCATION (COURSE WORK)

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Arts: A.

The second letter identifies the department teaching the subject:
Education: D.

The first digit 0–5, identifies each of the six subjects for the diploma (or degree).

The second digit 0, indicates that it is a subject for the Advanced Diploma in Education or for the degree of Master of Education.

THE ADVANCED DIPLOMA IN EDUCATION AND THE DEGREE OF MASTER OF EDUCATION.

Each of the four courses necessary for the diploma and/or the degree consists of one seminar class a week lasting for an hour and a half and such written and practical work as may be prescribed.

AD00 Theory of Education II.

The following books should be read:

Montaigne, M. E. de, *Essais.*
Locke, J., *Some thoughts concerning education.*
Arnold, M., *Culture and anarchy.*
Dewey, J., *The school and society* (Chicago U.P.).
Rousseau, J. J., *Emile.*
Whitehead, A. N., *The aims of education* (Benn).

The following books should be consulted:

Lodge, R. C., *Plato's theory of education* (Routledge)
Nettleship, R. L., *The theory of education in Plato's Republic* (O.U.P.).
Comenius, J. A., *The great didactic,* ed. M. W. Keatinge (Black).
Milton, J., *Tractate of education.*
Pestalozzi, J. H., *How Gertrude teaches her children* (Allen and Unwin).
Silber, Kate, *Pestalozzi: the man and his work* (Routledge).
Froebel, F. W. A., *Education of man.*
Mill, J. and J. S., *On education,* ed. F. A. Cavenagh (C.U.P.).
Spencer, H., *Education, intellectual, moral and physical.*
Newman, J. H., *Idea of a university.*
Huxley, T. H., *A liberal education; and where to find it* in his *Lectures and lay sermons* (Dent).
Dewey, J., *My pedagogical creed.*
Montessori, M., *The Montessori method.*
Whitehead, A. N., *Adventures of ideas* (Penguin).
Wordsworth, W., *The prelude.*
Leavis, F. R., *Education and the universities* (Chatto and Windus).
Lawrence, D. H., *Letters.*
Lawrence, D. H., *Education of the people,* in his *Phoenix: posthumous papers* (Heinemann).
Leavis, F. R., and Thompson, D., *Culture and environment* (Chatto and Windus).

AD10 History of Education II.

The course comprises two topics: The history of education in Australia; the history of education in France (a reading knowledge of French is NOT required).

It is assumed that candidates enrolled for the course will have read the books prescribed or recommended for AD14 History of Education I.

The following books are also recommended:

Jackson, J. H., *A short history of France from early times to* 1958 (C.U.P.).
Koestler, A., *The sleepwalkers* (Penguin).
Aron, Robert, *Jesus of Nazareth* (Hamilton).

Jaeger, W., *Early Christianity and Greek Paideia* (Belknap).
Augustinus Aurelius, saint, bp. of Hippo, *Confessions.*
Rashdall, H., *The universities of Europe in the middle ages,* 2nd ed., ed. Powicke and Emden, 1936, 3 vols. (Clarendon Press), for reference.
Haskins, C. H., *The renaissance of the twelfth century* (Harvard).
Ariès, P., *Centuries of childhood* (Cape).
Barnard, H. C., *The French tradition in education: Ramus to Mme. Necker de Saussure* (C.U.P.).
Evennett, H. O., *The spirit of the counter-reformation* (C.U.P.).
Ganss, G. E., *St. Ignatius' idea of a Jesuit university* (Marquette U.P.).
Battersby, W. J., *De la Salle: a pioneer of modern education* (Longmans).
Battersby, W. J., *History of the Institute of the Brothers of the Christian Schools,* 3 vols. (Waldegrave).
Barnard, H. C., *Education and the French revolution* (C.U.P.).
Johnson, D., *Guizot: aspects of French history 1774-1874* (Routledge).
Arnold, M., *Democratic education* (Michigan U.P.).
Acomb, E. M., *The French Laic Laws (1879-1889)* (Octagon Books).
Debiesse, J., *Compulsory education in France* (UNESCO).
Toulmin, S. E., and Goodfield, J., *The discovery of time* (Hutchison).
Smeaton, W. A., *Fourcroy: chemist and revolutionary, 1755-1809* (Heffer).
Waddington, P., *The history, administration and function of the Baccalauréat as a secondary school examination in France* (Xerox copy available in the Barr Smith Library).
Arnold, M., *Schools and universities on the continent* (Michigan U.P.).
Graves, N. J., *Technical education in France in the nineteenth century* (*Vocational aspect of secondary and further education,* vol. 16, 1964, pp. 148-160 and pp. 163-175).
Graves, N. J., *The "grandes écoles" in France* (Vocational aspect of secondary and further education, vol. 17, pp. 40-49).
Zeldin, T., *Higher education in France, 1848-1940* (Journal of Contemporary History, vol. 2, 1967, pp. 53-80).
Hughes, H. S., *Consciousness and society* (Vintage Books, Random House).
Wykes, Olive, *Secondary education in France during the Fourth Republic* (Xerox copy available in the Barr Smith Library).
Fraser, W. R., *Education and society in modern France* (Routledge).
Cros, L., *The explosion in the schools* (S.E.V.P.E.N.).
Halls, W. D., *Society, schools and progress in France* (Pergamon).
Capelle, J., *Tomorrow's education: the French experience* (Pergamon).
Rideau, E., *Teilhard de Chardin: a guide to his thought* (Collins).
French, E. L., *Secondary education in the Australian social order,* 1788-1898 (Xerox copy available in the Barr Smith Library).
Goodman, R., *Secondary education in Queensland, 1860-1960* (A.N.U.).
Nadel, G., *Australia's colonial culture* (Cheshire).
Fogarty, R., *Catholic education in Australia* 1806-1950, 2 vols. (M.U.P.).
McLaine, A. C., and Selby Smith, R. (eds.), *Fundamental issues in Australian education* (Novak).
Cleverley, J. F., *The first generation: school and society in early Australia* (Longmans).
Austin, A. G., *Australian education,* 1788-1900, 3rd edition (Pitman).
Austin, A. G., *Select documents in Australian education* (Pitman).
Barcan, A., *A short history of education in New South Wales* (Martindale).
Grundy, D., *Secular, compulsory and free* (M.U.P.).
Hansen, I. V., *Nor free, nor secular* (O.U.P.).
Australian Schools Commission. Interim committee. *Schools in Australia* (A.G.P.S.).

AD20 Sociology of Education II.

Candidates are expected to be familiar with the books recommended for AD24 Sociology of Education I. They should read those parts of the following books which will be indicated.

Znaniecki, F., *The method of sociology* (Octagon Books).

Bauman, Z., *Culture as Praxis* (Routledge).

Smolicz, J. J., *Humanistic sociology: A review of concepts and methods* (La Trobe University).

Merton, R. K., *On theoretical sociology* (Free Press).

Merton, R. K., and others, *Reader in bureaucracy* (The Free Press).

Melbourne studies in education 1968-1969 (M.U.P.).

Melbourne studies in education 1972 (M.U.P.).

Fallding, H., *The sociological task* (Prentice-Hall).

Cohen, P. S., *Modern social theory* (Heinemann).

Stretton, H., *The political sciences* (Routledge).

Sexton, P. C., *Readings on the school in society* (Prentice-Hall).

Jackson, J. A., *Social stratification* (Cambridge University Press).

Bottomore, T. B., *Classes in modern society* (Allen and Unwin).

Bottomore, T. B., *Elites and society* (Penguin).

Ossowski, S., *Class structure in the social consciousness* (Routledge).

Lefebvre, H., *The Sociology of Marx* (Allen Lane).

Encel, S., *Equality and authority* (Cheshire).

Congalton, A. A., *Status and prestige in Australia* (Cheshire).

Yates, A., *Grouping in education* (Wiley).

Etzioni, A., *Modern organizations* (Prentice-Hall).

Etzioni, A., *Readings in modern organizations* (Prentice-Hall).

Hansen, D. A., and Gerstl, T. E., *On education: sociological perspectives* (Wiley).

Hatt, P. K., and Reiss, A. J., *Cities and society: a reader in urban sociology* (The Free Press).

Merton, R. K., *Social theory and social structure* (The Free Press).

Martin, J. I., *Community and identity: Refugee groups in Adelaide* (A.N.U.).

Zubrzycki, J., *Settlers of the Latrobe Valley* (A.N.U. Press).

Price. C. A., *Southern Europeans in Australia* (Oxford).

Harris, R.Mc.L., and others, *Isolation and education: Educational aspirations and achievements in rural Australia* (South Australian Education Department).

Travers, R. M. W., *An introduction to educational research* (Macmillan).

Young, M., *Innovation and research in education* (Routledge).

Wakeford, J., *The Strategy of Social Enquiry* (Macmillan).

Stephan, F. F., and McCarthy, P. J., *Sampling opinions* (Wiley).

Garrett, A., *Interviewing* (Family Service Assoc. of America).

Foskett, D. J., *How to find out: educational research* (Pergamon).

Fischer, E., *Marx in his own words* (Penguin).

Durkheim, E., *Suicide.*

Students will also be referred to monographs and articles in sociological and educational journals. They will also be expected to refer to government reports of educational and sociological importance.

AD30 Educational Psychology II.

This course of lectures, tutorials, written and practical exercises will have special reference to educational research and the application of it to teaching in schools.

Students must be familiar with the following publications devoted to educational research:

Journals:

Educational research.
Review of educational research.
Journal of educational psychology.
British journal of educational psychology.

Reference book:

Harris, C. W. (ed.), *Encyclopædia of educational research*, 4th edition (Macmillan).

For many pieces of research it is necessary also to consult several other journals of psychology and education.

The following list of recommended books is not intended to be prescriptive; nor can it be comprehensive in view of the flexibility of the course.

Argyle, M., *The psychology of interpersonal behaviour* (Penguin).
Ausubel, D. P., *Educational psychology: a cognitive view* (Holt, Rinehart and Winston).
Lloyd, B., *Perception and cognition* (Penguin).
Tanner, J. M., and Inhelder, B. (eds.), *Discussions on child development*, vols. I, II, III, IV (Social Science Paperbacks).
Piaget, J., and Inhelder, B., *The psychology of the child* (Routledge).
Baldwin, A. L., *Theories of child development* (Wiley).
Flavell, J. H., *The developmental psychology of Jean Piaget* (Van Nostrand).
Sarason, I., *Personality: an objective approach* (Wiley).
Butcher, H. J., *Human intelligence, its nature and assessment* (Methuen).
Brown, R. W., *Social psychology* (Collier-Macmillan).
Bruner, J. S., and others, *A study of thinking* (Wiley).
Bruner, J. S., and others, *Studies in cognitive growth* (Wiley).
Shulman, L. S., and Keislar, E. R. (eds.), *Learning by discovery* (Rand McNally).
Gagne, R. M., *The conditions of learning* (Holt, Rinehart and Winston).
Maccoby, E. E. (ed.), *The development of sex differences* (Tavistock).
Rosenthal, R., *Experimenter effects in behavioural research* (Appleton-Century-Crofts).
Vygotsky, L. S., *Thought and language* (M.I.T. Press).
Dienes, Z., and Jeeves, M., *Thinking in structures* (Hutchinson Educational).
Hudson, L., *Contrary imaginations* (Penguin).
Hudson, L., *Frames of mind* (Methuen).
Wallach, M. A., and Kogan, N., *Modes of thinking in young children* (Holt, Rinehart and Winston).
Wiersma, W., *Research methods in education* (Lippincott).
Campbell, D. T., and Stanley, J. C., *Experimental and quasi experimental designs for research* (Rand, McNally).
Furth, H., *Piaget and knowledge* (Prentice-Hall).
Geiwitz, P. J., *Non-freudian personality theories* (Basic concepts in psychology series).
Inhelder, B., and Piaget, J., *The growth of logical thinking from childhood to adolescence* (Routledge).
Piaget, J., *Six psychological studies* (London U.P.).
Bruner, J. S., *The relevance of education* (Allen and Unwin).

Statistical Work.

All students must work through the following programme:

Elzey, F. F., *A programmed introduction to statistics* (Wadsworth).

Books which may be found helpful are:

Guilford, J. P., *Fundamental statistics in psychology and education* (McGraw-Hill).

McNemar, Q., *Psychological statistics* (Wiley).

Ferguson, G. A., *Statistical analysis in psychology and education* (McGraw-Hill).

Cattell, R. B., *Factor analysis* (Harper).

Siegel, S., *Nonparametric statistics* (McGraw-Hill).

AD40 Comparative Education.

The following books should be read:

Hans, N. A., *Comparative education* (Routledge).

Kandel, I. L., *Comparative education* (Harrap).

The world year book of education, 1948 (Evans).

The world year book of education, 1952 (Evans).

Armfelt, R., *The structure of English education* (Cohen and West).

Johnson, W. H. E., *Russia's educational heritage* (Carnegie Pr.).

Ulich, R., *The education of nations* (Harvard U.P.).

Cruickshank, M., *Church and state in English education, 1870 to the present day* (Macmillan).

Dancy, J. C., *The public schools and the future* (Faber).

King, E. J., *Other schools and ours* (Holt).

The following books should also be consulted:

Hans, N. A., *History of Russian educational policy* (King).

Monroe, P., *The founding of the American public school system* (Macmillan).

Myrdal, G., *An American dilemma: the negro problem and modern democracy* (Harper).

U.N.E.S.C.O., *World survey of education, vol.* 1: *Handbook of educational organization and statistics.*

Durkheim, E., *L'évolution pédagogique en France* (Alcan).

Edwards, N., and Richey, H. G., *The school in the American social order* (Houghton).

The world year book of education, 1938. Hans, N. A., *Educational traditions in the English-speaking countries* (Evans).

Hans, N. A., and Hessen, S., *Educational policy in Soviet Russia* (King).

U.N.E.S.C.O., *Education in the modern world.*

Simon, B., *Studies in the history of education* (Lawrence and Wishart).

Peterson, A. D. C., *A hundred years of education* (Duckworth).

Wolfenden, J. F., *The public schools of today* (London U.P.).

Mallinson, V., *An introduction to the study of comparative education* (Heinemann).

Pedley, R., *Comprehensive schools today* (Councils and Education Pr.).

The world year book of education, 1959 (Evans).

Great Britain: Education, Ministry of. Central Advisory Council on Education, 15 *to* 18 (Crowther Report) (H.M.S.O.).

Kandel, I. L., *Impressions of Australian education* (A.C.E.R.).

Medsker, L. L., *The junior college: progress and prospect* (McGraw-Hill).

Conant, J. B., *The American high school today* (McGraw-Hill).

Conant, J. B., *The education of American teachers* (McGraw-Hill).

De Grazia and Sohn, *Revolution in teaching* (Bantam).

De Grazia and Sohn, *Programmes teachers and machines* (Bantam).
Crow, A., and Crow, L. D., *Vital issues in American education* (Bantam).
Barzun, J. M., *The house of intellect* (Harper).
Riesman, D., *Constraint and variety in American education* (Nebraska U.P.).
Lieberman, M., *The future of public education* (Chicago U.P.).
Butts, R. F., and Cremin, L. A., *A history of education in American culture* (Holt).
The world year book of education, 1960 (Evans).
Flexner, A., *Universities* (O.U.P.).
Barnard, H. C., *The French tradition in education* (C.U.P.).
Bereday, G. Z. F., and Pennar, J. (eds.), *Politics of Soviet education* (Stevens).
Bereday, G. Z. F., and others, *The changing Soviet school* (Houghton).
Robbins, L. C., *The university in the modern world* (St. Martin's Press).
South Australia. Committee of enquiry into education in South Australia. *Education in South Australia* (Karmel report) (S.A. Govt. Pr.).
Hansen, I. V., *Nor free, nor secular* (O.U.P.).
McLaine, A. C., and Selby Smith, R. (eds.), *Fundamental issues in Australian education* (Novak).
Australian Schools Commission. Interim committee. *Schools in Australia* (A.G.P.S.).
Simpkins, W. S., and Miller, A. H. (eds.), *Changing education—Australian viewpoints* (McGraw-Hill).
Schoenheimer, H. P., *Good Australian schools* (Vic. Technical Teachers Assoc.).

AD50 History and Sociology of Science.

A study of the development of scientific thought from earliest times to the beginnings of modern science and of selected topics in the development of chemistry and the historical sciences from the seventeenth century to the present. The course will be concerned with the study of the structure of scientific change: the nature of scientific methods, explanation and proof; the cross-fertilization between sciences; the relation between pure science and technology; the influence of non-scientific factors upon the growth of science; and the social and moral responsibilities of scientists. Special emphasis will be placed on the study of the effects of scientific and technological change on man's natural environment and on the structure and function of social institutions. Attention will also be given to the place of the history and sociology of science in the education of scientists at both secondary and tertiary level and to the role of scientific education in helping to control the socially dysfunctional aspects of scientific and technological innovation. Interests of individual students will be taken into account whenever possible.

The course is intended primarily for graduates in science but, with the approval of the Head of the Department of Education, in special cases other qualified graduates may be permitted to take the course.

Recommended books:

Kuhn, T. S., *The structure of scientific revolutions*, 2nd edition (Chicago U.P.).
Gillispie, C., *Edge of objectivity* (Oxford U.P.).
Lakatos, I., and Musgrave, A., *Criticism and the growth of knowledge* (C.U.P.).
Mulkay, M. J., *The social process of innovation* (Macmillan).
Barnes, B., *Sociology of science* (Pelican).
Ben-David, J., *The scientist's role in society* (Prentice-Hall).
White, L., *Machina ex Deo* (Harvard).
Smolicz, J. J., *Man's coercion of nature: A historical and sociological perspective* (Australian Science Education Project).

Melbourne studies in education 1974 (M.U.P.).
Sambursky, S., *Physical world of the Greeks* (Routledge).
Clagett, M., *Greek science in antiquity* (Abelard-Schuman).
Crombie, A. C., *Augustine to Galileo* (Mercury books).
Hall, M. B., *The scientific renaissance* (Collins).
Kearney, H. F., *Origins of the scientific revolution* (Longmans).
Kuhn, T. S., *Copernican revolution* (Harvard).
Hall, A. R., *From Galileo to Newton* (Collins).
Santillana, G. de, *Crime of Galileo* (Heinemann).
Dijksterhuis, E. J., *The mechanization of the world picture* (Clarendon).
Cohen, I. B., *The birth of new physics* (Doubleday).
Hall, M. B., *Robert Boyle and seventeenth century chemistry* (C.U.P.).
Guerlac, H., *Lavoisier, the crucial year* (Cornell).
Lovejoy, A. O., *The great chain of being* (Harper).
Adams, F. D., *Birth and development of the geological sciences* (Dover).
Singer, C., *From magic to science* (Dover).
Price, D. J. de S., *Science since Babylon* (Yale).
Eiseley, L. C., *Darwin's century* (Doubleday).
Olson, E. C., *The evolution of life* (New American Library).
Leicester, H. M., *The historical background of chemistry* (Wiley).
Ihde, A. J., *The development of modern chemistry* (Harper).
Polanyi, M., *The study of man* (Routledge).
Polanyi, M., *Science, faith and society* (Oxford).
Oppenheimer, J. R., *The flying trapeze: three crises for physicists.*
Read, J., *Humour and humanism in chemistry* (Bell).
Klemm, F., *History of western technology* (Allen and Unwin).
White, L. T., *Medieval technology and social change* (Clarendon).
Derry, T. K., and Williams, T. I., *A short history of technology* (Clarendon).
Roubiczek, P., *Ethical values in the age of science* (C.U.P.).
Weizsäcker, C. F. von, *The relevance of science* (Collins).
Rose, H., and Rose S., *Science and society* (Allen Lane).
Vavoulis, A., and Colver, A. W., *Science and society* (Holden-Day).
Price, D. J. de S., *Little science, big science* (Columbia).
Marsak, L. M., *The rise of science in relation to society* (Macmillan).
Buchanan, R. A., *Technology and social progress* (Pergamon).
Spicer, E. H., *Human problems in technological change* (Wiley).
Tricker, R. A. R., *The contribution of science to education* (Mills and Bacon).
Yudkin, M., *General education* (Allen Lane).
Jevons, F. R., *The teaching of science* (Allen and Unwin).
Ross, A. S. C., *Arts v. science* (Methuen).
Brierley, J., *Science in its context* (Heinemann).

Useful background reading will be found in the following paper-backed books:

Hurd, D. L., and Kipling, J. J. (eds.), *Origins and growth of physical science,* 2 vols. (Penguin).
Rook, A. (ed.), *Origin and growth of biology* (Penguin).
Toulmin, S., and Goodfield, J., *Fabric of the heavens* (Penguin).
Toulmin, S., and Goodfield, J., *Architecture of matter* (Penguin).
Toulmin, S., and Goodfield, J., *Discovery of time* (Penguin).
Forbes, R. J., and Dijksterhuis, E. J., *A history of science and technology,* 2 vols. (Penguin).
Moonman, E., *Science and technology in Europe* (Penguin).

Reference books:

Taton, R., *A general history of the sciences,* 4 vols. (Thames and Hudson).

Sarton, G. A. L., *An introduction to the history of science* (Carnegie Inst.).

Partington, J. R., *A history of chemistry,* vols. 2, 3 and 4 (Macmillan).

Needham, J., *Science and civilization in China,* 4 vols. to date (C.U.P.).

Daumas, M., *Histoire générale des techniques* (P.U.F.).

Singer, C. J., and others, *A history of technology,* 5 vols. (Clarendon Press).

Collections of source materials, journals and collected essays:

The source materials will be studied whenever practicable, including selected passages from the works of Copernicus, Galileo, Kepler, Newton, Bacon, Harvey, Boyle, Hales, Dalton, Darwin and Pasteur. Many important Greek and Latin works are available in translation in the 'Loeb Classics Library' and in *Source Book in Greek Science* (eds. Cohen, M. R., and Drabkin, I. E.). For modern science, apart from the collections of readings included in several of the recommended books, useful material will be found in the *Source Books* in *Astronomy* (eds. Shapley and Haworth), *Physics* (ed. Magie, W. F.), *Chemistry* (eds. Leicester, H. M., and Klickstein, H. S.), *Geology* (eds. Mather, K. F., and Mason, S. L.) and *Medical History* (ed. Clendening, L.).

Much of the important reading for the course is contained in the articles in journals such as *The British journal for the history of science, Isis, Osiris, Annals of science, History of science, Archives internationales d'histoire des sciences, British journal for the philosophy of science, Scientia, Journal of the history of ideas, Minerva* and *Technology and culture.*

A number of valuable articles and essays from these and other journals have been collected and reprinted. Books to which students will need to refer also include collections of important papers presented to the international conferences and symposia and of essays written in honour of eminent scientists and historians and philosophers of science. Valuable collections of this type are:

Clagett, M. (ed.), *Critical problem in the history of science* (Wisconsin U.P.).

Symposium on the history of science, *Scientific change,* ed. A. C. Crombie (Heinemann).

Singer, C. (ed.), *Studies in the history and method of science* (Clarendon).

Underwood, E. A. (ed.), *Science, medicine and history: essays in honour of Charles Singer* (O.U.P.).

Wiener, P. P., and Noland, A. (eds.), *Roots of scientific thought* (Basic books).

Goldsmith, M., and McKay, A. L. (eds.), *The science of science* (Souvenir Pr.).

Glass, H. B., and others (eds.), *Forerunners of Darwin:* 1745-1859 (John Hopkins Pr.).

Bell, P. R. (ed.), *Darwin's biological work: some aspects reconsidered* (C.U.P.).

Barnett, S. A. (ed.), *A century of Darwin* (Heinemann).

Conant, J. B. (ed.), *Harvard case histories in experimental science,* 2 vols. (Harvard U.P.).

For more recent aspects of the development of science the appropriate scientific journals will be consulted.

Thesis for the degree of Master of Education.

A candidate is required to consult the Chairman of the Department about the subject of his thesis.

OF THE DEGREE OF

MASTER OF EDUCATION

REGULATIONS

1. There shall be a degree of Master of Education.

§2. A candidate for admission to the course for the degree shall:

(a) have been admitted to a degree of the University or to a degree of another university accepted for the purpose by the University;

(b) hold the Diploma in Education of the University or a qualification accepted by the University as equivalent; and

(c) satisfy such other requirements for admission to the course as are set out in schedules.

2A. Subject to the approval of the Council the Faculty may, in special cases and subject to such conditions (if any) as it may see fit to impose in each case accept as a candidate for the degree a person who does not hold a degree of a university but has given evidence satisfactory to the Faculty of his fitness to undertake work for the degree.

†3. To qualify for the degree a candidate shall:

(a) satisfactorily complete a course of study extending over at least one year of full-time study or at least two years of part-time study; and

(b) subsequently either present a satisfactory thesis on a subject approved by the Faculty of Arts, or present a satisfactory dissertation on a subject approved by the Faculty of Arts and also be examined on a second subject approved by the Faculty of Arts.

4. Schedules defining the course of study and prescribing the fees to be paid by candidates shall be drawn up from time to time by the Faculty of Arts and shall be approved by the Council. Such schedules shall take effect as from the date of approval by the Council or such other date as the Council shall determine and shall be published in the next University Calendar which is issued after that approval has been given.

† Amended 22 December, 1966.

§ Amended 9 January, 1969, 21 December, 1972, 28 February, 1974, and further amendment awaiting allowance at time of printing.

5. A candidate for the degree by part-time study shall be examined in any year in not more than half the subjects of the course of study.

††6. A candidate shall submit for approval by the Faculty of Arts the subject of his thesis or the subject of his dissertation and the subject on which he desires to be examined. The Faculty shall appoint a supervisor to guide the candidate in his work.

†7. A candidate shall present his thesis, or submit his dissertation and take the examination on his approved subject, within four calendar years, but not earlier than one calendar year, from the date of the approval of his subject or subjects by the Faculty.

8. On completion of his work the candidate shall lodge with the Registrar three copies of the thesis or of the dissertation prepared in accordance with directions given to candidates from time to time.*

†9. (a) The Faculty of Arts shall appoint examiners of the thesis or of the dissertation and the approved subject, of whom at least one shall be an external examiner.

(b) At the discretion of the examiners a candidate may be examined orally on his thesis or on his dissertation and may also be required to pass a written examination connected with the subject of his thesis or of his dissertation.

10. A candidate who desires that examinations which he has passed in the University or in another university should be counted *pro tanto* for the degree of Master of Education, may on written application be granted such exemption from the requirements of these regulations as the Council shall determine.

11. A candidate who complies with the foregoing conditions and satisfies the examiners shall, on the recommendation of the Faculty of Arts, be admitted to the degree of Master of Education.

Regulations allowed 16 March, 1961.
† Amended 22 December, 1966.
†† Amended 22 December, 1966 and 28 February, 1974.
* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

SCHEDULES

(Made by the Council under Regulation 4.)

NOTE: Syllabuses of subjects for the degree of M.Ed. (Course Work) are published above, immediately after the regulations and schedules of the Advanced Diploma in Education. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I: COURSES OF STUDY

1. A candidate shall, unless exempted therefrom by the Faculty of Arts, regularly attend lectures, do such written and tutorial work as may be prescribed, and pass examinations at the standard prescribed in *one* of the following *groups* of subjects.

Group A:

Theory of Education II
Sociology of Education II
Educational Psychology II
History of Education II; *or*
Comparative Education; *or*
History and Sociology of Science

Group B—Advanced Curriculum Studies in English:

Linguistics II

Two papers, not already passed, from those listed under Honours English Language and Literature

A special topic, related to English curriculum development and approved by the Chairman of the Department of Education which will be the subject of an essay of approximately 12,000 words.

2. In order to reach the standard prescribed in clause 1 a candidate shall:

(a) pass in each subject; and

(b) pass with Credit or Distinction in at least one of the subjects prescribed in clause 1.

3. Before being admitted to the Group B courses of study in clause 1 a candidate shall (a) have passed in English III or hold an Honours degree in English or other qualifications in English acceptable to the Chairmen of the Departments of Education and English, and (b) have had at least one year's experience of teaching approved by the Chairman of the Department of Education.

4. A candidate who was enrolled in any of the course-work subjects on or before 31 March, 1972 may complete the degree under the schedule in force at the time of his enrolment provided that he completes the course of study before 1 March, 1976.

NOTE (not forming part of the regulations or schedules): Candidates who pass the examinations in all the subjects prescribed in clause 1 of the schedules are advised to read regulation 7 of the regulations of the Advanced Diploma in Education.

SYLLABUSES

The syllabuses of the subjects for the pre-thesis course work for the degree of Master of Education are published above, immediately after the regulations and schedules of the Advanced Diploma in Education.

OF THE DEGREE OF

MASTER OF ARTS

REGULATIONS

1. (a) A Bachelor of Arts may proceed to the degree of Master of Arts by complying with these regulations, but may not be admitted to the degree until the expiration of two academic years from the date of his admission to the Ordinary degree or one year from the date of his admission to the Honours degree of Bachelor of Arts.

(b) Subject to the approval of the Council, the Faculty may accept as a candidate for the degree, on such conditions (if any) as it may impose in each case, a person who (i) holds the degree of Bachelor of Arts or its equivalent in a university recognised for the purpose by the University of Adelaide, and (ii) satisfies the requirements of regulation 2.

(c) Subject to the approval of the Council, the Faculty may, in special cases and subject to such conditions (if any) as it may impose in each case, accept as a candidate for the degree a person who does not hold a degree of a university, but has given evidence satisfactory to the Faculty of his fitness to undertake work for the degree.

2. A candidate for the degree shall first satisfy the Faculty of his ability to proceed to the degree in the subject of study he selects. To do so he must:

(a) have obtained the Honours degree of Bachelor of Arts in a school to which his subject of study relates; or

(b) have passed in all the courses for the Ordinary degree that are compulsory for the Honours degree of Bachelor of Arts, and in addition an examination of Honours standard, in a school or schools to which his subject of study relates; or

(c) submit other evidence that satisfies the Faculty that his case deserves special approval.

3. Every candidate shall either:

*(a) present a satisfactory thesis on a subject approved by the Faculty of Arts and (if required) adduce sufficient evidence that the thesis is his own work, provided that in Anthropology and Classics a candidate shall present himself for an examination in addition to presenting a thesis; or

* Amendment awaiting allowance at time of printing.

(b) satisfy examiners, by means approved by the Faculty in each case, that he has completed a course of advanced study in work selected from two departments within the Faculty and approved by the Faculty.

A candidate who wishes to proceed to the degree in a course of study selected from two departments shall, after consultation with the heads of the departments concerned, apply in writing to the Academic Registrar for permission so to proceed and shall state in his application the course which he wishes to undertake.

4. (a) On completion of his work the candidate shall lodge with the Registrar three copies of his thesis prepared in accordance with directions given to candidates from time to time.*

(b) Unless the Faculty expressly approve an extension of time in a particular case the thesis shall be submitted within nine terms, but not earlier than three terms, from the date of approval of the candidate's subject by the Faculty.

(c) On submission of the thesis, the Faculty shall nominate examiners.

(d) The examiners may require a candidate to take an examination, written or oral or both, in the field of study immediately relevant to the subject of his thesis.

5. The fees to be paid by candidates shall be prescribed from time to time by the Council, and the schedule of fees so prescribed shall be published in the University Calendar.

6. A candidate who fulfils the requirements of these regulations and satisfies the examiners under regulation 4 shall on the recommendation of the Faculty be admitted to the degree of Master of Arts.

Regulations allowed 12 December, 1963.

* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

NOTE (not forming part of the regulations): For the purpose of section (b) of regulation 3 the Faculty is willing to consider applications for permission to take combined courses; such applications should in the first instance be discussed with the Heads/Chairmen of the departments concerned.

OF THE DEGREE OF

MASTER OF ARTS

NOTES BY DEPARTMENTS

The attention of all candidates is directed to "Notes and Instructions to candidates for higher degrees (by thesis)" which gives general advice to candidates and sets out the specifications for theses. (*See* Table of Contents.)

Anthropology:

1. M.A. Qualifying:

This course will be open to students with no previous training in Anthropology or closely related disciplines and to students holding a degree not considered by the Department to be equivalent to B.A. Honours. Students will do the B.A. Honours course work and must produce a 15,000 word qualifying essay.

2. M.A. Programme:

Students will be eligible for entry to the programme if they hold an Honours degree in Anthropology or closely related social science discipline (for example, Sociology, Political Studies, History).

Candidates for the degree in Anthropology must:

(a) present a thesis on a subject approved by the Faculty of Arts: between 30,000 and 40,000 words is suggested as the appropriate length, and

(b) present themselves for examination in a portion of work approved by the Faculty of Arts.

Members of the department will lead a weekly seminar programme which all M.A. candidates will be encouraged to attend. A thesis will be written with the supervision of a department member appointed by the Faculty, and will be assessed by a member of the Anthropology Department and an external examiner. The thesis itself, though expected to be of high standard, need not necessarily contain original field work material.

Potential candidates should consult the Chairman of the Anthropology Department in the first instance.

Classics:

Candidates for the degree of M.A. in Classics must:

(a) present a thesis on a subject approved by the Faculty of Arts; about 20,000 words is suggested as the appropriate length;

(b) present himself for examination in a portion of work approved by the Faculty of Arts.

The qualifications required of applicants to be admitted as candidates for the degree are set out in the regulations of the degree of Master of Arts. In general, a candidate should have obtained a good Honours degree in Latin or Classics or Classical Studies.

The degree is intended to be obtained normally by one year of full-time or two years of part-time study. Work towards the degree is pursued under a supervisor or supervisors appointed by the Faculty, and consists largely of reading and essay work, until the candidate is ready to begin writing his thesis. The thesis itself, though of an advanced standard, is not intended necessarily to contain material that is a new contribution to knowledge.

Potential candidates should consult the Chairman of the Department of Classics in the first instance.

English Language and Literature:

Candidates for the degree of M.A. in English Language and Literature are advised to take the earliest opportunity of consulting the Chairman of the Department about their courses.

Candidates who wish to qualify for the degree of M.A. under regulation 2(b) are required for their qualifying examination to take six papers (including paper (i)) from the fourth-year honours papers set out in syllabus AE99 above. This involves one year's full-time study or two years' part-time study. Part-time students will take paper (i) at the end of their second year of study. Successful completion of these courses will qualify a student to proceed to the M.A. degree. It will not qualify a student for the honours degree in English unless the other requirements set out in the syllabus are also met.

Candidates who have a satisfactory Honours degree or who have qualified by means of the M.A. qualifying examination are required to write a thesis, for the subject of which they should consult the Chairman of the Department as early as possible.

French Language and Literature:

Candidates for the degree of M.A. in French Language and Literature are advised to consult the Chairman of the Department at the earliest opportunity. Those who seek to qualify for candidature under regulation 2(b) are required to present equivalent qualifications which satisfy the Chairman of the Department of French.

Geography:

Candidates for the degree of M.A. in Geography are advised to consult the Chairman of the Department. A good Honours degree in Geography is necessary.

German Language and Literature:

Candidates for the degree of M.A. in German Language and Literature are advised to consult the Professor of German.

History:

Candidates for the degree of M.A. in History are advised to consult the Chairman of the Department.

Music:

Candidates for the degree of M.A. in Music are advised to consult the Chairman of the Department.

Philosophy:

Candidates for the degree of M.A. in Philosophy are required to consult the Chairman of the Department within the first month of the academic year about the subject and the course of reading for their thesis.

Politics:

Candidates for the degree of M.A. in Politics are advised to consult the Professor at the earliest opportunity.

Psychology:

Candidates for the degree of M.A. in Psychology are advised to consult the Chairman of the Department.

OF THE DEGREE OF

DOCTOR OF LETTERS

REGULATIONS

1. (a) The Faculty of Arts may accept as a candidate for the degree of Doctor of Letters a person who has qualified for any degree in the University of Adelaide.

(b) On the recommendation of the Faculty of Arts, the Council may accept as a candidate for the degree a person who (i) has obtained in another university or institution of higher education a qualification accepted for the purpose by the University as equivalent to a degree of the University; and (ii) has, or has had, a substantial association with the University.

(c) No person may be admitted to the degree of Doctor of Letters before the expiration of five years from the date on which he obtained the qualification prescribed in (a) or (b)(i) above.

2. (a)A person who desires to become a candidate for the degree shall give notice of his intended candidature in writing to the Academic Registrar and with such notice shall furnish particulars of his scholarly achievements and of the work which he proposes to submit for the degree.

(b) The Faculty of Arts shall examine the information submitted and decide whether or not to allow the applicant to proceed.

(c) If the Faculty accept the candidature it shall nominate examiners, of whom two at least shall be external examiners.

3. (a) To qualify for the degree the candidate shall furnish satisfactory evidence that he has made an original and substantial contribution of distinguished merit to the knowledge or understanding of any subject with which the Faculty is directly concerned.

(b) The degree shall be awarded primarily on a consideration of such of his published works as a candidate may submit for examination, but the examiners may take into account any unpublished original work that he may submit in support of his candidature.

(c) The candidate in submitting his work shall, where applicable, state generally in a preface and specifically in notes the main sources from which his information is derived and the extent to which he has availed himself of the work of others, especially where joint publications are concerned. He may also signify in general terms the portions of his work which he claims as original.

(d) The candidate shall indicate what part, if any, of his works has already been submitted for a degree in this or any other university.

4. The candidate shall lodge with the Academic Registrar three copies of the works submitted for the degree, any unpublished work being prepared in accordance with the directions given in sub-paragraph (b) of clause 2B of Chapter XXV of the Statutes. If the work is accepted for the degree the Academic Registrar will transmit two of the copies to the University Library.

5. A candidate who complies with the foregoing conditions and satisfies the examiners may, on the recommendation of the Faculty of Arts, be admitted to the degree of Doctor of Letters.

6. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 16 December, 1971.

FACULTY OF DENTISTRY

REGULATIONS, SCHEDULES AND SYLLABUSES OF DEGREES

Bachelor of Dental Surgery (B.D.S.)
- Regulations and Schedules - - - - - - - 722
- Syllabuses - - - - - - - - - - 727

Bachelor of Science in Dentistry (B.Sc.Dent.)
- Regulations and Schedules - - - - - - - 740
- Syllabuses - - - - - - - - - - 743

Master of Dental Surgery (M.D.S.)
- Regulations - - - - - - - - - - 746

Doctor of Philosophy (Ph.D.)
- Regulations and Schedules: under "Board of Research Studies"—*see* Table of Contents.

Doctor of Dental Science (D.D.Sc.)
- Regulations - - - - - - - - - - 749

OF THE DEGREE OF

BACHELOR OF DENTAL SURGERY

REGULATIONS

*1. There shall be a degree of Bachelor of Dental Surgery.

2. Schedules defining the courses of study, including lectures, clinical practice, laboratory and other practical work to be undertaken, the examinations to be passed, and the fees to be paid, shall be drawn up by the Faculty of Dentistry and submitted to the Council. Such schedules shall become effective from the date of approval by the Council or from such other date as the Council may determine, and shall be published in the University Calendar.

3. A candidate shall enter for each annual examination on the form and by the date prescribed by the Council, but shall not be eligible to present himself for examination unless he has completed to the satisfaction of the professors and lecturers concerned the course of study and practice prescribed for that examination.

4. Written or practical work done by candidates by direction of the professors and lecturers and the results of terminal or other examinations in any subject may be taken into consideration at the final examination in that subject.

5. All regulations hitherto in force concerning the degree of Bachelor of Dental Surgery are hereby repealed: provided that this repeal shall not affect

(a) anything done or suffered under any regulation hereby repealed; or

(b) any right or status acquired, duty imposed, or liability incurred by or under any regulation hereby repealed.

*6. The course of study for the degree of Bachelor of Dental Surgery shall extend over five years after matriculation. To qualify for the degree a candidate shall:

(a) regularly attend lectures and clinical practice and do written and laboratory or other practical work to the satisfaction of the professors and lecturers concerned;

* Amended 28 February, 1974.

(b) satisfactorily complete each annual examination before entering upon the work of the following year's course of study: provided that a candidate may begin the first term's work in the following year's course of study pending the result of a supplementary examination for which he has been permitted to present himself.

**7. The annual examination shall be held in or about August or November, as the Council shall in each case determine from time to time. The supplementary examinations shall be held at such times as the Council, on the recommendation of the Faculty, may determine.

††8. The Board of Examiners may grant a supplementary examination to a candidate who has been prevented by illness or other sufficient cause from attendance at the whole or part of the annual examination or who has failed a part of such examination.

*9. A candidate shall not be re-examined at a supplementary examination in any subject or group of subjects in which he had passed at the annual examination.

*10. The annual examination at the end of the fifth year shall be known as the Final Examination. A final examination may also be held in May or June. On the recommendation of the Board of Examiners the Faculty may debar any candidate who has failed in the Final Examination from presenting himself at a subsequent Final Examination until a period of twelve months has elapsed since that failure.

‡11. (a) There shall be three classifications of pass in each component subject of the annual examinations for the degree, as follows: Pass with Distinction, Pass with Credit, Pass. The names of candidates who pass with Distinction or with Credit shall be arranged in order of merit within the relevant classification; the names of candidates who pass shall be arranged in alphabetical order.

(b) A candidate who fails to pass in any subject of an annual examination shall, unless exempted wholly or partially therefrom by the Faculty, again attend lectures, clinical practice, laboratory and other practical work in that subject before presenting himself again for examination. In the case of the third, fourth and fifth years, such a candidate may also be required to attend, concurrently, such lectures, clinical practice, laboratory and other practical work as the Faculty may prescribe, in other subjects of that annual examination.

(c) Except in the case of the First Annual Examination, a candidate who is exempted from part of any subject shall not be granted a classified pass in that subject.

* Amended 17 December, 1970.
‡ Allowed 17 December, 1970, and 28 February, 1974.
†† Amended 17 December, 1970, and 28 February, 1974.
** Amended 28 February, 1974.

†12. A candidate who has passed subjects in other faculties or universities or elsewhere, may on written application to the Academic Registrar be granted such exemption from these regulations and from schedules made under them as the Council on the recommendation of the Faculty may determine.

Regulations allowed 16 March, 1961.
† Amended 21 December, 1972

SCHEDULES

(Made by the Council under Regulation 2.)

NOTES: 1. The dental clinical year begins on the fifth Monday in the year. 2. Students should obtain from the Dental School Office the lists of instruments and equipment required by each student before commencing each year's course. 3. Syllabuses of subjects for the degree of B.D.S. are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I: COURSES OF STUDY.

1. Approval of Enrolment.

Students who have been granted, or are seeking exemption from the requirements of these schedules under regulation 12, must have their course of study approved by the Dean (or his nominee) at the time of enrolment in the year concerned.

2. Lectures, Practical Work, Clinical Instruction.

During the first year every student shall attend a course of instruction in the following subjects: (a) Biology, (b) Chemistry, (c) Behavioural Science, (d) Physics and (e) Genetics.

During the second year every student shall attend a course of instruction in each of the following subjects: (a) General Anatomy, (b) General and Dental Histology, (c) Biochemistry, (d) Human Physiology, (e) Oral Anatomy (f) Dental Materials and Technics.

During the third year every student shall attend a course of instruction in each of the following subjects: (a) Human Physiology, (b) General Pathology, (c) Microbiology, (d) Oral Pathology, (e) Conservative Dentistry, (f) Prosthetic Dentistry, (g) Pharmacology and Therapeutics; and shall attend at the Dental Department of the Royal Adelaide Hospital for clinical instruction.

During the fourth and fifth years every student shall attend a course of instruction in each of the following subjects:—(a) General Medicine, (b) General Surgery, (c) Preventive Dentistry, (d) Children's Dentistry, (e) Orthodontia, (f) Periodontia, (g) Microbiology, (h) Oral Pathology, (i) Oral Surgery and Anaesthesia, (j) Pharmacology, (k) Conservative Dentistry, (l) Crown and Bridge Prosthesis, (m) Partial Denture Prosthesis, (n) Immediate Replacement Denture Prosthesis, (o) Complete Denture Prosthesis, (p) Principles of Dental Practice, (q) Applied Physiology; and shall attend at the Royal Adelaide Hospital courses of clinical instruction in medical and surgical practice; and at the Dental Department of the Royal Adelaide Hospital for clinical instruction.

Schedule II: Examinations.

1. At the First Annual Examination the candidate shall satisfy the examiners in each of the following subjects and half-subjects:

(i) SZ71 Biology I.
(ii) SC71 Chemistry IM (at Division I standard or higher).
(iii) MH71 Behavioural Science.
(iv) SP7H Physics IM.
(v) SJ8H Genetics IM.

2. At the Second Annual Examination the candidate shall satisfy the examiners in each of the following subjects:

(i) General Anatomy.
(ii) General and Dental Histology.
(iii) Biochemistry.
(iv) Oral Anatomy.
(v) Restorative Dentistry I.
(vi) Human Physiology.

3. At the Third Annual Examination the candidate shall satisfy the examiners in each of the following subjects:

(i) Human Physiology
(ii) General Pathology
(iii) Oral Pathology I
(iv) Microbiology
(v) Restorative Dentistry II.

4. At the Fourth Annual Examination the candidate shall satisfy the examiners in each of the following subjects:

(i) General Medicine
(ii) General Surgery
(iii) Children's Dentistry
(iv) Periodontology I
(v) Oral Pathology II
(vi) Pharmacology and Therapeutics
(vii) Restorative Dentistry III.

5. At the Final Examination the candidate shall satisfy the examiners in each of the following subjects:

(i) Preventive Dentistry
(ii) Orthodontia
(iii) Periodontology II.
(iv) Oral Surgery and Anaesthesia
(v) Oral Medicine
(vi) Restorative Dentistry IV.

RULES FOR THE ADMISSION OF DENTAL STUDENTS TO THE PRACTICE OF THE ROYAL ADELAIDE HOSPITAL

1. Each dental student of the University of Adelaide shall attend at the Dental Department and at other Departments of the Royal Adelaide Hospital as directed by the Dean of the Faculty of Dentistry; and each student shall be admitted to the practice of the Hospital under the disciplinary control of the Medical Superintendent or Dental Superintendent whilst attending a Department of the Hospital.

2. No student may introduce visitors into any department of the Hospital without permission from the Administrator.

3. Every student shall conduct himself with propriety and discharge the duties assigned to him, and pay for or replace any article damaged or lost, or destroyed by him, and make good any loss sustained by his negligence.

4. Each student shall at all times be under the direction and supervision of a duly appointed member of the teaching staff of the University of Adelaide, and shall carry out such work as shall be allotted to him.

5. No student shall administer treatment to any patient without the approval of an appointed teacher.

6. No student shall publish a report on any case without the written permission of the Honorary Medical Officer or Honorary Dental Officer under whose care the patient is or has been.

7. Any student infringing any of these rules, or otherwise misconducting himself, may be temporarily suspended by the Medical Superintendent or the Dental Superintendent. In the case of such temporary suspension, written notice shall immediately be given to the Dean of the Faculty of Dentistry and the Administrator of the Hospital.

Approved by Council, 1961.

OF THE DEGREE OF

BACHELOR OF DENTAL SURGERY

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the faculties responsible for the various subjects, as follows:

Faculty of Dentistry - - - D
Faculty of Medicine - - - M
Faculty of Science - - - - S

The second letter: if it follows
M, is explained under Faculty of Medicine; *or*
S, is explained under Faculty of Science.

Where the second letter follows D, the subject is taught by one of the following departments:

B: Department of Oral Biology.
H: Department of Dental Health.
P: Department of Oral Pathology and Oral Surgery.
R: Department of Restorative Dentistry.

The first digit—
0–6: Indicates that the subject forms part of a sequence.
7–9: Indicates that the subject does not form part of a sequence.

The second digit—
1–5: Indicates year of subject, e.g. first, second, etc.
9: Indicates subject available to Honours students only.
H: Indicates a first-year half-subject.

FIRST-YEAR SUBJECTS.

SC71 Chemistry IM.

This first-year chemistry course is designed to meet the specific needs of students enrolled in the Faculties of Medicine and Dentistry. Principles are illustrated with biological and medical examples.

A. Structure and Bonding.

1. Crystals and the solid state; the principle of X-ray crystallography, crystal systems; crystal chemistry.
2. Chemical bonding concepts: developed to a level for understanding of structures and reactions elsewhere in the course.
3. Qualitative discussion of spectrophotometry and spectral techniques used to establish molecular structure.
4. Molecular architecture: the structure of biological molecules, metal chelates and haem-type complexes.

B. Energetics and Chemical Equilibria.

1. Equilibria in aqueous solutions: concepts of free energy, enthalpy and entropy; buffers; metal-complex formation.
2. Electrochemical phenomena: electrode potentials; glass electrode; specific ion electrodes.
3. Interfacial phenomena: interfaces and adsorption; monolayers; electrical double-layers; membranes; osmotic phenomena; Donnan equilibrium; hydrophilic colloids.

C. Rate Processes.

The concepts of reaction rates, rate laws, mechanisms; effect of temperature on reaction rates; diffusion as a rate-determining process.

D. Organic Chemistry.

The lecture course in Organic Chemistry will be devoted to a discussion of the occurrence, preparation and properties, both physical and chemical, of the major families of organic compounds, *viz.*

paraffins	acids
olefins	aromatic hydrocarbons
acetylenes	phenols
alcohols	amines
alkyl halides	heterocyclic compounds
aldehydes	amino acids and proteins
ketones	carbohydrates

Representative examples will be included of compounds of medicinal and biological importance, e.g., anaesthetics, analgesics, anti-inflammatory drugs, antiseptics, bacteriostats, antibiotics, vitamins, nucleotides, steroids etc.

At appropriate places in the course the following topics will be presented:

1. Isomerism: geometrical, optical, recognition and separation of isomers.
2. Spectroscopic methods: applications of ultra-violet, infra-red, n.m.r., and mass spectrometry in the identification of organic compounds.
3. Fluorescence: examples of fluorescent compounds, fluorescence spectroscopy.
4. Carcinogenesis: separation and identification of carcinogenic hydrocarbons.

5. Polymers: preparation and properties of synthetic organic polymers, proteins, cellulose, starch.
6. Chromatography: some examples of applications of gas, thin film, column chromatography.
7. Biological processes: simple examples of transformations, *in vivo*, of organic molecules, transport mechanisms.
8. Fats and waxes, lipids.

Text-books:

Campbell, J. A., *Chemical systems* (Freeman, 1970).
Richards, Cram and Hammond, *Elements of organic chemistry* (McGraw-Hill).

MH71 Behavioural Science.

The course deals with scientific approaches to the understanding of human behaviour in health and disease. Biological, psychological, sociological, anthropological and development aspects will be considered.

The course consists of three lectures, one tutorial, and one three-hour practical class, a week.

Text-books:

Mussen, P. H., and others, *Child development and personality*, 4th edition (Harper).
Munn, N. L., and others, *Basic psychology*, 3rd edition (Houghton Mifflin).
Mann, L., *Social Psychology* (Wiley).
Firth, R. W., *Human types. An introduction to social anthropology* (Mentor).

Reference books:

Engel, G., *Psychological development in health and disease* (Saunders).
Maxwell, A. E., *Basic statistics in behavioural research* (Penguin).
Butcher, H. J., *Human intelligence* (Methuen).
Contemporary psychology: readings from *Scientific American* (Freeman).
Coopersmith, S., Frontiers of psychological research: readings from *Scientific American* (Freeman).
Proshansky, H. M., and Seidenbery, B. (eds.), *Basic studies in social Psychology* (Holt, Rinehart and Winston).
Broom, L., and Selznick, P., *Sociology*, 5th edition (Harper).
Erikson, E. H., *Identity and the life cycle* (I.U.P.).

SP7H Physics IM.

The course consists of 39 one-hour lectures (two per week), 20 one-hour tutorials, and one three-hour laboratory session a fortnight.

The lecture topics include:

Hydrostatics.
Fluid flow.
Changes of state.
Heat conduction, convection and vapour pressure.
Sound.
Wave aspects of light.
Photons.
Atomic spectra.
Nuclear structure and radiations.
Electric circuits.

Wherever possible the basic principles will be illustrated by appropriate examples of biological applications.

Text-book:

To be advised.

SJ8H Genetics IM.

There will be one lecture a week and one three-hour practical session fortnightly throughout the year. Part of the practical sessions will be devoted to tutorial discussions of selected topics.

This course outlines the principles of human genetics as an introduction to individual variation which is part of the background to the practice of medicine and dentistry. Practical sessions and exercises will give students the opportunity to analyse data of normal and pathological human variation so as to encourage a critical approach to genetical and medical problems.

Scientific method. Mendelian genetics in human families. Application of statistical tests to genetic data. Cytogenetics. Biochemical and population genetics. Genetics of quantitative variables. Genetic counselling.

Text-book:

Thompson, J. S., and Thompson, M. W., *Genetics in medicine*, 2nd edition (Saunders).

Reference books:

McKusick, V. A., *Human genetics*, 2nd edition (Prentice-Hall).

Maxwell, A. E., *Basic statistics in behavioural research* (Penguin).

Stone, G. K., *Evidence in science. A simple account of the principles of science for students of medicine and biology* (Wright).

SZ71 Biology I.

A course consisting of two lectures, one tutorial and approximately four hours of practical work each week throughout the year. Both day and evening classes will be held.

The course includes: an introduction to the structure, physiology and functional evolution of plants and animals; elementary biochemistry, cell physiology and genetics; the mechanisms of evolution, and the principles of ecology.

Text-books:

Villee, C. A., and others, *General zoology*, 4th edition (Saunders).

Raven, P. H., and Curtis, H., *Biology of plants* (Worth).

Reference books:

Browning, T. O., *Animal populations* (Hutchinson).

Holdren, J. P., and Ehrlich, P. R. (ed.), *Global ecology* (Harcourt Brace Jovanovich).

Galston, A. W., *The life of the green plant*, 2nd edition (Prentice-Hall).

Hardin, G., *Biology, its principles and implications*, 2nd edition (Freeman).

Johnson, W. H., and others, *Biology*, 3rd edition (Holt, Rinehart and Winston).

SECOND-YEAR SUBJECTS.

MA72 General Anatomy.

The course consists of systematic lectures, demonstrations, and practical work and extends over three terms. It is arranged to cover the general anatomy of the body and the principles underlying its structure, the topographical anatomy of the head and neck and the dissection of this region, and a brief course in neurobiology.

Text-books:

Cunningham, D. J., *Manual of practical anatomy*, vol. 3 (O.U.P.).

Matzke, H. A., and Foltz, F. M., *Synopsis of neuroanatomy*, 2nd edition (O.U.P., New York).

Scott, J. H., and Dixon, A. D., *Anatomy for students of dentistry* (Livingstone).

Sinclair, D. C., *Human growth after birth* (O.U.P.).

Books for reference and further reading:

Sicher, H., *Oral anatomy*, 5th edition (Mosby).

Young, J. Z., *An introduction to the study of man* (Clarendon).

MA82 General and Dental Histology.

This course of study extends over three terms and consists of lectures, demonstrations and practical classes on general histology and cytology, and histology and development of teeth and adjacent structures.

Text-books:

Bloom, W., and Fawcett, D. W. A., *A textbook of histology* (Saunders).

Orban, B. J., *Oral histology and embryology*, 7th edition (Mosby).

Atlas (optional):

Reith, E. J., and Ross, M. H., *Atlas of descriptive histology* (Harper).

Reference books:

Clark, W. E., *The tissues of the body* (O.U.P.).

Greep, R. O., and Weiss, L., *Histology* (McGraw-Hill).

Kraus, B. S., and others, *Dental anatomy and occlusion* (Williams and Wilkins).

Toner, P. G., and Carr, K. E., *Cell structure* (Livingstone).

SY82 Biochemistry.

A course of lectures for three terms on general biochemistry.

Dental students attend the same basic lecture course as second-year medical students (SY72) but at appropriate places separate lectures with emphasis on aspects relevant to dentistry are substituted.

Text-book:

Harper, H. A., *Review of physiological chemistry*, 14th edition (Lange).

Reference books:

Larner, J., *Intermediary metabolism and its regulation* (Prentice-Hall).

Lazzari, E. P., *Dental biochemistry* (Lea and Febiger).

Searcy, R. L., *Diagnostic biochemistry* (McGraw-Hill).

Stanbury, J. B., and others, *Metabolic basis of inherited diseases*, 3rd edition (McGraw-Hill).

White, A., and others, *Principles of biochemistry*, 4th edition (McGraw-Hill).

SS22 Human Physiology.

The course in Human Physiology extends over the three terms of the Second year.

Text-books:

Best, C. H., and Taylor, N. B., *Physiological basis of medical practice*, 9th edition, ed. J. R. Brobeck (Williams and Wilkins). (Joint text-book with Biochemistry.)

Rand, M. J., and others, *An introduction to the physiology and pharmacology of the autonomic nervous system* (The Australasian Pharmaceutic Pub. Co.).

Reference book:

Mountcastle, V. B. (ed.), *Medical physiology*, 13th edition, vol. 1 and 2 (Mosby).

Preliminary and parallel reading:

Horrobin, D. F., *An introduction to human physiology* (M.T.P.).

DB02 Oral Anatomy.

A course of instruction on the functional anatomy of the teeth and associated structures consisting of; the morphology of primary and permanent teeth, the anatomy of the tooth supporting tissues and the physiology of dental occlusion.

The teeth and associated structures will be studied in a series of laboratory exercises which include visual representation, tooth carving and tooth reconstruction.

Text-books:

Kraus, B. S., and others, *Dental anatomy and occlusion* (Williams and Wilkins).

Ramfjord, S. P., and Ash, M. M., *Occlusion*, 2nd edition (Saunders).

Wheeler, R. C., *An atlas of tooth form*, 4th edition (Saunders).

Reference books:

Posselt, U., *The physiology of occlusion and rehabilitation*, 2nd edition (Blackwell).

Scott, J. H., and Symons, N. B., *Introduction to dental anatomy*, 6th edition (Livingstone).

Wheeler, R. C., *Dental anatomy, physiology and occlusion*, 5th edition (Saunders).

DR02 Restorative Dentistry I.

The course consists of lectures, tutorials and practical work: one lecture a week through three terms on materials science in dentistry; one lecture a week in the first and second terms and one tutorial a week in the third term on specific dental materials; and three hours of practical work a week in the first and second terms. Tutorials are continued in the first term of the third year.

The aim of the course is a detailed study of the physical, chemical and mechanical properties of materials used in restorative dentistry. Applications in dental technics are studied by means of practical exercises.

Text-books:

American Dental Association, *Guide to dental materials*, 6th edition, 1972-73.

Greener, E. H., and others, *Materials science in dentistry* (Williams and Wilkins).

Skinner, E. W., and Phillips, R. W., *Science of dental materials*, 7th edition (Saunders).

Reference books:

Anderson, J. N., *Applied dental materials* (Blackwell).

Combe, E. C., *Notes on dental materials* (Churchill Livingstone).

Peyton, F. A., and others, *Restorative dental materials* (Mosby).

THIRD-YEAR SUBJECTS.

MP73 General Pathology.

A course of instruction on the general principles of pathology, consisting of: the genetic background of disease; the causation, character and sequelae of inflammation, degeneration, regeneration, repair, hypertrophy, atrophy and hyperplasia; blood coagulation and its disorders, thrombosis, embolism, infarction and ischaemia; the biologic effects of radiant energy and of viruses; the fundamentals of neoplasia. The pathology of systemic disease of importance in dental practice is also briefly studied.

Text-book:

Walter, J. B., *et al.*, *Principles of pathology for dental students*, latest edition (Churchill).

Reference book:

Robbins, S. L., *Pathologic basis of disease* (Saunders).

SS23 Human Physiology.

This course in Physiology and Pharmacology is a continuation of the Second year studies (SS22) and it extends over the first and second terms of Third year.

Text and reference books:

As for Syllabus SS22.

In addition, as text-books:

Rand, M. J., and others, *An introduction to the physiology and pharmacology of the autonomic nervous system* (The Australasian Pharmaceutic Pub. Co.).

Thompson, R., *Foundations of physiological psychology* (Harper and Row).

Melzack, R., *The puzzle of pain* (Penguin).

Reference books:

Mountcastle, V. B. (ed.), *Medical physiology*, 13th edition, vol. 1 and 2 (Mosby).

DP03 Oral Pathology I.

A course of lectures and practical classes extending over two terms.

This course of instruction is based on the principles of general pathology and microbiology. Oral manifestations of disease processes are studied, and practical instruction given in clinical aspects and histopathology of diseased oral tissues.

The course deals with pathological processes involving enamel, dentine, cementum and pulp; dental caries; periodontal disease and cysts of the jaws.

Text-book:

Shafer, W. G., and others, *A textbook of oral pathology*, 3rd edition (Saunders).

Reference books:

Burnett, G. W., and Scherp, H. W., *Oral microbiology and infectious diseases*, 3rd edition (Williams and Wilkins).

Gorlin, R. J., and Goldman, H. M., *Thoma's oral pathology* (Mosby).

Pindborg, J. J., *Pathology of the dental hard tissues* (Munksgaard).

Rushton, M. A., and others, *Oral histopathology* (Livingstone).

DB13 Microbiology.

The course emphasises basic principles of microbiology and immunology covering the general areas of: morphology, cytology, metabolism, physiology, ecology, isolation, cultivation and classification of bacteria and viruses. Principles of disinfection, sterilisation and chemotherapy. Microbial genetics. Host-parasite relationships, mechanisms of microbial pathogenicity and principles of immunology and resistance to infective agents. Characteristics of selected groups of microorganisms and viruses important in medical microbiology. Consideration of the oral microbiota and its relation to dental disease.

Text-books:

Burnett, G. W., and Scherp, H. W., *Oral microbiology and infectious disease*, 3rd edition (4th edition if available) (Williams and Wilkins).

Davis, B. D., and others, *Principles of microbiology and immunology* (Hoeber or Harper International).

Jawetz, E., and others, *Review of medical microbiology*, 10th edition (Saunders/Lange Medical Publications).

Reference book:

Harris, R., *Art and science of dental caries research* (Academic Press).

DR03 Restorative Dentistry II.

The courses in conservative dentistry and prosthetic dentistry form the basis of integrated studies in restorative dentistry which extend through the third, fourth and fifth years.

CONSERVATIVE DENTISTRY:

The course consists of one lecture and three practical sessions a week through three terms. Practical work in the first term involves demonstrations and pre-clinical exercises concerned with the restoration of teeth with plastic materials. Students are required to achieve a satisfactory standard in work of the first term before proceeding in the second and third terms with the treatment of patients and pre-clinical exercises concerned with cast restorations. A series of tutorials in each term parallels progress in the pre-clinical work.

Text-book:

Sturdevant, C. M., and others, *The art and science of operative dentistry* (McGraw-Hill).

Reference books:

In addition to those listed under Dental materials and technics (DR02):

Black, G. V., *Operative dentistry*—Vol. II (Kimpton).

Black, G. V., *Operative dentistry*; revised by R. E. Blackwell, 9th edition (Kimpton).

Gilmore, H. W., *Textbook of operative dentistry* (Mosby).

Hampson, E. L., *Text-book of operative dentistry* (Heinemann).

Hollenback, G. M., *Science and technique of the cast restoration* (Mosby).

McGehee, W. H. O., and others, *A text-book of operative dentistry* (McGraw-Hill).

Tocchini, J. J., *Restorative dentistry* (McGraw-Hill).

PROSTHETIC DENTISTRY:

The course consists of lectures and practical work: fifteen lectures or tutorials in the first term, one lecture a week in the second and third terms, three practical sessions a week in the first and second terms and four sessions a week in the third term. Studies in the first term are concerned with the physiology of occlusion and its relation to restorative dentistry and in the second and third terms with the replacement of missing teeth and associated structures by means of partial and complete denture prostheses.

Text-books:

Posselt, U., *The physiology of occlusion and rehabilitation* (Blackwell).

Sowter, J. B. (ed.), *Dental laboratory technology: prosthodontic techniques* (University of North Carolina Press).

Reference books:

Henderson, D., and Steffel, V. L., *McCracken's removable partial prosthodontics* (Mosby).

Kraus, B. S., and others, *Dental anatomy and occlusion* (Williams and Wilkins).

Ramfjord, S. P., and Ash, M. M., *Occlusion* (Saunders).

FOURTH-YEAR SUBJECTS.

MM04 General Medicine.

A special course of lectures and clinical instructions in the principles of medicine and on the diseases of different organs and systems of the body, with particular reference to the relationship between medical disorders and the oral manifestations of disease.

Text-book:

Kennedy, A. C., *Essentials of medicine for dental students* (Livingstone).

Reference books:

Davidson, L. S. P., and others, *Principles and practice of medicine* (Livingstone).

Houston, J. C., and others, *A short text-book of medicine*, 4th edition (English Universities Press).

MS04 General Surgery.

A course of lectures and clinical demonstrations to illustrate the patterns of behaviour of surgical conditions, and the principles of their treatment.

Text-book:

Elmslie, R. G., and Ludbrook, J., *An introduction to surgery*: 100 *topics*, 1st edition (Heinemann).

DH04 Children's Dentistry.

A course of instruction on child management and the materials and methods used in the treatment of injuries and diseases of children's teeth.*

Text-book:

Finn, S. B., *Clinical pedodontics*, 4th edition (Saunders).

Reference books:

Andreasen, J. O., *Traumatic injuries of the teeth* (Munksgaard).

Brauer, J., and others, *Dentistry for children* (McGraw-Hill).

Davies, G. N., and King, R. M., *Dentistry for the pre-school child* (Livingstone).

Hargreaves, J. A., and Craig, J. W., *The management of traumatised anterior teeth of children* (Livingstone).

McDonald, R. E., *Dentistry for the child and adolescent*, 2nd edition (Mosby).

* Clinical instructions in this subject commences in the fourth year and is continued throughout the fifth year until the final examination.

Competence in the management of children's dental problems is included in the overall assessment of the final year students.

DH14 Periodontology I.

Periodontology is the study of the tooth supporting tissues and of diseases that affect these structures. Instruction covers the recognition, prevention and treatment of periodontal disease and their relationship to other branches of dentistry.

The course of instruction commences with introductory lectures in third year and continues through fourth and fifth years. It comprises lectures, tutorials and clinical practice.

The annual assessment in fourth year is based upon performance in clinical sessions and tutorials as well as a written paper.

Text-book:

Goldman, H. M., and Cohen, D. W., *Periodontal therapy*, 5th edition (Mosby).

Reference books:

Glickman, I., *Clinical periodontology*, 4th edition (Saunders).

Ramfjord, S. P., and Ash, M., *Occlusion*, 2nd edition (Saunders).

DP04 Oral Pathology II.

This is a continuation of DP03 Oral Pathology I.

A course of lectures, seminars and practical sessions extending over three terms.

The course considers the principles of diagnosis of oral mucosal lesions and deals with the pathology of diseases of the oral mucosa; deep infections; diseases of bone including osteodystrophies; oral tumours; diseases of the temporomandibular joint, salivary glands and nasal sinuses.

Text-books and Reference books as for Oral Pathology I, plus the following additional text-book.

Lucas, R. B., *Pathology of tumours of the oral tissues,* 2nd edition (Churchill).

DB24 Pharmacology and Therapeutics.

A course of instruction in the principles and application of pharmacology.

Text-books:

Meyers, F. H., and others, *Review of medical pharmacology*, current edition (Lange).

Kay, L. W., *Drugs in dentistry*, current edition (John Wright).

Walton, J. G., and Thompson, J. W., *Pharmacology for the dental practitioner*, current edition (British Dental Association).

Reference books:

Bevan, J. A., *Essentials of pharmacology*, current edition (Hoeber).

Goodman, L. S., and Gilman, A., *The pharmacological basis of therapeutics*, current edition (Macmillan).

DR04 Restorative Dentistry III.

The course extends over the dental clinical year of 32 weeks and it consists of lectures, demonstrations, laboratory work, clinical practice and tutorial instruction in conservative and prosthetic dentistry. The aim of the course is to provide opportunities for students to gain experience in the simpler clinical procedures of operative dentistry and prosthodontics and to develop the theory and skills enabling them to undertake more complex restorative procedures.

CONSERVATIVE DENTISTRY:

Endodontics: Lectures and practical work on three sessions a week during the first three weeks of the year.

Dental Radiology: A series of six lectures followed by demonstrations, practical work and tutorials on one session a week by roster.

Crown and Bridge Prosthesis: One lecture and one practical class a week through three terms.

Clinical Practice and Tutorials: Rostered attendance for clinical practice and tutorials dealing with operative dentistry timetabled on two sessions a week through three terms.

PROSTHETIC DENTISTRY:

Complete Denture Prosthesis: Practical work on two sessions a week during the first three weeks of the year; one lecture a week in the first and third terms; rostered attendance for clinical practice and for seminars and tutorials on two sessions a week through three terms.

Removable Partial Denture Prosthesis: One lecture a week in the second term.

Text-books:

Blackman, S., and Poyton, H. G., *A manual of dental and oral radiography* (John Wright).

Henderson, D., and Steffel, V. L., *McCracken's removable partial prosthodontics* (Mosby).

Ingle, J. I., *Endodontics* (Lea and Febiger).

Johnston, J. F., and others, *Modern practice in crown and bridge prosthodontics* (Saunders).

Sharry, J. J., *Complete denture prosthodontics* (McGraw-Hill).

Stafne, E. C., *Oral roentgenographic diagnosis*, 3rd edition (Saunders).

Reference books:

In addition to those listed under DR02 and DR03:

Applegate, O. C., *Essentials of removable partial denture prosthesis* (Saunders).

Coolidge, E. D., and Kesel, R. G., *A text-book of endodontology* (Lea and Febiger).

Heartwell, C. M., *Syllabus of complete dentures* (Lea and Febiger).

Johnston, J. F., and others, *Modern practice in dental ceramics* (Saunders).

Miller, E. L., *Removable partial prosthodontics* (Williams and Wilkins).

Osborne, J., and Lammie, G. A., *Partial dentures* (Blackwell).

Swenson, M. G., *Complete dentures*, 6th edition, by C. O. Boucher (Mosby).

Tylman, S. D., *Theory and practice of crown and bridge prosthodontics* (Mosby).

Worth, H. M., *Principles and practice of oral radiographic interpretation* (Year Book Publications).

FIFTH-YEAR SUBJECTS.

DH25 Preventive Dentistry.

The course deals with the epidemiology of dental disease; methods of control and treatment: the relation of dental disease to systematic disease, and the place of dentistry in public health programmes. It comprises lectures, tutorials and project assignments. Competence in clinical practice in paedodontics during the year is included in the overall assessment.

Reference books:

Fluorides and human health (W.H.O.).

Dunning, J. M., *Principles of dental public health* (Harvard U.P.).

Nizel, A. E., *Nutrition in preventive dentistry: science and practice* (Saunders).

Clements, F. W., and others, *Diet and nutrition for the Australian people* (Angus and Robertson).

Goose, D. H., and Hartles, R. L., *Principles of preventive dentistry* (Pergamon Press).

Sognnaes, R. F., *Chemistry and prevention of dental caries* (Thomas).

Young, W. D., and Striffler, D. F., *The dentist, his practice and his community* (Saunders).

DH35 Orthodontics.

Lectures and clinical instruction in the growth and development of the craniofacial complex; the recognition, diagnosis and treatment of malocclusion and associated anomalies of the jaws with orthodontic procedures.

Text-book:

Graber, T. M., *Orthodontics: principles and practice,* 3rd edition (Saunders).

Reference books:

Horowitz, S. L., and Hixon, E. H., *The nature of orthodontic diagnosis* (Mosby).

Salzmann, J. A., *Practice of orthodontics,* Volumes I and II (Lippincott).

DH15 Periodontology II.

The course in periodontology which commences in third year and continues through to fourth and fifth year is examined in the fifth year by means of an assessment based principally on clinical competence but a *viva voce* examination may also be required.

DP15 Oral Surgery and Anaesthesia.

A series of lectures and clinical tutorials is given on the principles and practice of oral surgery and the use of local anaesthesia and general anaesthesia.

Clinical practice includes routine minor oral surgery and elective oral surgery on out-patients, and major oral surgery on patients admitted as in-patients to the Royal Adelaide Hospital on a theatre list. Instruction is included in the techniques of extra oral radiography and the interpretation of radiographs.

Text-books:

Howe, G. L., *Minor oral surgery* (Wright).

Killey, H. C., and Kay, L. W., *The impacted wisdom tooth* (Livingstone).

Roberts, D. H., and Sowray, J., *Local analgesia in dentistry* (Wright); *or*

Jorgensen, N. B., and Hayden, J., *Sedation—local and general anaesthesia in dentistry,* 2nd edition (Lea and Febiger).

Reference books:

Howe, G. L., *The extraction of teeth* (Wright).

Kruger, G. O., *Textbook of oral surgery,* 3rd edition (Mosby).

Lee, J. A., *Synopsis of anaesthesia* (Wright).

Nevin, M., and Puterbaugh, P. G., *Conduction, infiltration and general anaesthetics in dentistry* (Dental Items of Interest Publishing Co.).

Rowe, N. L., and Killey, H. C., *Fractures of the facial skeleton* (Livingstone).

Stacy, G. C., *Dental elevators* (Sydney U.P.).

DP25 Oral Medicine.

This course extending over the final year deals with the principles of diagnosis of systemic and local diseases affecting the oral cavity, and instruction is given in the use of clinical and laboratory diagnostic procedures.

Methods of treatment of oral diseases are considered. Emphasis is placed on the effect of dental treatment on medical conditions, and on the management of patients with medical disorders undergoing dental treatment.

Text-books and reference books as for Oral Pathology I and II plus the following additional reference books:

Alling, Charles C., *Facial pain* (Lea and Febiger).

Kay, L. W., *Drugs in dentistry*, 2nd edition (Wright).

Kerr, D. A., and others, *Oral diagnosis*, 4th edition (Mosby).

DR05 Restorative Dentistry IV.

The course extends over the dental clinical year of 32 weeks and it consists of lectures, seminars, clinical practice and tutorial instruction. There are two lectures or seminars a week during the first and second terms. Students are rostered for clinical practice to the restorative dentistry clinics timetabled on five sessions a week throughout the year and to the radiology clinic timetabled on one session a week. Tutorials on specific problems of clinical practice are given throughout the year within the time allotted for clinical practice.

The aim of the course is to provide opportunities for students to receive additional training and clinical experience in the comprehensive dental care of patients and aspects of practice management which will fit them for unsupervised general practice on graduation.

Text-book:

Baum, L., *Advanced restorative dentistry—Modern materials and techniques* (Saunders).

and those text-books and reference books listed under Restorative Dentistry I, II and III.

Dental Radiology.

An integrated course of lectures, demonstrations and clinical practice in dental radiology is given through the third, fourth and fifth years.

Oral Diagnosis.

A short course of introductory lectures is given at the beginning of Fourth year.

Students in fourth and fifth years attend on roster in the Admissions Clinic of the Dental Department. During these sessions the overall as well as the immediate dental needs of the patient are considered and the alternative forms of treatment are discussed. The long term effects of differing forms of emergency treatment are evaluated. When patients present with special manifestations of pathology the relationship of the condition to general dental care and preventive and community dentistry is reviewed, though such patients are referred to the appropriate special department(s) for more thorough investigation and treatment.

(In the specialist departments diagnosis and treatment planning is also an important aspect of the students' instruction where as well as in a general way it is related to the problem of special treatment procedures.)

Principles of Dental Practice.

A short course of lectures on dental jurisprudence; forensic odontology; dental ethics; dental practice administration.

OF THE HONOURS DEGREE OF

BACHELOR OF SCIENCE IN DENTISTRY

REGULATIONS

1. There shall be an Honours degree of Bachelor of Science in Dentistry. Subject to these regulations a candidate may proceed to the degree by undertaking a course of study in one of the following:

(a) Anatomy
(b) Biochemistry
(c) Dental Health
(d) Genetics
(e) Histology
(f) Materials Science
(g) Microbiology
(h) Oral Biology
(i) Oral Pathology
(j) Oral Surgery
(k) Pathology
(l) Pharmacology
(m) Physiology
(n) Restorative Dentistry.

2. Before entering upon the course of study for the degree a candidate must:

(i) have completed the pre-requisite work, or work accepted by the Faculty of Dentistry as appropriate for the proposed course of study, and

(ii) be deemed by the Head of the Department concerned to be a suitable candidate for advanced work.

3. To qualify for the degree a candidate shall undertake advanced study extending over one academic year as a full-time candidate, or with the approval of the Faculty of Dentistry, over a period of not more than two academic years as a half-time candidate, in one of the courses listed in regulation 1, and satisfy the examiners therein at the first attempt.

4. Schedules defining the pre-requisite work, the course of study, including lectures, laboratory and other practical work to be undertaken, the examinations to be passed and the fees to be paid by candidates shall be drawn up by the Faculty of Dentistry, and submitted to the Council. Such schedules shall become effective from the date of approval by the Council or such other date as the Council may determine, and shall be published in the next University Calendar issued after that approval has been given.

5. The candidate shall enter for the examination on the form and by the date prescribed by the Council, but shall not be eligible to present himself for examination unless he has regularly attended the prescribed lectures and has done written and laboratory or other practical work, where required, to the satisfaction of the head of the department(s) concerned.

6. The names of the candidates who qualify for the degree shall be published in alphabetical order within the following classes and divisions in each subject:

First Class
Second Class
Division A
Division B
Third Class.

*7. A person who holds the Honours degree of Bachelor of Dental Surgery of the University of Adelaide may, on application to the Academic Registrar, be admitted to the Honours degree of Bachelor of Science in Dentistry, provided:

(a) that he first surrender the Honours degree of Bachelor of Dental Surgery; and

(b) that if he has not already been admitted to the Ordinary degree of Bachelor of Dental Surgery he shall be admitted also to that degree.

Regulations allowed 28 February, 1974.
* Awaiting allowance at time of printing.

NOTE (not forming part of the regulations): A candidate permitted to undertake a course over two academic years must be able to devote half of his normal working time to his studies exclusive of evenings and weekends.

SCHEDULES

(Made by the Council under Regulation 4.)

SCHEDULE I: PRE-REQUISITE WORK

The pre-requisite work for admission to the courses listed in regulation 1 shall be as follows:

Anatomy, Biochemistry, Histology, Materials Science, Microbiology, Oral Biology, Pathology, Pharmacology, Physiology: a pass in the Third Annual Examination for the degree of Bachelor of Dental Surgery.

Dental Health, Oral Pathology, Oral Surgery, Restorative Dentistry: a pass in the Final Examination for the degree of Bachelor of Dental Surgery.

Genetics: a pass in the Third Annual Examination for the degree of Bachelor of Dental Surgery and a pass in the subject SJ02 Genetics II as prescribed for the degree of Bachelor of Science.

Schedule II: Courses of Study

A course of study will consist of such of the following as may be required:

(i) reading in selected fields and submissions of essays;
(ii) attendance at lectures;
(iii) practical work; and
(iv) the undertaking of a research investigation on a topic assigned early in the course.

Schedule III: Examinations

The examination for the degree may consist of such written, oral and practical examinations as may be required. Assessments of any essays submitted by the candidate, practical work completed during the course, and the report on a research investigation may be taken into account.

OF THE HONOURS DEGREE OF

BACHELOR OF SCIENCE IN DENTISTRY

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the faculties responsible for the various subjects, as follows:

Faculty of Dentistry - - -	D	Faculty of Medicine - - -	M
Faculty of Engineering - -	N	Faculty of Science - - - -	S

The second letter: if it follows

M, is explained under Faculty of Medicine; *or*

N, is explained under Faculty of Engineering; *or*

S, is explained under Faculty of Science.

Where the second letter follows D, the subject is taught by one of the following departments:

B: Department of Oral Biology.

H: Department of Dental Health.

P: Department of Oral Pathology and Oral Surgery.

R: Department of Restorative Dentistry.

The first digit—

7–9: Indicates that the subject does not form part of a sequence.

The second digit—

9: Indicates subject available to Honours students only.

HONOURS DEGREE OF BACHELOR OF SCIENCE IN DENTISTRY

The following Honours courses are available:

DB99 Oral Biology.

Candidates may, with the approval of the Chairman of the Department, enrol in the Oral Biology Honours programmes after they have successfully completed the third year of the B.D.S. Ordinary degree or after they have obtained the Ordinary degree of B.D.S. or its equivalent.

Under certain circumstances candidates who have obtained the Ordinary degree of B.Sc. may be admitted to an honours programme in Oral Biology.

Candidates will be expected to nominate one of the following disciplines as their major subject: Anatomy, Genetics, Histology, Immunology, Pharmacology, Physiology, Microbiology, Pathology.

All candidates will be required to undertake on a full-time basis for one year (unless otherwise determined by the Chairman of the Department) a special course of study, including essays, seminars and laboratory work and a research project under the supervision of staff members of the Department. This project will provide the basis of a research report. Prescribed reading lists provided by the Department will be given to prospective candidates during the long vacation prior to the Honours year.

A candidate may be required to undertake such formal courses of study in related subjects as deemed necessary in each case.

DH99 Dental Health.

Candidates may choose one of the sections of Dental Health as a principal subject. The course will begin in the first week of February or earlier and will consist of lectures, tutorials, practical work and reading in advanced aspects of the principal subject and related subjects as prescribed by the Chairman of the Department. Candidates will be required to participate in a research investigation under the direction and supervision of a member of staff and to submit a report on a topic assigned early in the course. A reading list will be provided and candidates will be expected to begin the course of reading during the long vacation prior to the Honours year. Prospective candidates are advised to consult the Chairman of the Department as early as possible in the year preceding the Honours year.

DP79 Oral Surgery.

Candidates may choose some area of Oral Surgery. Attendance will be required at prescribed lectures in subjects related to oral surgery such as Anatomy and General Pathology. A minor research project will be undertaken on which a research report will be written.

The course is designed to further a student's knowledge in the relevant subjects and to train him in laboratory research techniques and experimental methodology.

Prospective candidates are advised to contact the Chairman of the department in the year preceding the proposed Honours year.

DP89 Oral Pathology.

Candidates may choose some aspect of Oral Pathology or some other area of clinical dentistry.

The course will begin in the first week of February and will require attendance at prescribed lectures in subjects related to oral pathology, such as Anatomy, Physiology and General Pathology. A minor research project will be undertaken on which a research report will be written.

The course is designed to further a student's knowledge in the relevant subjects and to train him in laboratory research techniques and methods of recording the results of experiments.

Prospective candidates are advised to consult the Chairman of the Department in the year preceding the Honours year.

DR99 Restorative Dentistry.

Candidates may choose one of the sections of restorative dentistry as a principal subject. The course will begin in the first week of February and will consist of lectures, tutorials, practical work and reading in advanced aspects of the principal subject and related subjects as prescribed by the Chairman of the Department. Candidates will be required to participate in a research investigation under the direction and supervision of a member of staff and to submit a report on a topic assigned early in the course. A reading list will be provided and candidates will be expected to begin the course of reading during the long vacation prior to the Honours year. Prospective candidates are advised to consult the Chairman of the Department in the year preceding the Honours year.

SK79 Microbiology.

Candidates may choose one of two fields, Molecular Biology or Immunology. The course will begin in February and consists of seminars, tutorials and a research project under the supervision of a member of staff. A detailed reading list will be provided and candidates should begin the course of reading during the long vacation prior to the Honours year. Prospective candidates are advised to consult the Head of the Department in the year preceding the Honours year.

SY79 Biochemistry.

Intending students should consult the Head of the Department. The course will consist of a research project under the supervision of a member of the Department of Biochemistry, together with such reading and participation in lectures and seminars and other work as shall be prescribed by the Head of the Department. A candidate for the degree will be required to write a thesis on his research and pass such examinations as shall be prescribed by the Head of the Department.

MA89 Anatomy and Histology.

The course consists of tutorials, seminars, reading and essay preparation in any anatomical discipline such as gross anatomy, neurobiology, histology, cytology or embryology. Emphasis is placed on the relation of structure to function. A candidate is expected to study one topic in depth. He would normally undertake a research project under the supervision of a member of staff and would be required to submit a written report on this work.

Candidates should consult the Chairman of the Department before undertaking the course.

MP89 Pathology.

NH59 Materials Science.

SJ69 Genetics.

SS39 Physiology.

SS49 Pharmacology.

Prospective students should consult the appropriate Head/Chairman of Department in the year preceding that in which they wish to take the course.

OF THE DEGREE OF

MASTER OF DENTAL SURGERY

REGULATIONS

†1. (a) The Faculty of Dentistry may accept as a candidate for the degree any person who:

(i) has qualified in the University of Adelaide for the degree of Bachelor of Dental Surgery and for the Honours degree of Bachelor of Science in Dentistry with First or Second Class Honours;

(ii) has qualified in another university for a degree or degrees which the Faculty regards as equivalent to those degrees specified in sub-section (i) hereof; or

(iii) has qualified for a degree in dentistry and whose qualifications are regarded by the Faculty as equivalent to those specified in sub-section (i) hereof.

(b) The Faculty of Dentistry may accept provisionally as a candidate for the degree any other person who has qualified for a degree in dentistry of the University of Adelaide or of another university and who satisfies the Faculty that he is a suitable candidate for advanced work.

(c) With the approval of the Council, the Faculty may accept as a candidate for the degree, provisionally or otherwise, and subject to such conditions as it may see fit to impose a person who does not hold a degree of a university but holds a dental qualification for which he has followed a course of study acceptable to the Faculty and who satisfies the Faculty that he is a suitable candidate for advanced work.

°(d)(i) A candidate accepted provisionally shall pass a qualifying examination before his acceptance as a candidate will be confirmed. The provisional candidature of a candidate who fails the qualifying examination at the first attempt shall be cancelled unless the Faculty decides otherwise.

† Amended 28 February, 1974.

° NOTE (not forming part of the regulations): It is the intention of the Faculty of Dentistry that candidates should normally have qualified for the Honours degree of Bachelor of Dental Surgery or the Honours degree of Bachelor of Science in Dentistry with First or Second Class Honours. Any qualifying examination will therefore be at the same standard as that for the Honours degree of Bachelor of Science in Dentistry for which one year of full-time study is normally the required preparation. Any course of advanced study prescribed under regulation 1(d)(ii) will be designed to ensure that the candidate has had equivalent preparation.

(ii) The Faculty shall approve the scope of any qualifying examination under regulation 1(d) and the means by which it shall be conducted. The Faculty may require a candidate to undertake such course of advanced study as it sees fit, before he sits for the qualifying examination.

(e) A candidate shall not be admitted to the degree before the expiration of one year from his admission to a degree specified in section (a) above or the expiration of two years from his admission to the degree or other qualification accepted by the Faculty under sections (b) or (c) above.

2. To qualify for the degree a candidate shall either:

(a) complete satisfactorily an approved programme of research work and submit a satisfactory thesis thereon; or

(b) (i) pass an examination set after completion of an approved course of postgraduate study; and

(ii) complete satisfactorily an approved research project and submit a satisfactory report thereon:

provided that a candidate accepted provisionally shall first pass the qualifying examination as required under regulation 1(d) above.

3. (a) A person who wishes to become a candidate for the degree shall apply to the Academic Registrar indicating in general terms the subject and outline of his proposed research or investigation and where applicable his proposed course of study for examination.

(b) For each candidate, including a candidate accepted provisionally, the Faculty shall appoint a supervisor or supervisors to guide him in his work.

4. A candidate shall submit a thesis or present himself for examination under regulation 2 above not earlier than one academic year and except by permission of the Faculty not later than three academic years after his admission to candidature under regulation 1.

5. A candidate's progress shall be reviewed by the Faculty at the end of each academic year. If, in the opinion of the Faculty, a candidate is not making satisfactory progress the Faculty may, with the consent of the Council, terminate the candidature.

6. (a) On completion of his work the candidate shall lodge with the Academic Registrar three copies of his thesis or research report which shall be prepared in accordance with directions given from time to time.*

(b) The Faculty shall nominate examiners of the thesis or research report, one of whom may be an external examiner.

(c) The examiners may recommend that a candidate by thesis under regulation 2(a) be examined orally or otherwise on the subject of his thesis and the general field of knowledge in which it falls.

* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

7. (a) For each candidate the Faculty shall appoint a Board of Examiners which shall:

(i) consider the reports of the examiners of the thesis or research report and the results of any examination;

(ii) examine a candidate proceeding under regulation 2(b);

(iii) examine a candidate under regulation 6(c) if it concurs with a recommendation by examiners under that regulation; and

(iv) examine under regulation 1(d)(i), a candidate accepted provisionally.

(b) The Board of Examiners may recommend that the candidate:

(i) be awarded the degree subject to such minor amendments of the thesis or research report as the examiners may have suggested;

(ii) be not awarded the degree but be allowed to revise and resubmit his thesis or research report within such period as the Faculty may allow; or

(iii) be not awarded the degree.

8. A candidate who complies with the foregoing conditions and satisfies the Board of Examiners shall, on the recommendation of the Faculty, be awarded the degree of Master of Dental Surgery.

9. The fees to be paid by candidates shall be prescribed from time to time by the Council; and a schedule of fees so prescribed shall be published in the University Calendar.

10. All regulations hitherto in force concerning the degree of Master of Dental Surgery are hereby repealed. Candidates enrolled for the degree under the regulations hereby repealed may *either*;

(a) complete the requirements of the degree under those regulations, provided that they do so by 31 December, 1974;

(b) be granted such status under these regulations as the Council, on the recommendation of the Faculty of Dentistry, shall decide.

Regulations allowed 16 December, 1971.

OF THE DEGREE OF

DOCTOR OF DENTAL SCIENCE

REGULATIONS

1. A candidate for the degree of Doctor of Dental Science shall not be admitted to the degree until the expiration of at least four years from his admission to the degree of Bachelor of Dental Surgery in the University of Adelaide: Provided that, in the case of a graduate in dentistry of another university who has been admitted *ad eundem gradum* in the University of Adelaide, the period of four years shall be reckoned from the date of his first graduation in dentistry.

2. Except in special cases approved by the Council only persons who have been admitted to the degree of Master of Dental Surgery may become candidates for the degree of Doctor of Dental Science.

3. To qualify for the degree a candidate shall submit a satisfactory thesis embodying the results of original research or investigation by the candidate on a subject approved by the Faculty of Dentistry. The thesis may be written specially for the degree, or may be an already published work, or may be a series of papers. It shall not be a compilation from books, nor a mere compendium of cases, nor merely observational. The candidate shall indicate in a preface or in a separate statement wherein he considers that it advances dental knowledge or practice, and shall furnish a history of the progress of dental knowledge in the subject of the thesis. A candidate may be required to undergo examination in the subject matter of, or in subjects cognate to, his thesis.

4. The degree shall not be awarded unless in the opinion of the examiners the thesis makes an original and substantial contribution to knowledge in some branch of Dental Science.

†5. The candidate shall lodge with the Academic Registrar three copies of the work prepared in accordance with the directions given in sub-paragraph (b) of clause 2B of Chapter XXV of the Statutes. If the work is accepted for the degree the Academic Registrar will transmit two of the copies to the University Library.

6. On receipt of the reports of the examiners appointed to adjudicate upon the thesis the Faculty of Dentistry will recommend whether the degree be granted or withheld or delayed.

† Allowed 16 March, 1961.

‡7. Repealed.

*8. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 10 December, 1942. * Allowed 18 October, 1961.
‡ Repealed 16 March, 1961.

FACULTY OF ECONOMICS

REGULATIONS, SCHEDULES AND SYLLABUSES OF DEGREES AND DIPLOMA

Bachelor of Economics (B.Ec.)
- Regulations and Schedules - - - - - - 752
- Syllabuses - - - - - - - - - 759
  - Economics - - - - - - - - - 760
  - Commerce - - - - - - - - - 774

Diploma in Business Management (Dip.B.M.)
- Regulations and Schedules - - - - - - 780
- Syllabuses - - - - - - - - - 783

Master of Business Management (M.B.M.)
- Regulations and Schedules - - - - - - 787
- Syllabuses of Course Work (See Dip.B.M.) - - - 783

Master of Economics (M.Ec.)
- Regulations - - - - - - - - - 791

Doctor of Philosophy (Ph.D.)
- Regulations and Schedules: under "Board of Research Studies"—*see* Table of Contents.

OF THE DEGREE OF

BACHELOR OF ECONOMICS

REGULATIONS

1. There shall be an Ordinary and an Honours degree of Bachelor of Economics. A candidate may obtain either degree or both.

*2. The course of study for the Ordinary degree shall extend over three years and that for the Honours degree over four years. A candidate for the Ordinary degree shall attend lectures and pass examinations in accordance with the provisions of Schedule II; a candidate for the Honours degree shall attend lectures and pass examinations in accordance with the provisions of Schedule III.

†3. The names of candidates who pass at an annual examination in any subject or division of a subject for the Ordinary degree shall be published in alphabetical order in the following classifications:

Pass with Distinction
Pass with Credit
Pass.

If the pass lists be published in two divisions, a pass in the higher division may be prescribed in the syllabuses as a pre-requisite for admission either to further courses in that subject or to other subjects.

4. The names of candidates who qualify for the Honours degree shall be published in alphabetical order within the following classes and divisions:

First Class
Second Class
    Division A
    Division B
Third Class

A candidate who fails to obtain Honours may be awarded the Ordinary degree provided that he has in all other respects completed the work for the Honours degree.

5. No graduate who has obtained the Honours degree of Bachelor of Arts in the school of Economics may obtain the Honours degree of Bachelor of Economics.

* Amended 4 November, 1965.

† Amended 16 December, 1971.

6. Except by permission of the Faculty a candidate shall not proceed to a subject for which he has not completed the pre-requisite subjects or preparatory work as prescribed in the syllabuses.

7. A candidate shall do such written or practical work in any subject as may be prescribed by the professor or lecturer concerned.

*8. The annual examinations shall be held towards the end of each academic year. A candidate shall enter for examination on the form and by the date prescribed by the Council, but shall not be eligible to present himself for examination unless he has attended such tutorials and seminars, and has done such written or other work as may be required, to the satisfaction of the professors and lecturers concerned.

9. Written or practical work done by candidates by direction of the professor or lecturer concerned and the results of terminal or other examinations held during the year may be taken into consideration at the final examination in any subject.

*10. A candidate who fails to pass in any subject shall again attend tutorials and seminars and do written or practical work in that subject to the satisfaction of the professor or lecturer concerned, unless granted exemption from doing so by the Faculty.

11. A candidate who has twice failed to pass the annual examination in any subject or division of a subject may not present himself again for instruction or examination therein unless his plan of study is approved by the Dean. If he fails a third time he may not proceed with the subject again except by special permission of the Faculty and under such conditions as the Faculty may prescribe.

For the purpose of this regulation a candidate who has failed to comply with the provisions of regulation 8 shall be deemed to have failed to pass the examination.

12. A candidate who has passed equivalent examinations in the University or otherwise and who desires that the examinations which he has passed should be counted *pro tanto* for the degree of Bachelor of Economics, may, on written application, be granted such exemption from the requirements of these regulations as the Council may determine.

†13. A graduate in another faculty who wishes to proceed to the degree of Bachelor of Economics:

(i) may present for the degree not more than four subjects or their equivalent which he has already presented for another degree or in which he has been granted status or exemption on account of work done for another degree;

* Allowed 20 December, 1956, and amended 24 December, 1969.
† Amended 4 October, 1962, 4 April, 1963, 4 November, 1965 and 16 December, 1971.

(ii) shall present a range of subjects which fulfils in all respects the requirements of the schedules made under regulation 15 below;

(iii) shall present two third-year subjects or their equivalent not presented for another degree.

A candidate who holds a diploma may be granted such status in the course for the degree of Bachelor of Economics as the Faculty shall in each case determine; provided that if status be granted for more than four subjects the candidate shall surrender his diploma before being admitted to the degree.

14. If in any year the number of students desiring to attend lectures in any subject be fewer than a minimum fixed by the Council, the course of lectures in that subject may be suspended for that year.

15. Schedules defining the course of study, including lectures and practical work to be undertaken, the examinations to be passed and the fees to be paid by candidates shall be drawn up by the Faculty of Economics and be submitted to and approved by the Council.

Such schedules shall become effective as from the date of approval by the Council or such other date as the Council may determine and shall be published in the next University calendar which is issued after that approval has been given.

Regulations allowed 17 January, 1952.

SCHEDULES

(Made by the Council under Regulations 2 and 15.)

NOTE: Syllabuses of subjects for the degree of B.Ec. are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I — GENERAL.

1. (a) The following may be presented for the Ordinary degree:

B.Ec. subjects and half-subjects:

Subjects:

Commercial Law II
Economic Development III
Economic History II
Economic Theory
Economic Statistics II and IIA
Elements of Accounting I
Industrial Sociology III
Management Accounting II
Mathematics (Economics) I

Half-subjects:

First-year:
Macroeconomics IH
Microeconomics IH

Second-year:
Macroeconomics IIH
Microeconomics IIH

**Third-year*:
Accounting Theory IIIH
Agricultural Economics IIIH
Business Finance IIIH
Econometrics IIIH
Economic Problems in Historical Perspective IIIH
Economics of Labour IIIH
History of Economic Thought IIIH
Information Systems and Data Processing IIIH
International Economics IIIH
Introduction to Operations Research IIIH
Macroeconomics IIIH
Management Information Systems IIIH
Managerial Economics IIIH
Marketing IIIH
Microeconomics IIIH
Public Finance IIIH
Russian Economic History IIIH

B.A. subjects and half-subjects:

Such of the subjects and half-subjects set out in Schedule I of the regulations of the degree of B.A., as are not included in the list of B.Ec. subjects above.

(b) No candidate may present:
(i) more than one of Mathematics (Economics) I, Mathematics IM, Mathematics I and Mathematics IH;
(ii) more than one of Economic Statistics II, Economic Statistics IIA and Mathematical Statistics II;
(iii) Politics IIA and Politics IIB (unless both subjects have been passed before 31 March, 1966);
(iv) Economics I (passed prior to 1974) and Microeconomics IH or Macroeconomics IH;
(v) Economics II (passed prior to 1974) and Microeconomics IIH, Macroeconomics IIH or Microeconomics IIIH;

FOOTNOTE (not forming part of the schedule):
* International Economics IIIH, Macroeconomics IIIH and Microeconomics IIIH will always be offered, but other half-subjects may not all be offered every year.

(vi) the half-subject Statistics IH unless he also presents Mathematical Statistics II;
(vii) Information Systems and Data Processing IIIH and Management Information Systems IIIH;
(viii) *either* Information Systems and Data Processing IIIH, *or* Introduction to Operations Research IIIH, and any one of Computing Science III, IIIA and IIIM;
(ix) more than two of History IA, History IB and History IC;
(x) both subjects of any of the pairs of subjects set out in clause 2 of Schedule I of the regulations of the degree of B.A.

(c) A candidate may present Mathematical Statistics II in place of Economic Statistics IIA.

2. A graduate in another faculty may be granted status in or exemption from not more than four subjects or their equivalent on account of work done for another degree.

A graduate may be exempted by the Dean from Mathematics (Economics) I and two other subjects from Schedule I referred to in Schedule II.†

3. Courses of study must be approved by the Dean (or his nominee) at enrolment each year.

4. Candidates who have completed subjects for the degree prior to 1974 may continue under the schedules then in force, with such modifications (if any) as shall be prescribed by the Dean.

5. For the purpose of completing the requirements of the degree, a candidate shall not, except with permission of the Faculty, retain credit for any subject or half-subject for more than ten years.

6. A candidate who has presented himself for the annual examinations in any subject may, at the discretion of the examiners, be required subsequently to present himself for an additional examination, which may be either oral or written; and his results at such an additional examination shall be taken into account in determining his results at the annual examination.

Schedule II — The Ordinary Degree

Except as provided for in clause 2 of Schedule I a candidate for the Ordinary degree shall pass in seven subjects and seven half-subjects or the equivalent.

1. (a) (i) Microeconomics IH.
(ii) Macroeconomics IH.
(b) Mathematics (Economics) I (*or* another subject approved by the Dean).
(c) Elements of Accounting I.
(d) Another subject from Schedule I which may be a first-year subject.

† See Schedule II, 1(d) and 3(c).

2. (a) (i) Microeconomics IIH.
(ii) Macroeconomics IIH.
(b) Economic Statistics II *or* IIA.
(c) Management Accounting II *or* Economic History II (*or*, in special cases approved by the Dean, another subject).

3. (a) (i) International Economics IIIH.
(ii) Microeconomics IIIH *or* Macroeconomics IIIH.
(iii) One other third-year half-subject.
(b) Economic Development III *or* two third-year half-subjects (*or*, in special cases approved by the Dean, another subject).
(c) Two third-year half-subjects *or* another subject from Schedule I which may not be a first-year subject. (For a candidate admitted to preliminary honours work this subject shall be Economic Theory.)

NOTES (not forming part of the schedules): Students taking subject 1(b) in 1975 will be permitted to take Mathematics (Economics) I or any other subject from Schedule I, but are advised that a knowledge of mathematics is helpful for economics and commerce courses and is essential for some second- and third-year options.

A student may count towards his degree:
(a) both Management Accounting II and Economic History II if one is counted as subject 2(c) and the other as subject 3(c), and
(b) both Microeconomics IIIH and Macroeconomics IIIH if one is counted as 3(a)(ii) and the other as 3(a)(iii).

Macroeconomics and International Trade IIIH offered in 1972 and 1973 will be counted as the two half-subjects 3(a)(i) and 3(a)(ii) under this schedule.

Work required to complete an Adelaide degree.

To qualify for the degree of Bachelor of Economics a student granted status under regulation 12 or 13 must pass at least the equivalent of a full year's work from subjects taught in the Departments of Economics or Commerce at the University of Adelaide and this must include at least two third-year half-subjects (or the equivalent) which could be counted towards sections 3(a) or 3(b) of Schedule II of the degree.

Schedule III — The Honours Degree

A candidate for the Honours degree shall:

(a) except as provided for in clause 2 of Schedule I, pass in seven subjects and seven half-subjects or their equivalent as prescribed for the Ordinary degree in Schedule II, provided that one of the subjects shall be Economic Theory.

(b) The work of the Final Honours year must be completed in one year of full-time study, save that on the recommendation of the Dean, the Faculty may permit a candidate to spread the work over two years, but not more, under such conditions as it may determine.

OF THE DEGREE OF

BACHELOR OF ECONOMICS

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Economics: E.

The second letter identifies the department teaching the subject:

Commerce - - - - - - - C Economics - - - - - - - E

The first digit—

In first- and second-year subjects

0–3: Indicates that the subject is in sequence with another subject.

4–6: Indicates that the subject is not in sequence with another subject.

7–9: Indicates service subject.

In third-year subjects and half-subjects the first digit serves only to differentiate the subjects and half-subjects.

The second digit—

1, 2, 3: Indicates year of subject, e.g. first, second or third.

(4–7: Not used.)

8: Indicates subjects taken by Honours students before the Final Honours year.

9: Final Honours.

H or G: Indicates a half-subject.

ECONOMICS

The main courses in Economics forming a sequence for the degrees of Bachelor of Agricultural Science, Bachelor of Arts and Bachelor of Economics are the half-subjects EE1G Macroeconomics IH and EE2G Microeconomics IH, EE3G Macroeconomics IIH and EE4G Microeconomics IIH and EE7G International Economics IIIH and two half-subjects one of which must be either EE5G Macroeconomics IIIH or EE6G Microeconomics IIIH. (EE6G Microeconomics IIIH will be offered for the first time in 1975 and may not be presented by a candidate who passed EE02 Economics II in 1973 or earlier.)

Students who have passed with credit in EE71 Social Economics I or EE83 Agricultural Economics I may, with the approval of the Dean of the Faculty of Economics, enrol in EE3G Macroeconomics IIH and EE4G Microeconomics IIH.

The compulsory first, second, and third-year half-subjects (designated IH, IIH or IIIH) are given annually, lectures in the second- and third-year subjects being given alternately at day and evening classes. Other third-year half-subjects may not be offered every year, but, as far as possible, a selection will be given each year as evening lectures.

It is proposed at present to give these lectures as follows:

	1975	1976	1977
Macroeconomics IH and Microeconomics IH	Day and Evening	Day and Evening	Day and Evening
Macroeconomics IIH and Microeconomics IIH	Evening	Day	Evening
Macroeconomics IIIH	Day	Evening	Day
International Trade IIIH	Day	Evening	Day

This arrangement will permit a student to complete these subjects in successive years as a sequence either of day or of evening lectures, according to the year in which he commences.

FIRST-YEAR SUBJECTS AND HALF-SUBJECTS.

EE1G Macroeconomics IH.

No pre-requisite subjects.

The course consists of one lecture a week and one tutorial a fortnight throughout the year. The course is offered in both evening and day lectures.

The course provides an introductory study of the theory of employment and production for the economy as a whole. It also provides, in an introductory way, an account of the way that money, debt, borrowing and lending relate to production, investment and saving. The impact of governments and international trade on the level of production and income is examined. A preliminary study is made of the determination of the general level of prices.

Preliminary reading:

Heilbroner, R. L., *The economic problem*, 2nd or 3rd edition (Prentice-Hall).

Robinson, M. A., and others, *An introduction to economic reasoning* (Tudor).

Text-books:

Hancock, K. J., Hughes, B., and Wallace, R. H., *Applied economics: readings for Australian students* (McGraw-Hill).

Harcourt, G. C., Karmel, P. H., and Wallace, R. H., *Economic activity* (C.U.P.).

Samuelson, P. A., Hancock, K. J., and Wallace, R. H., *Economics*, Australian edition (McGraw-Hill).

Reference books:

Heilbroner, R. L., *The economic problem*, 3rd edition (Prentice-Hall).

Moore, B., *An introduction to modern economic theory* (Cassell and Collier McMillan).

Ritter, L. S., and Silber, W. L., *Money* (Basic Books).

EE2G Microeconomics IH.

No pre-requisite subjects.

The course consists of one lecture a week and one tutorial a fortnight throughout the year. The course is offered in both evening and day lectures.

This course is concerned primarily with the theory of price, developed through consideration of the behaviour of individual consumers and firms in a 'mixed-capitalist' economy. Emphasis is given to theories of consumer behaviour, real-world applications of the theory of price (such as price control, sales tax and price support arrangements in agriculture), production economics and the pricing and output behaviour of firms operating under different forms of industrial organisation.

Preliminary reading:

Galbraith, J. K., *The affluent society* (Penguin).
North, D. C., and Miller, R. L., *The economics of public issues*, 2nd edition (Harper and Row).
Morley, R., *Mathematics for modern economics* (Fontana).

Text-book:

Tisdell, C. A., *Economics of markets* (Wiley).

Reference books:

Bilas, R. A., *Microeconomic theory*, 2nd edition (McGraw-Hill).
Cole, C. L., *Microeconomics: a contemporary approach* (Harcourt, Brace, Jovanovich).
James, D. E., and Throsby, C. D., *Introduction to quantitative economics* (Wiley).
Leftwich, R. H., *The price system and resource allocation*, 5th edition (Holt, Rinehart and Winston).
Mansfield, E., *Microeconomics: theory and application* (Norton).

EE41 Mathematics (Economics) I.

No pre-requisite subjects are formally required. However, a sound knowledge of Leaving Mathematics is assumed. (Most students enrolling have attempted some Mathematics at Matriculation level.) Students are also strongly advised (though not required) to have done, or to be concurrently doing, EE1G Macroeconomics IH and EE2G Microeconomics IH.

The course is given, in alternate years, as day and evening lectures. It will be given as day lectures in 1975. It comprises three lectures and one tutorial a week. Exercises will be set each week and permission to sit for the final examination will not be granted unless a satisfactory standard has been reached.

The main emphasis of the syllabus is on:

(a) Calculus—with applications to problems in economics and commerce.
(b) Matrix algebra—with applications to economic models.

Preliminary reading:

Morley, R., *Mathematics for modern economics* (Fontana).

Text-books:

Chiang, A. C., *Fundamental methods of mathematical economics* (McGraw-Hill); *or*
Draper, J. E., and Klingman, J. S., *Mathematical analysis: business and economic applications*, 2nd edition (Harper and Row); *or*
Yamane, T., *Mathematics for economists*, 2nd edition (Prentice-Hall).

Reference books:

Archibald, G. C., and Lipsey, R. G., *An introduction to a mathematical treatment of economics* (Weidenfeld and Nicolson).
James, D. E., and Thrasby, C. D., *Introduction to quantitative methods in economics* (Wiley).
Peston, M. H., *Elementary matrices for economics* (Routledge and Kegan Paul).
Pfouts, R. W., *Elementary economics: a mathematical approach* (Wiley).
Additional references will be prescribed by the lecturers.

SECOND-YEAR SUBJECTS AND HALF-SUBJECTS.

EE3G Macroeconomics IIH.

Pre-requisite subject: EE1G Macroeconomics IH and EE2G Microeconomics IH.

EE3G Macroeconomics IIH will be given in 1975 as evening lectures. It comprises one lecture a week and one tutorial fortnightly.

This course expands the EE1G Macroeconomics IH analysis by introducing the monetary sector and the general level of prices. In this course we examine first the operations of the major financial institutions, and the role of money, finance and other forms of debt in economic activity. This material is then integrated with the first-year macroeconomic analysis to make a more comprehensive model of an economy. Finally the role of monetary policy is examined as an instrument of demand management.

Preliminary reading:

Morgan, E. V., *A history of money* (Pelican).
Ritter, L. S., and Silber, W. L., *Money* (Basic Books).

Text-books:

Arndt, H. W., and Stammer, D. W., *The Australian trading banks*, 4th edition (Cheshire).
Dernburg, T. F., and McDougall, D. M., *Macro-economics* (McGraw-Hill); *or*
Glahe, F. R., *Macroecenomics* (Harcourt, Brace, Jovanovich).
Hirst, R. R., and Wallace, R. H., *The Australian capital market*, 2nd edition (Cheshire).
Laidler, D. E. W., *The demand for money* (International Text Book Company).

Reference books:

Bain, A. D., *The control of the money supply* (Penguin).
Ball, R. J., and Doyle, P., *Inflation* (Penguin).
Harcourt, G. C., Karmel, P. H., and Wallace, R. H., *Economic activity* (C.U.P.).
Mayer, T., *Monetary policy in the United States* (Random House).
Moore, B. J., *An introduction to the theory of finance* (Free Press).
Nevile, J. W., and Stammer, D. W., *Inflation and unemployment* (Pelican).
Rose, P. J. B., *Australian securities markets* (Cheshire).
Runcie, N. (ed.), *Australian monetary and fiscal policy* (London U.P.).
Shapiro, E., *Macroeconomic analysis* (Harcourt, Brace and World).
Shaw, G. K., *An introduction to the theory of macro-economic policy* (Martin Robertson).
Smith, W. L., and Teigen, R. (eds.), *Readings in money, national income and stabilization policy* (Irwin).
Stanford, J. D., *Money banking and economic activity* (Wiley).
Thorn, R. S. (ed.), *Monetary theory and policy* (Random House).
Walters, A. A., *Money and banking* (Penguin).

Additional references will be prescribed by the lecturers.

EE4G Microeconomics IIH.

Pre-requisite subject: EE1G Macroeconomics IH and EE2G Microeconomics IH.

One lecture a week and one tutorial a fortnight.

This section will comprise two sections.

(i) *Twelve lectures on Applied Allocation Theory.*

The aim of this course is to elucidate on what economists mean by efficiency. Re-distribution of income aspects and the notion of compensation will also be studied. The assumptions of the formal Pareto analysis will be criticised with particular emphasis on the fact that externalities and increasing returns to scale are widespread in real world situations. These situations will be analysed in the context of pollution and resource allocation problems. Possible solutions, taxes, subsidies, bans *etc.* will be discussed.

(ii) *Twelve lectures on Industrial Organisation.*

This course will be centred round an analysis of market structure, conduct and performance. Thus it will complement the earlier lectures in that it will illustrate the market practicability and feasibility of attaining 'efficient' positions. The course will outline the current structure, conduct and performance of Australian industry. The concept of workable competition will be developed as a basic yardstick. Elements of market structure will be discussed; including barriers to entry, concentration and collusion. The concept of an oligopoly market will be developed and its implications considered. Finally the course will look at the use of public policy; Anti-trust legislation, Prices Justification, Environmental Control Agencies and the Tariff Board, as means of achieving better performance.

Text-books:

(i) Collard, D., *Prices, markets and welfare* (Faber).
Dolan, E. G., *TANSTAAFL—The economic strategy for environmental crisis* (Holt, Rinehart and Winston).
Tisdell, C., *Microeconomics* (Wiley).
Seneca, J. J., and Taussig, M. K., *Environmental Economics* (Prentice-Hall).

(ii) Scherer, F. M., *Industrial market structure and economic performance* (Rand McNally).
Tisdell, C., *Microeconomics* (Wiley).
Hawkins, C. J., *Theory of the firm* (Macmillan).
Rowley, C. K., *Antitrust and economic efficiency* (Macmillan).

Reference books:

(i) Dorfman, R., and Dorfman, N. S., *Economics of the environment—selected readings* (Norton).
Barkley, P. W., and Seckler, D. W., *Economic Growth and Environmental Decay* (Harcourt, Brace, Jovanovich).
Peston, M., *Public goods and the public sector* (Macmillan).
Treasury Economic Paper No. 2, *Economic growth: is it worth having?* (Australian Government Publishing Service).

(ii) Needham, D., *Economic analysis and industrial structure* (Holt, Rinehart and Winston).
Low, R., *Modern economic organisation* (Irwin).
Caves, R., *American industry: structure, conduct, performance* (Prentice-Hall).
Hunter, A. (ed.), *The economics of Australian industry* (M.U.P.).
Needham, D., *Readings in the economics of industrial organization* (Holt, Rinehart and Winston).
Galbraith, J. K., *The new industrial state* (Pelican).

Additional references will be prescribed by the lecturers.

EE12 Economic History II.

Pre-requisite subjects: EE71 Social Economics I *or* EE01 Economics I *or* EE1G Macroeconomics IH and EE2G Microeconomics IH.

This course, comprising two lectures and one tutorial a week, will be given as day lectures in 1975.

The course is concerned with the economic development of the United Kingdom and Australia. It will attempt to show how economic change was related to the social and economic position of these countries and how simple economic models can be used to analyse their development.

Preliminary reading:

Rostow, W. W., *The stages of economic growth* (C.U.P.).
Hill, C., *Reformation to industrial revolution* (Pelican).
Hobsbawm, E. J., *Industry and empire* (Pelican).

Text-books:

Britain.

Hartwell, R. M., *The industrial revolution and economic growth* (Methuen).

Landes, D. S., *The unbound Prometheus* (C.U.P.).

Mathias, P., *The first industrial nation* (Methuen).

Australia.

Boehm, E. A., *20th century economic development in Australia* (Longmans).

Forster, C., *Australian economic development in the twentieth century* (Allen and Unwin).

Griffin, J., *Essays in economic history in Australia* (Jacaranda).

EE22 Economic Statistics II.

Pre-requisite subjects: EE01 Economics I *or* EE71 Social Economics I *or* EE1G Macroeconomics IH and EE2G Microeconomics IH, unless the Chairman of the Department of Economics determines otherwise.

This course is given annually, alternately as day lectures and evening lectures. It will be given in 1975 as evening lectures. It comprises two lectures and one tutorial a week.

The course provides an introduction to statistical methods with special reference to applications in the field of economics. It includes discussion of the available Australian economic statistics and of the methods of compilation. The principal topics are: collection, presentation and description of data, with special reference to frequency distributions; an introduction to probability, sampling, significance and elementary decision theory, including the use of the normal, t and χ^2 distributions; linear regression and correlation; time series; sample surveys; quality control; elementary statistical computing; index numbers of prices and volume; elementary demography.

Text-books:

Hamburg, M., *Statistical analysis for decision making* (Harcourt, Brace and World).

or

Neter, J., and Wasserman, W., *Fundamental statistics for business and economics*, 4th edition (Allyn and Bacon).

It is also strongly recommended that you buy:

Statistics: a guide to the unknown, ed. J. M. Tanur and others (Holden-Day).

Reference books:

Boot, J. C. G., and Cox, E. B., *Statistical analysis for managerial decisions* (McGraw-Hill).

Costis, H. G., *Statistics for business* (Merrill).

L'Esperance, W. L., *Modern statistics for business and economics* (Collier Macmillan).

Huff, D., *How to take a chance* (Gollancz, and Penguin).

Karmel, P. H., and Polasek, M., *Applied statistics for economists* (Pitman);

Kazmier, L. J., *Statistical analysis for business and economics* (McGraw-Hill).

Mansfield, E., *Elementary statistics for economics and business* (Norton).

Mason, R. D., *Programmed learning aid for business and economic statistics* (Self Review) (Irwin).

Moroney, M. J., *Facts from figures* (Penguin).

Mudgett, B. D., *Index numbers* (Wiley).

Palmer, G. R., *A guide to Australian economic statistics* (Macmillan).

Spiegel, M. R., *Theory and problems of statistics* (Schaum).

Yamane, Taro, *Statistics, an introductory analysis*, 3rd edition (Harper and Row).

Yates, F., *Sampling methods for censuses and surveys* (Charles Griffin).

Additional references will be prescribed by the lecturers.

Students will be expected to familiarise themselves with the publications of the Australian Bureau of Statistics, and they should procure a copy of the latest issue of the *Labour report* (Govt. Printer, Canberra).

EE32 Economic Statistics IIA.

Pre-requisite subjects: EE01 Economics I *or* EE1G Macroeconomics IH and EE2G Microeconomics IH. An adequate mathematics background is also required; either a good pass in EE41 Mathematics (Economics) I, QM01 Mathematics I or another approved mathematics course.

Students other than candidates for the degree of Master of Business Management may enrol for this subject only with the permission of the Chairman of the Department of Economics.

The course comprises two lectures and one tutorial a week. In 1975 the course will be given as evening lectures and thereafter will alternate between day and evening lectures.

Students will be required to prepare class exercises. Permission to sit for the final examination may not be granted unless a satisfactory standard in them has been obtained.

The course will deal with an essentially mathematical approach to probability and statistical inference with economic applications. The topics covered will include: probability and probability distributions, expected values and moments, estimation and statistical inference, simple and multiple regression, sampling theory, non-parametric statistics, demography, time series, index numbers, introduction to electronic computing.

Text-books:

Freund, J. E., *Mathematical statistics* (Prentice-Hall).

Johnston, J., *Econometric methods* (McGraw-Hill).

Statistics: a guide to the unknown, ed. J. M. Tanur and others (Holden-Day).

Additional references will be prescribed by the lecturers.

THIRD-YEAR SUBJECTS AND HALF-SUBJECTS.

EE13 Economic Development III.

Pre-requisite: Student should have passed or be taking EE7G International Economics IIIH.

The course comprises two seminars a week throughout the year; it will be given in 1975 as evening classes.

Students will be expected to produce case studies on selected countries, write two essays and prepare some discussion papers for seminars.

The course is concerned primarily with the problems of development in less-developed countries. Topics to be discussed include: the meaning of under-development, industrialisation, foreign aid, employment, theories and techniques of planning, relevant growth theories.

Preliminary reading:

Stein, L., *Economic realities in poor countries* (Angus and Robertson).

Bernstein, H. (ed.), *Underdevelopment and development: the third world today* (Penguin).

Text-books:

Little, I. M. D., Scitovsky, T., and Scott, M., *Industry and trade in some developing countries* (O.U.P.).

Meier, G. M. (ed.), *Leading issues in economic development*, 2nd edition (O.U.P.).

Schiavo-Campo, S., and Singer, H. W., *Perspectives of economic development* (Houghton Mifflin).

Reference books:

Myrdal, G., *Asian drama* (Penguin *or* Random House).

Elkan, W., *An introduction to development economics* (Penguin).

Bauer, P. T., *Dissent on development* (Weidenfeld and Nicolson).

Sutcliffe, R. B., *Industry and underdevelopment* (Addison-Wesley).

Griffin, K. B., and Enos, J. L., *Planning Development* (Addison-Wesley).

EE8G Economic Problems in Historical Perspective IIIH.

Pre-requisite subjects: EE02 Economics II *or* EE3G Macroeconomics IIH and EE4G Microeconomics IIH.

The course will illustrate the contribution of economic history to an understanding of selected modern economic problems. Material will be drawn primarily from the experience of the United States since 1860, but also from that of the international economy and other advanced Western countries. Subjects examined may include the sources of growth; growth and welfare; the international economic environment; the role of government in market economies; inflation; agricultural adjustment; technological change; urbanisation; and the economic effects of wars.

Text-books:

Davis, L. E., and others, *American economic growth: an economist's history* (Harper and Row).

Gould, J. D., *Economic growth in history: survey and analysis* (Methuen).

Reference books:

Fogel, R. W., and Engerman, S. L. (eds.), *The reinterpretation of American economic history* (Harper and Row).

Kenwood, A. G., and Lougheed, A. L., *The growth of the international economy* 1820-1960 (Allen and Unwin).

Kuznets, S., *Modern economic growth: rate, structure, spread* (Yale U.P.).

North, D. C., *Growth and welfare in the American past: a new economic history*, 2nd edition (Prentice-Hall).

EE5G Macroeconomics IIIH.

Pre-requisite subjects: EE02 Economics II *or* EE3G Macroeconomics IIH and EE4G Microeconomics IIH.

This half-subject will be given as day lectures in 1975.

This course is an extension of the macroeconomics and monetary sections of Economics I and II, and assumes a grasp of these prior courses. It aims to develop issues of both theory and policy. Areas of theory to be developed relate to investment and the trade cycle, consumption theory, the monetary sector and elementary growth theory. The policy issues will relate to the problems of demand management in the context of the Australian economy.

Exemption from tutorials is not usually granted.

Preliminary reading:

Harcourt, G. C., Karmel, P. H., and Wallace, R. H., *Economic activity* (C.U.P.).

Pen, J., *Modern economics* (Pelican A710).

Robinson, J., *Economics: an awkward corner* (Allen and Unwin).

Robinson, J., and Eatwell, J., *An introduction to modern economics* (McGraw-Hill).

Text-books:

Australia; Census and Statistics, Bureau of,
Australian balance of payments (latest issue).
Australian economy (latest issue).

Branson, W. H., *Macroeconomic theory and policy* (Harper).

Matthews, R. C. O., *The trade cycle* (C.U.P.).

Mueller, M. G., *Readings in macro-economics* (Holt).

Reference books:

Allen, R. G. D., *Macro-economic theory* (Macmillan).

American Economic Association, *Surveys of economic theory*, volume 1 (Macmillan).

Arndt, H. W., and Corden, W. M., *The Australian economy* (Cheshire).

Arndt, H. W., and Boxer, A. H., *The Australian economy* (Cheshire).

Ball, R. J., and Doyle, P. (eds.), *Inflation* (Penguin).

Bober, S., *The economics of cycles and growth* (Wiley).

Burton, J., *Wage inflation* (Macmillan studies in economics).

Davidson, P., *Money and the real world* (Macmillan).

Evans, M. K., *Macroeconomic activity* (Harper and Row).

Hansen, A. H., *A guide to Keynes* (McGraw-Hill).

Johnson, M. B., *Household behaviour* (Penguin).

Laidler, D. E. W., *The demand for money* (Appleton).

Lekachman, R., *Keynes' general theory: reports of three decades* (Macmillan).

Sen, A. K. (ed.), *Growth economics* (Penguin).

EE7G International Economics IIIH.

Pre-requisite subject: EE02 Economics II *or* EE3G Macroeconomics IIH and EE4G Microeconomics IIH.

The course consists of one lecture a week and one tutorial a fortnight throughout the year. Lectures will be given in the day in 1975.

The general purpose of the course will be to integrate the international sector with the macroeconomic analysis in Economics I and Economics II; links between exchange rates, international prices, international capital movements and domestic wages and prices will be examined. Balance of payments adjustment mechanisms, international investment, international monetary systems will be studied.

Preliminary reading:

Harcourt, G. C., Karmel, P. H., and Wallace, R. H., *Economic activity* (C.U.P.).

Reference books:

There is no single book or short list of books which is a text-book for the course or for a substantial part of the course.

Treasury Economic Paper No. 1, *Overseas investment in Australia,* 1972 (Australian Govt., Publishing Service).

Burton, J., *Wage inflation* (Macmillan).

Cohen, B. J., *Balance of payments policy* (Penguin modern economics).

Cooper, R. N., *International finance* (Penguin modern economics).

Day, A. C. L., *Outline of monetary economics* (O.U.P.).

Grubel, H. G., *The international monetary system* (Penguin modern economics).

Isaac, J. E., and Ford, G. W. (eds.), *Australian labour economics* (Sun Books).

Leighton, R. I., *Economics of international trade* (McGraw-Hill).

Machlup, F., *International monetary economics* (Allen and Unwin).

Meade, J. E., *Theory of international economic policy*, volume I. *The balance of payments* (O.U.P.).

Nevile, J. W., and Stammer, D. W., *Inflation and unemployment* (Pelican).

EE6G Microeconomics IIIH.

Pre-requisite subjects: EE3G Macroeconomics IIH and EE4G Microeconomics IIH. This half-subject may not be presented by a candidate who passed EE02 Economics II in 1973 or earlier.

This course will be offered for the first time in 1975, and will comprise one lecture a week and one tutorial a fortnight.

The emphasis in this course will be on positive economics and, in particular, on the application of price theory to practical issues. Topics covered will include general equilibrium theory, theoretical and applied analysis of structure, conduct and performance of concentrated markets and extensions to and modifications of the traditional theories of consumption and production.

Preliminary reading:

Hawkins, C. J., *Theory of the firm* (Macmillan).

Text-books.

Scherer, F. M., *Industrial market structure and economic performance* (Rand McNally).

North, D. C., and Miller, R. L., *The economics of public issues*, 2nd edition (Harper and Row).

Becker, G. S., *Economic theory* (Knopf); *or*

Lancaster, K., *Introduction to modern microeconomics*, 2nd edition (Rand McNally).

Reference books:

Bain, J., *Industrial organization*, 2nd edition (Wiley).

Breit, W., and Hochman, H. M., *Readings in microeconomics*, 2nd edition (Holt, Reinhart and Winston).

Cohen, K. J., and Cyert, R. M., *Theory of the firm* (Prentice-Hall).

Cole, C. L., *Microeconomics: a contemporary approach* (Harcourt, Brace and Jovanovich).

Friedman, M., *Price theory* (Aldine).

Henderson, J. M., and Quandt, R. E., *Microeconomic theory*, 2nd edition (McGraw-Hill).

Johnson, H. G., *The two-sector model of general equilibrium* (Allen and Unwin).

Koch, J. V., *Industrial organization and prices* (Prentice-Hall).
Mermelstein, D., *Economics: mainstream readings and radical critiques* (Random House).
Rosenberg, N., *The economics of technological change* (Penguin).
Scott, R. H., *The pricing system* (Holden-Day).
Sherman, R., *The economics of industry* (Little, Brown).
Stigler, G. J., *The organization of industry* (Irwin).
Thompson, A. A., *Economics of the firm* (Prentice-Hall).
Tisdell, C. A., *Microeconomics: the theory of economic allocation* (Wiley).
Townsend, H., *Price theory* (Penguin).
Weston, J. F., and Ornstein, S. I., *The impact of large firms on the U.S. economy* (Heath).

EE2H Public Finance IIIH.

Pre-requisite subject: EE02 Economics II *or* EE3G Macroeconomics IIH and EE4G Microeconomics IIH.

This half-subject will be given once a week as late afternoon lectures in 1975. In addition day and evening tutorials will be offered every two to three weeks.

The course is concerned with the theory and practice of public finance with emphasis on its application in the Australian economy. The effectiveness of the public sector will be measured against its ability to operate as an allocating, distributing and regulating body. The major sections of the course will therefore cover taxation and borrowing, public expenditure appraisal, federal-state fiscal relations and fiscal (as against monetary) policy.

Preliminary reading:
Eckstein, O., *Public finance*, 3rd edition (Prentice-Hall).

Text-books:
Dixon, J. (ed.), *The public sector* (Penguin).
Friedman, M., *Capitalism and freedom* (C.U.P.).
Musgrave, R. A., and Musgrave, P. B., *Public finance in theory and practice* (McGraw-Hill).
Nevile, J. W., *Fiscal policy in Australia* (Cheshire).

Reference books:
Mathews, R. L., *Public investment in Australia* (Cheshire).
Mathews, R. L., and Jay, W. R. C., *Federal finance* (Nelson).
Mishan, E. J., *Elements of cost-benefit analysis* (Unwin).

Additional references will be prescribed by the lecturers.

EE3H Economics of Labour IIIH.

Pre-requisite subject: EE02 Economics II *or* EE3G Macroeconomics IIH and EE4G Microeconomics IIH.

EE3H Economics of Labour IIIH will be given in 1975 as day lectures. It comprises one lecture a week and one tutorial fortnightly.

This course is essentially a study of the interaction of economic and institutional factors in the labour market. The topics studied will include processes of wage determination; factors influencing the relative wage structure; industrial relations systems; unemployment and the labour force; basic theories of inflation; and wages and incomes policies. Emphasis will be given to the role of the Australian arbitration system in relation to general economic policy.

Text-books:
Burton, J., *Wage inflation* (Macmillan studies in economics).
Isaac, J. E., and Ford, G. W., *Australian labor economics: readings* (Sun Books).
Rees, A., *The economics of work and pay* (Harper and Row).

Reference books:

Ball, R. J., and Doyle, P., *Inflation* (Penguin).

Dunlop, J. T., *Wage determination under trade unions* (Kelley).

Fleisher, B. M., *Labor economics: theory and evidence* (Prentice-Hall).

Hicks, J. R., *The theory of wages*, 2nd edition (Papermac).

International Labor Office, *Job evaluation* (I.L.O. Studies and Reports N.S. 56).

Isaac, J. E., and Ford, G. W., *Australian labor relations: readings*, revised edition (Sun Books).

Jaques, E., *Equitable payment* (Pelican).

McCormick, B. J., and Smith, E. O., *The labour market* (Penguin).

O'Dea, R., *Industrial relations in Australia* (West).

Pohlman, J. E., *Economics of wage and price control* (Grid).

Portus, J. H., *Australian compulsory arbitration* (Hicks Smith).

Wootton, B., *The social foundations of wage policy*, 2nd edition (Allen and Unwin).

EE4H Agricultural Economics IIIH.

Pre-requisite subject: EE02 Economics II *or* EE3G Macroeconomics IIH and EE4G Microeconomics IIH.

This course consists of one lecture a week and a tutorial every third week throughout the year and will be offered as day lectures in 1975.

The prime purpose of this course is to provide a basis for critical appraisal of Australian Agricultural Policy. Emphasis is given to the characteristics of agriculture (capital formation and technological innovation, production instability and price uncertainty, supply responses); the role of agriculture in the Australian economy; policy objectives and measures in support of the farm sector (such as price stabilisation arrangements, duty free entry under by-law and tax concessions); recent and current problems in the farm sector (such as the cost-price squeeze on income, protection of the dairy industry, the reserve price scheme and operations of the Wool Corporation, quota restrictions on wheat production and rural reconstruction) as well as the nature and implications of recent changes in farm policy.

Text-book:

Throsby, C. D., *Agricultural policy* (Pelican).

Reference books:

Crawford, J. G., *Australian agricultural policy* (Joseph Fisher Lecture, University of Adelaide).

Johnson, D. G., *Forward prices for agriculture* (Chicago U.P.).

Schultz, T. W., *Production and welfare of agriculture* (Macmillan).

Williams, D. B., *Agriculture in the Australian economy* (Sydney U.P.).

Most of the reading is drawn from selected journal articles and Commonwealth publications. Photo copies of this material will be available in the Napier Birks room and on reserve in the Barr Smith Library.

EE5H History of Economic Thought IIIH.

Pre-requisite subject: EE02 Economics II *or* EE3G Macroeconomics IIH and EE4G Microeconomics IIH.

This half-subject will be given as day lectures in 1975.

The course covers some of the main contributions to economic thought of the leading economists from Adam Smith up to recent times. The emphasis is on contributions to economic theory. Students are expected to work mainly from secondary sources.

Text-books:

Blaug, M., *Economic theory in retrospect* (Heinemann).

Rima, I. H., *Development of economic analysis* (Irwin).

Reference books:

Dobb, M. H., *Theories of value and distribution since Adam Smith* (C.U.P.).

Hutchinson, T. W., *Review of economic doctrines* (Clarendon).

Seligman, B. B., *Main currents in modern economics: economic thought since* 1870 (Free Press of Glencoe).

Stigler, G. J., *Production and distribution theories* (Macmillan).

Additional references will be prescribed by the lecturers.

EE6H Russian Economic History IIIH.

Pre-requisite subjects: EE02 Economics II *or* EE3G Macroeconomics IIH and EE4G Microeconomics IIH, together with *either* EE12 Economic History II *or* (with the approval of the Chairman of the Department) an appropriate option from those listed under AH02 History II or AP32 Politics IIA.

The economic development of Russia from the 1860's, and of the Soviet Union to the present, together with analysis of Russian and Soviet economic institutions and the operation of the Soviet economic system. The course includes treatment of the post 1965 economic reforms.

Preliminary reading:

Kochan, L., *The making of modern Russia* (Penguin).

Wolfe, B., *Three who made a revolution* (Penguin).

Text-books:

Dobb, M. H., *Soviet economic development since* 1917 (Routledge).

Nove, A., *An economic history of the U.S.S.R.* (Allan Lane Penguin).

Nove, A., *The Soviet economy*, 3rd edition; *and/or*

Spulber, N., *The Soviet economy: structure, principles, problems.*

Reference books will be prescribed by the lecturer.

EE7H Managerial Economics IIIH.

Pre-requisite subject: EE02 Economics II *or* EE3G Macroeconomics IIH and EE4G Microeconomics IIH.

Basic concepts in demand analysis; cost analysis; pricing; forecasting demand; capital budgeting; advertising and linear programming.

Reference books:

Chamberlin, E. H., *The theory of monopolistic competition* (Harvard U.P.).

Clarkson, G. P. E. (ed.), *Managerial economics* (Penguin).

Dean, J., *Managerial economics* (Prentice-Hall).

Farrar, D. E. and Meyer, J. R., *Managerial economics* (Prentice-Hall).

Hague, D. C., *Managerial economics* (Longmans).

Haynes, W. W., *Managerial economics: analysis and cases* (Business Publications).

Johnston, J., *Statistical cost analysis* (McGraw-Hill).

Marris, R., *The economic theory of 'managerial' capitalism* (Macmillan).

Additional references will be prescribed by the lecturers.

EE8H Econometrics IIIH.

Pre-requisite subjects: EE32 Economic Statistics IIA and EE41 Mathematics (Economics) I *or* QM01 Mathematics I and a knowledge of elementary matrix algebra.

Students may enrol for this half-subject only with the approval of the Chairman of the Department. The course will consist of one lecture a week and one tutorial a fortnight throughout the year.

The econometrics course will deal with the estimation of economic relationships. It will include the following topics: single equation and multiple equation estimation in econometric models, in particular the effects of violation of the classical least squares assumptions and the development of multiple equation estimation procedures; the identification problem in multiple equation systems; the application of econometric techniques to applied problems.

A text-book will be recommended from:

Johnston, J., *Econometric methods* (McGraw-Hill, International Student Edition).

Kmenta, J., *Elements of econometrics* (Macmillan).

Koutsoyiannis, A., *Theory of econometrics* (Macmillan).

Reference books:

Bridge, J. L., *Applied econometrics* (North Holland).

Christ, C., *Econometric models and methods* (Wiley).

Murphy, J., *Introductory econometrics* (Irwin).

Theil, H., *Principles of econometrics* (Wiley).

Walters, A. A., *An introduction to econometrics* (Macmillan).

Wonnacott, R. J., and T. H., *Econometrics* (Wiley, International Edition).

EE68 Economic Theory.

Students may enrol for this subject only with the permission of the Chairman of the Department of Economics.

The course comprises two lectures a week. The purpose of the course is to introduce students to more advanced theory. Wide reading is not expected, instead intensive study is made of a few selected books and articles. Areas for study include, welfare economics, theory of international trade, value theory.

HONOURS DEGREES.

EE99 Economics for the Honours degrees of B.A. and B.Ec.

Detailed arrangements for classes will depend on enrolments, and students are advised to communicate with the Dean of the Faculty of Economics well before the beginning of the academic year. Students will be admitted to honours classes only with the approval of the Dean. The honours work falls into two divisions. Interim honours classes are conducted for students in the third year and final honours classes in the fourth year.

INTERIM HONOURS:

Interim honours students will take the course in Economic Theory.

FINAL HONOURS:

(i) Final honours students are required to undertake a research project and present a thesis of approximately 10,000 words. An absolute upper limit of 15,000 words will apply and theses in excess of this will be returned to be reduced to this length. The thesis will form part of the final honours examination. Students must have the subject of their theses approved by the Dean of the Faculty and be allotted to supervisors before the end of the academic year preceding their final honours year. Students must commence work on their projects during the long vacation preceding their final honours year and must report to their supervisors not later than during the first week of February. They will be required to keep in touch with their supervisors during the term. A complete draft of the thesis is to be submitted to the supervisor for comment no later than the last day of first term and a final draft must be ready for typing at the end of the second week of the first vacation. Four copies of the thesis typed double spaced on A4 paper must be presented not later than the first day of the second term. Students will be required to submit themselves to an oral examination on their theses during the second term.

(ii) Each student will select two options from the following list. Classes and tutorials in these subjects will be arranged to take place in second and third terms.

Accounting Theory	Econometrics
Money	Economics of the Firm
Capital and Growth	International Trade
Business Statistics	Development

(iii) Seminars in Applied Economics will be held throughout the year.

(iv) The examination will consist of:

(a) The thesis.

(b) Two papers in Applied Economics.

(c) One paper in each of the two optional subjects.

ADDITIONAL SUBJECTS.

The Department also provides the following subjects for other faculties.

EE71 Social Economics I for the degree of B.A.

EE43 Economics of Natural Resource Use for the degree of B.Ag.Sc.

EE53 Farm Management for the degree of B.Ag.Sc.

EE63 Farm Prices and Policy for the degree of B.Ag.Sc.

COMMERCE.

EC01 Elements of Accounting I.

No pre-requisite subjects.

The course comprises two lectures and one tutorial class each week throughout the academic year. Students are required to submit written assignments (approximately one a fortnight) at tutorials. Permission to sit for the final examination will not be granted unless a satisfactory standard is attained in assignments.

A self contained course designed to provide future economists with an understanding of the strengths and limitations of accounting, and to serve as an introduction to the study of accounting for future accountants. Topics include the accounting process; introduction to the theory of valuation and income measurement; consolidations; sources and uses of funds; function of the auditor; information for external parties; alternative valuation and income measurement systems.

Preliminary reading (optional):

Anthony, R. N., *Essentials of accounting* (Addison-Wesley).

Text-books:

Anthony, R. N., *Essentials of accounting* (Addison-Wesley).

Gordon, M. J., and Shillinglaw, G., *Accounting: a management approach*, 5th edition (Irwin).

Colditz, B. T., and Gibbins, R. W. (eds.), *Accounting perspectives* (McGraw-Hill).

Reference books:

Mathews, R. L., *The accounting framework* (Cheshire).

Carrington, A. S., and Battersby, G. B., *Accounting: Concepts systems applications*, Australian edition (Whitcombe and Tombs).

EC02 Management Accounting II.

Pre-requisite subjects: EC01 Elements of Accounting I, EE01 Economics I *or* EE2G Microeconomics IH.

(Except with the permission of the Chairman of the Department of Commerce EE22 Economic Statistics II *or* EE32 Economic Statistics IIA, if not previously passed, should be taken concurrently.)

The course consists of two lectures plus one tutorial each week. Day lectures are given in odd years, evening lectures in even years. Day tutorials are given every year, but evening tutorials in even years only.

A general course in management accounting which serves two purposes: it seeks to teach future managers what they need to know about accounting and finance, whilst at the same time teaching future accountants what might be expected of them by managers. The course is broadly divided into four sections covering elements of organisation theory, an introduction to cost accounting, accounting information for tactical decisions and business finance.

Text-books:

Horngren, C. T., *Cost accounting: a managerial emphasis*, 3rd edition (Prentice-Hall).

Peirson, C. G., and Bird, R. G., *Business finance* (McGraw-Hill).

Reference books:

Ackoff, R. L., *A concept of corporate planning* (Wiley).

Argenti, J., *Corporate planning: a practical guide* (Allen and Unwin).

Battersby, A., *Network analysis for planning and scheduling* (Macmillan).

Bierman, H., and Dyckman, T. R., *Managerial cost accounting* (Collier-Macmillan).

Bierman, H., and Smidt, S., *The capital budgeting decision* (Macmillan).

Dopuch, N., and Birnberg, J. G., *Cost accounting: accounting data for management's decisions* (Harcourt, Brace and World).

Drucker, P. F., *The practice of management* (Mercury or Pan).
Hirst, R. R., and Wallace, R. H. (eds.), *Studies in the Australian capital market* (Cheshire).
Hummel, P. M., and Seebeck, C. L., *Mathematics of finance* (McGraw-Hill) (or any standard financial mathematics text).
Mathews, R. L., *The accounting framework* (Cheshire).
Richards, M. D., and Nielander, W. A. (eds.), *Readings in management* (South-Western).
Shillinglaw, G., *Cost accounting, analysis and control* (Irwin).
Simon, H. A., *Administrative behaviour* (Free Press).
Solomons, D. (ed.), *Studies in cost analysis*, 2nd edition (Sweet and Maxwell).
Van Horne, J. C., *Financial management and policy*, 2nd edition (Prentice-Hall).
Weston, J. F., and Brigham, E. F., *Managerial finance*, 4th edition (Holt, Rinehart and Winston).

EC13 Commercial Law II.

Not normally available to students before completion of the first full-time year or its equivalent.

The course comprises two lectures a week and a tutorial class each fortnight.

An introduction to the legal system and legal concepts as used in Australia, including an examination of sources of law in Australia (the system of courts and the legislative authorities) and the rules of statutory interpretation. Lectures on these topics will not be extensive. It will be assumed that students have covered this work in preliminary reading.

A statement of the general principles of the law of contract with analysis of the rules relating to the formation of contract with analysis of the rules relating to the formation of contract, the consent of the parties, mistake misrepresentation, illegality, privity of contract, terms of contracts, form of contracts, capacity to contract, termination of contracts, and contractual remedies with some brief examination of legislation in South Australia, and its influence on the law of contract.

The law of agency including an examination of the topics of an agent's authority, the relationship of a principal and his agent with third parties and in particular in so far as it affects the contractual situation of the principal and a third party, the position at law of the unauthorised agent including a discussion of the doctrine of ratification, and the relationship which exists between a principal and his agent.

The law of partnership, with discussion of the character and the elements of the partnership relationship, an examination of the rules relating the ascertainment of the existence of a partnership, the formation of a partnership relationship, the relation of partners to third parties who deal with the partnership, the relation between partners and the dissolution of partnership.

The law relating to companies with discussion of the following topics: the nature of and types and classifications of companies, incorporation promoters, preliminary agreements, flotations, prospectuses, company contracts, ultra vires, the organic theory, capital structure, maintenance of capital, dividends, the rights and duties of shareholders, the rights and duties of directors, variations of class rights, shares, fraud on and oppression of minority shareholders, and recent Company legislation.

The following South Australian statutes, which may be taken into examinations, should be acquired:

Partnership Act, 1891-1935.
Companies Act, 1962-72.
Business Names Act, 1963.
Misrepresentation Act, 1971-1972.
Sale of Goods Act, 1895-1971.
Consumer Credit Act, 1972.
Consumer Transactions Act, 1972.
And other statutes prescribed.

Preliminary reading books:

Vermeesch, R. B., and Lindgren, K. E., *Business law of Australia*, 2nd edition (Butterworth). (First three chapters.)

Reference books:

Atiyah, P. S., *An introduction to the law of contract*, 2nd edition (O.U.P.).
Bowstead, W., *A digest of the law of agency*, 13th edition (Sweet and Maxwell).
Cheshire, G. C., and Fifoot, C. H. S., *The law of contract*, 3rd Australian edition (Butterworth).
Ford, H. A. J., *Principles of company law* (Butterworth).
Fridman, G. H. L., *The law of agency*, 2nd edition (Butterworth).
Gower, L. C. B., *Principles of modern company law*, 3rd edition (Stevens).
Gower, L. C. B., *Principles of modern company law*, 2nd Australian supplement, by R. Baxt (Law Book Co.).
Higgins, P. F. B., *Law of partnership in Australia and New Zealand* (Law Book Co.).
Powell, *The law of agency*, 2nd edition (Pitman).
Underhill, A., *Principles of the law of partnership*, 8th edition (Butterworth).
Vermeesch, R. B., and Lindgren, K. E., *Business law of Australia*, 3rd edition (Butterworth).
Yorston, R. K., and Brown, S. R., *Company law*, 3rd edition (Law Book Co.).

EC23 Industrial Sociology III.

Not normally available to students before completion of the first full-time year or its equivalent.

The course comprises two lectures and one tutorial class each week throughout the academic year. Students are required to prepare exercises and essays and permission to sit for the final examination will not be granted unless a satisfactory standard in them has been reached.

This subject is offered as a day-time course in even years, and as an evening course in odd years.

Interpersonal behaviour: interactions, activities, sentiments, transactions. Membership and structure of groups, workgroup and intergroup behaviour, leadership, supervision, motivation, worker satisfaction and morale, productivity. Organisational change, management succession. Technology and organisation structure, socio-technical systems. Selected research studies in organisational behaviour, detailed critical analysis of selected theories.

Text-books:

Gibb, C. A.. *Leadership* (Penguin).
Mead, M., *Cultural patterns and technical change* (Mentor).
Vroom, V. H., and Deci, E. L., *Management and motivation* (Penguin).
Whyte, W. F., *Organizational behavior* (Irwin-Dorsey).

Reference books:

Argyle, M., *The psychology of interpersonal behaviour* (Pelican).
Burns, T., *Industrial man* (Penguin).
Homans, G. C., *The human group* (Routledge and Kegan Paul).
Jaques, E., *The changing culture of a factory* (Tavistock).
Katz, D., and Kahn, R. L., *The social psychology of organizations* (Wiley).
Landsberger, H. A., *Hawthorne revisited* (Cornell U.P.).
Likert, R., *The human organisation* (McGraw-Hill).
Mann, F. C., and Hoffman, L. R., *Automation and the worker* (Holt).
Roethlisberger, F. J., and Dickson, W. J., *Management and the worker* (Wiley).
Sayles, L., *Behaviour of industrial work groups* (Wiley).

Shepherd, C. R., *Small groups: some sociological perspectives* (Chandler Publishing Co., San Francisco).
Walker, C. R., and Guest, R. H., *The man on the assembly line* (Harvard U.P.).
Walker, C. R., and Turner, A. N., *The foreman on the assembly line* (Harvard U.P.).
Warner, W. L., and Low, J. C., *The social system of the modern factory* (Yale U.P.).
Woodward, J., *Industrial organization: theory and practice* (O.U.P.).

THIRD-YEAR HALF-SUBJECTS.

EC1H Accounting Theory IIIH.

Pre-requisite subject: EC02 Management Accounting II.

The course comprises one lecture a week and one tutorial a fortnight. Day lectures are given in even years, evening lectures in odd years. Day tutorials are given every year, but evening tutorials in odd years only.

Methodology, income measurement and the effect of price changes; current problems in financial accounting; consolidations; auditing; valuation of assets, shares and enterprises.

Preliminary reading:

Chambers, R. J., *Securities and obscurities* (Gower).
McDonald, D. L., *Comparative accounting theory* (Addison-Wesley).

Text-books:

Hendriksen, E. S., *Accounting theory*, revised edition (Irwin).
Kenley, W. J., and Staubus, G. J., *Objectives and concepts of financial statements* (Accountancy Research Foundation).

Reference books:

American Accounting Association, *A statement of basic accounting theory* (The Association).
American Institute of Certified Public Accountants, *Accounting research studies.*
Baxter, W. T., *Depreciation* (Sweet and Maxwell).
Baxter, W. T., and Davidson, S. (eds.), *Studies in accounting theory* (Irwin).
Bedford, N. M., *Income determination theory: an accounting framework* (Addison-Wesley).
Bennett, J. W., and others, *Topics in business finance and accounting* (Cheshire).
Boutell, W. S., *Computer-oriented business systems* (Prentice-Hall).
Chambers, R. J., *Accounting, evaluation and economic behaviour* (Prentice-Hall).
Chambers, R. J., *Accounting, finance and management* (Butterworths).
Cyert, R. M., and Davidson, H. J., *Statistical sampling for accounting information* (Prentice-Hall).
Davidson, S., and others (eds.), *An income approach to accounting theory* (Prentice-Hall).
Edwards, E. O., and Bell, P. W., *The theory and measurement of business income* (University of California Press).
Lee, L. N., and McPherson, L. A., *Consolidated statements and group accounts* (Law Book Co.).
Mautz, R. K., *Fundamentals of auditing*, 2nd edition (Wiley).
Parker, R. H., and Harcourt, G. C. (eds.), *Readings in the concept and measurement of income* (C.U.P.).
Revsine, L., *Replacement cost accounting* (Prentice-Hall).
Sterling, R. R. (ed.), *Asset valuation and income determination* (Scholars Book Co.).
Zeff, S. A., and Keller, T. F. (eds.), *Financial accounting theory*, 2nd edition (McGraw-Hill).

EC2H Introduction to Operations Research IIIH.

Pre-requisite subject: Except with the permission of the Chairman of the Department of Commerce, EE32 Economic Statistics IIA.

The course consists of one, one and one-half hour lecture/tutorial period a week throughout the year.

Linear and non-linear programming; statistical inference and forecasting; simulation and model building; inventory control decision making under certainty and uncertainty.

Text-books:

Taha, H. A., *Operations research* (Macmillan).

Reference books:

Hamming, R. W., *Introduction to applied numerical analysis* (McGraw-Hill).

Schlaifer, R., *Probability and statistics for business decisions* (McGraw-Hill).

Starr, M. K., *Systems management of operations* (Prentice-Hall).

EC3H Information Systems and Data Processing IIIH.

Pre-requisite subjects: Except with the permission of the Chairman of the Department of Commerce, EE22 Economic Statistics II or EE32 Economic Statistics IIA.

The course consists of one, one and one-half hour lecture/tutorial period a week, throughout the year.

The course introduces programming languages including BASIC and COBOL and provides a integrated coverage of the techniques of systems analysis and design, the design of related computer systems and computer programmes and the study of illustrative systems, including, for example, special purpose on-line enquiry systems, production and inventory control systems and packaged systems. The course languages are BASIC and COBOL.

Text-book:

National Computing Centre, *Basic training in systems analysis*, A. Daniels and D. Yeates (eds.) (Pitman).

Reference books:

Appropriate programming manuals for computers available to the University. Course languages are BASIC (or FORTRAN) and COBOL.

Clifton, H. D., *Systems analysis for business data processing* (Business Books).

Glans, T. B., Grad. B., and others (eds.), *Management systems* (Holt, Rinehart and Winston).

Kanter, J., *Management guide to computer system selection and use* (Prentice-Hall).

EC4H Business Finance IIIH.

Pre-requisite subjects: EC02 Management Accounting II, EE22 Economic Statistics II or EE32 Economic Statistics IIA.

The course comprises one lecture a week and one tutorial a fortnight.

Topics include advanced study of the cost of capital; pure theory of finance; security evaluation and portfolio analysis; financial aspects of mergers and takeovers.

Preliminary reading:

Peirson, C. G., and Bird, R. G., *Business finance* (McGraw-Hill).

Text-book:

Philippatos, G. C., *Financial management: theory and techniques* (Holden-Day).

Reference books:

Archer, S. H., and D'Ambrosis, C. A. (eds.), *The theory of business finance:a book of readings* (Macmillan).

Elton, E. J., and Gruber, M. J. (eds.), *Security evaluation and portfolio analysis* (Prentice-Hall).

Lorie, J. H., and Hamilton, M. T., *The stock market: theories and evidence* (Irwin).
Van Horne, J. C., *Financial management and policy* (Prentice-Hall).
Weston, J. F., and Brigham, E. F., *Managerial finance* (Holt, Rinehart and Winston).

EC5H Marketing IIIH.

Pre-requisite subjects: EE22 Economic Statistics II or EE32 Economic Statistics IIA.

The course comprises one lecture a week and one tutorial class every second week. Practical exercises will be required.

Marketing tasks, the broadened concept of marketing; consumer behaviour; research marketing, multivariate data analysis, marketing experimentation; distribution channels, physical distribution; marketing-mix; organisation, planning, marketing information system, control.

Text-books:

Kotler, P., *Marketing management: analysis, planning, and control*, 3rd edition (Prentice-Hall, paperback).
Boyd, H. W., and Westfall, R., *Marketing research: text and cases*, 3rd edition (Irwin).

Reference books:

Aaker, D. (ed.), *Multivariate analysis in marketing: theory and application* (Wadsworth).
Bowersox, D. J., and others, *Physical distribution management: logistic problems of the firm.*
Brion, J. M., *Corporate marketing planning* (Wiley).
Gist, R. R., *Basic retailing—text and cases* (Wiley).
Hansen, F., *Consumer choice behavior* (Free Press).
Kleegan, W. J., *Multinational marketing management* (Prentice-Hall).
Kotler, P., and Cox, K., *Readings in marketing management* (Prentice-Hall).
Webster, F., and Wind, Y., *Organisational buying behaviour* (Prentice-Hall).

EC6H Management Information Systems IIIH.

Pre-requisite subject: Except with the permission of the Chairman of the Department of Commerce, EC02 Management Accounting II.

The course consists of one lecture a week and one tutorial class every second week throughout the year.

Management as a feedback process involving information and decisions; the systems approach to providing information for management control and decision making; the techniques of systems analysis and design; management information systems, with particular emphasis on computerised systems, in business and government; computer programming and programs as a significantly different element in the management environment; the effects of available computer technology on the level and effectiveness of systems implementation; the effects of computer systems upon organisational structure and operation; the management of information systems, control, security, privacy and audit; information systems and society.

Text-book:

Murdick, R. G., and Ross, J. E., *Information systems for modern management* (Prentice-Hall).

Reference books:

Coleman, R. J., and Riley, M. J., *MIS: Management dimensions* (Holden-Day).
Radford, K. J., *Information systems in management* (Reston Publishing).
Sanders, R. H., *Computers and management* (McGraw-Hill).

OF THE

DIPLOMA IN BUSINESS MANAGEMENT

REGULATIONS

1. There shall be a postgraduate Diploma in Business Management.

†2. (a) The Faculty of Economics may accept as a candidate for the diploma a person who is qualified for admission to a degree of the University of Adelaide (or of another university recognised for the purpose by the University of Adelaide).

(b) Subject to the approval of the Council the Faculty may, in special cases and subject to such conditions (if any) as it may see fit to impose in each case, accept as a candidate for the diploma a person who does not hold a degree of a university but has given evidence satisfactory to the Faculty of his fitness to undertake work for the diploma.

(c) A candidate shall have had at least two years' experience in business, public service or other field of employment approved by the Faculty of Economics before commencing Part II of the course.

3. The maximum number of candidates which may be enrolled in any subject shall be determined from time to time by the Council on the recommendation of the Faculty of Economics; and courses will not be provided unless a sufficient number of students has enrolled.

4. To qualify for the diploma a candidate shall attend classes and pass the examinations in courses as prescribed in the schedules.

5. If in the opinion of the Faculty of Economics a candidate for the diploma is not making satisfactory progress the Faculty may with the consent of the Council withdraw its approval of his candidature and the candidate shall cease to be enrolled for the diploma.

6. A candidate shall not be permitted to present himself for examination, unless he has regularly attended the prescribed classes and has completed satisfactorily such written and practical work as may be required.

7. Schedules defining the courses of study for the diploma, the examinations to be passed and the fees to be paid by candidates shall be drawn up from time to time by the Faculty of Economics and approved by the Council.

† Amendment awaiting allowance at time of printing.

8. A candidate who complies with the foregoing conditions and satisfies the examiners shall on written application be awarded the diploma.

9. These regulations shall come into force at a date to be determined by the Council.

Regulations allowed 28 February, 1974.

SCHEDULES

(Made by the Council under Regulation 7.)

NOTE: Syllabuses of subjects which may be taken only for the Diploma in Business Management or for the degree of M.B.M. are published below immediately after the regulations and schedules of the diploma. Syllabuses of subjects which may be taken also for the degree of B.Ec. are published immediately after the regulations and schedules of that degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I: COURSES OF STUDY

1. The courses of study for the Diploma in Business Management shall comprise:

Part I:

Macroeconomics IH;
Microeconomics IH;
Mathematics (Economics) I *or* Mathematics I;
Economic Statistics IIA *or* Mathematical Statistics II;
Accounting (Business Management);
Industrial Sociology III.

Part II:

Economic Institutions and Policy;
Organisation Theory and Behaviour;
Economic and Accounting Analysis;
Business Statistics;
Decision Making.

2. A candidate shall complete the required course-work subjects and pass examinations in them, as follows:

Part I: At such standard as the Faculty may require;

Part II: At a standard, over the whole of Part II, at least equivalent to that required for Second Class Honours.

Provided that the Faculty may grant any candidate such status in any subject as it may determine.

3. Subject to the following exceptions a candidate shall complete the subjects in Part I before proceeding with any of the subjects in Part II:

(a) The Head of the Department of Commerce may permit a candidate to proceed with a Part II subject before he has completed all the subjects of Part I;

(b) The Faculty of Economics may allow a candidate who has completed all but one of the subjects in Part I to proceed to Part II and to take the Part I subject concurrently with his Part II studies.

4. The Faculty of Economics may review the academic performance of any candidate on his completion of Part I, and a candidate whose performance in Part I is deemed by the Faculty to be unsatisfactory shall not be permitted to proceed to Part II.*

5. Except with the specific advance approval of the Faculty in each case, a candidate for the degree by part-time study shall complete the subjects of Part II in two years; provided that in the case of a candidate proceeding under one of the provisos in clause 3 the year in which he is completing Part I shall not be counted. If the Faculty permit a longer time it may impose such conditions as it sees fit.

6. A candidate's programme of study must be approved by the Head of the Department of Commerce (or his nominee) at enrolment each year.

7. Each candidate will be required to undertake during University vacations such studies as may be prescribed.

* NOTE (not forming part of the schedules): Normally Part I subjects must be passed at first attempt with credits in at least two subjects.

OF THE

DIPLOMA IN BUSINESS MANAGEMENT

AND OF THE DEGREE OF

MASTER OF BUSINESS MANAGEMENT
(COURSE WORK)

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Economics: E.

The second letter identifies the Department of Commerce: C.

The first digit identifies each of the subjects which may be taken only for the Diploma in Business Management or the degree of Master of Business Management.

The second digit 0 indicates that it is a subject which may be taken only for the Diploma in Business Management or the degree of Master of Business Management.

For details of other subjects listed in the schedules of the Diploma in Business Management or the degree of Master of Business Management see the syllabuses for the degree of Bachelor of Economics.

EC00 Accounting (Business Management).

The course is offered annually for students proceeding to the degree of Master of Business Management and for such other students as the Professor of Commerce may approve. EE01 Economics I *or* EE1G Macroeconomics IH and EE2G Microeconomics IH, if not already passed, must be taken concurrently.

Students take the full course EC02 Management Accounting, and in addition one lecture a week during first and second terms. Written assignments will be set throughout the course.

Syllabus: As for EC02 Management Accounting, and in addition:

The double-entry framework and the recording of business transactions; preparation of accounting reports; analysis and interpretation of accounting reports, limitations of accounting data.

Text-books:

As listed under EC02 Management Accounting and in addition:

Anthony, R. N., *Essentials of accounting* (Addison Wesley).

Reference books:

As listed under EC02 Management Accounting and in addition:

Gordon, M. J., and Shillinglaw, G., *Accounting, a management approach*, 4th edition (Irwin).

EC30 Economic Institutions and Policy.

The structure of the Australian economy—the structure of agricultural, industrial, labour and capital markets. Economic policy objectives, and weapons of economic policy—monetary, fiscal, wages and trade. The development and operation of Australian economic institutions.

Preliminary reading:

Coombs, H. C., *The fragile pattern* (Australian Broadcasting Commission).

Text-books:

Australia. Census and Statistics, Bureau of, *Official yearbook of the Commonwealth of Australia* (Government Printer, Canberra).

Cameron, B., *Australia's economic policies* (Cheshire).

Reference books:

Arndt, H. W., and Corden, M. (eds.), *The Australian economy* (Cheshire).

Australia. Economic Enquiry, Committee of, *Report of the Committee of Economic Enquiry* (Vernon Report) (Government Printer, Canberra).

Downing, R. I. (ed.), *The Australian economy* (Weidenfeld and Nicolson).

Downing, R. I., and others, *Taxation in Australia: agenda for reform* (M.U.P.).

Hunter, A. (ed.), *The economics of Australian industry* (M.U.P.).

Isaac, J. E., *Wages and productivity* (Cheshire).

Karmel, P. H., and Brunt, M., *The structure of the Australian economy* (Cheshire).

Williams, D. B., *Economic and technical problems of Australia's rural industries* (M.U.P.).

EC50 Economic and Accounting Analysis.

Economic and accounting analysis at the management level with particular emphasis on microeconomics and the internal policies of the firm. Topics include industrial organisation, demand, cost, pricing, and portfolio analysis. The course incorporates both lectures and case discussion.

Reference books:

Brigham, E. F., and Pappas, J. L., *Managerial economics* (Dryden).

Haynes, W. W., *Managerial economics* (Dorsey).

Lorie, J. H., and Hamilton, M. T., *The stock market: theories and evidence* (Irwin).

Needham, D., *Economic analysis and industrial structure* (Holt, Rinehart and Winston).

Scherer, F. M., *Industrial market structure and economic performance* (Rand McNally).

EC60 Business Statistics.

A knowledge of EE41 Mathematics (Economics) I and EE32 Economic Statistics IIA is assumed in this course. The ability to write effective programs in BASIC or FORTRAN will be assumed.

Analysis of probabilistic processes, decision-making under uncertainty, mathematical programming. Analysis of production and marketing situations.

Text-books:

Taha, H. A., *Operations research* (Macmillan).

Reference books:

Hadley, G., and Whitin, T. M., *Analysis of inventory systems* (Prentice-Hall).

Hamming, R. W., *Introduction to applied numerical analysis* (McGraw-Hill).

Livingstone, J. L. (ed.), *Management planning and control: mathematical models* (McGraw-Hill).

Moore, P. G., and Hodges, S. D. (eds.), *Programming for optimal decisions* (Penguin).

Schlaifer, R. O., *Analysis of decisions under uncertainty*, 2nd edition (McGraw-Hill).

Schlaifer, R. O., *Probability and statistics for business decisions* (McGraw-Hill).

Starr, M. K., *Systems management of operations* (Prentice-Hall).

Whittle, P., *Optimisation under constraints* (Wiley-Interscience).

EC70 Decision-Making.

Cases in financial management and in business policy and pricing.

Text-books:

Craig, H. F., *Australian case studies and readings in business administration*, 3rd edition (Law Book Co.).

Hunt, P., and others, *Basic business finance, text and cases*, 4th edition (Irwin).

Learned, E. P., and others, *Business policy: text and cases*, revised edition (Irwin).

EC80 Organisation Theory and Behaviour.

A knowledge of EC23 Industrial Sociology III is assumed in this course.

Theory of organisations. Design of organisation structure. Organisational change and development. Some topics in industrial relations.

Text-books:

Dalton, G. W., and others, *Organisational change and development* (Irwin-Dorsey).

Dalton, G. W., and others, *Organisational structure and design* (Irwin-Dorsey).

Perrow, C., *Organisational analysis* (Tavistock).

Price, J. L., *Organisational effectiveness: An inventory of propositions* (Irwin-Dorsey).

Thompson, J. D., *Organizations in action* (McGraw-Hill).

Reference books:

Ghorpade, J., *Assessment of organisational effectiveness* (Goodyear).

Lawrence, P. R., and Lorsch, J. W., *Organisation and environment* (Irwin).

Miller, E. J., and Rice, A. K., *Systems of organisation* (Tavistock).

Sexton, W. P., *Organisation theories* (Merrill).

OF THE DEGREE OF

MASTER OF BUSINESS MANAGEMENT

REGULATIONS

1. There shall be a degree of Master of Business Management.

†2. (a) The Faculty of Economics may accept as a candidate for the degree a graduate of the University of Adelaide or of another university recognised for the purpose by the University of Adelaide.

(b) Subject to the approval of the Council the Faculty may, in special cases and subject to such conditions (if any) as it may see fit to impose in each case, accept as a candidate for the degree a person who does not hold a degree of a university but has given evidence satisfactory to the Faculty of his fitness to undertake work for the degree.

(c) A candidate shall have had at least two years' experience in business, public service or other field of employment approved by the Faculty of Economics before commencing Part II of the course.

3. The maximum number of candidates which may be enrolled in any course for the degree shall be determined from time to time by the Council on the recommendation of the Faculty of Economics; and courses will not be provided unless a sufficient number of students has enrolled.

‡4. To qualify for the degree a candidate shall:

†(a) attend classes and pass examinations in courses as prescribed in the schedules; and

**(b) subsequently, as prescribed in the schedules, present a satisfactory dissertation of masterate standard on a subject approved by the Faculty of Economics.

5. If in the opinion of the Faculty of Economics a candidate for the degree is not making satisfactory progress the Faculty may with the consent of the Council withdraw its approval of his candidature and the candidate shall cease to be enrolled for the degree.

6. A candidate shall not be permitted to present himself for examination, unless he has regularly attended the prescribed classes and has completed satisfactorily such written and practical work as may be required.

‡ Amended 12 December, 1963. ** Amended 22 December, 1966.
† Amended 28 February, 1974.

7. The Faculty of Economics shall appoint a Board of Examiners to conduct the examinations required under regulation 4.

**8. On completion of his work the candidate shall lodge with the Registrar three copies of his dissertation prepared in accordance with directions given to candidates from time to time.*

‡9. Schedules defining the courses of study for the degree, the examinations to be passed and the fees to be paid by candidates shall be drawn up from time to time by the Faculty of Economics and approved by the Council.

†10. A candidate who holds the Diploma in Business Management shall surrender his diploma before being admitted to the degree.

11. A candidate who complies with the foregoing conditions and satisfies the examiners shall, on the recommendation of the Faculty of Economics, be admitted to the degree.

12. These regulations shall come into force at a date to be determined by the Council.††

Regulations allowed 16 March, 1961.

†† The Council authorised the regulations to come into force on 1 January 1962.
** Amended 22 December, 1966. ‡ Amended 12 December, 1963.
† Allowed 28 February, 1974.
* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

SCHEDULES

(Made by the Council under Regulations 4 and 9.)

NOTE: Syllabuses of subjects for the degree of M.B.M. (Course Work) are published above, immediately after the regulations and schedules of the Diploma in Business Management. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I: COURSES OF STUDY

1. The courses of study for the degree of M.B.M. shall comprise:

(a) Course-work subjects as follows:

Part I:
Macroeconomics IH;
Microeconomics IH;
Mathematics (Economics) I *or* Mathematics I;
Economic Statistics IIA *or* Mathematical Statistics II;
Accounting (Business Management);
Industrial Sociology III.

Part II:
Economic Institutions and Policy;*
Organisation Theory and Behaviour;
Economic and Accounting Analysis;
Business Statistics;
Decision Making.

(b) A dissertation, satisfactory to the examiners, on a subject approved by the Faculty of Economics.

2. A candidate shall complete the prescribed course-work subjects and pass examinations in them, as follows:

Part I: At such standard as the Faculty may require;

Part II: At a standard, over the whole of Part II, at least equivalent to that required for Second Class Honours:

Provided that the Faculty may grant any candidate such status in any subject as it may determine.

3. Subject to the following exceptions a candidate shall complete the subjects in Part I before proceeding with any of the subjects in Part II:

(a) The Head of the Department of Commerce may permit a candidate to proceed with a Part II subject before he has completed all the subjects of Part I;

(b) the Faculty of Economics may allow a candidate who has completed all but one of the subjects in Part I to proceed to Part II and to take the Part I subject concurrently with his Part II studies.

4. The Faculty of Economics may review the academic performance of any candidate on his completion of Part I, and a candidate whose performance in Part I is deemed by the Faculty to be unsatisfactory shall not be permitted to proceed to Part II.

5. Except with the specific advance approval of the Faculty in each case, a candidate for the degree by part-time study shall complete the subjects of Part II in two years; provided that in the case of a candidate proceeding under one of the provisos in clause 3 the year in which he is completing Part I shall not be counted. If the Faculty permit a longer time it may impose such conditions as it sees fit.

6. A candidate's programme of study must be approved by the Head of the Department of Commerce (or his nominee) at enrolment each year.

7. Each candidate will be required to undertake during university vacations such studies as may be prescribed.

* It is the intention of the Faculty that a graduate who holds the Honours degree of Bachelor of Economics shall be given status in this subject.

8. A candidate shall submit for approval by the Faculty the subject on which he proposes to write his dissertation; and he shall submit the dissertation within two calendar years, but not earlier than six months, from the date of approval of the subject by the Faculty or from the date of passing the examinations in the course-work subjects, whichever is the later.

NOTES (not forming part of the schedules):

1. Normally Part I subjects must be passed at the first attempt with credits in at least two subjects.
2. Candidates who pass the examinations in all subjects prescribed in clause 1(a) of the schedules are advised to read the regulations of the Diploma in Business Management.

SYLLABUSES

The syllabuses of the subjects for the pre-dissertation course work for the degree of Master of Business Management are published above, immediately after the regulations and schedules of the Diploma in Business Management.

OF THE DEGREE OF

MASTER OF ECONOMICS

REGULATIONS

1. (a) The Faculty of Economics may accept as a candidate for the degree any graduate who:

(i) has obtained the Honours degree of Bachelor of Economics of the University of Adelaide with First or Second-Class Honours; or

(ii) has obtained an Honours degree of another university, which degree the Faculty regards as being equivalent to a First- or Second-Class Honours degree in Economics of the University of Adelaide.

(b) The Faculty of Economics may accept provisionally as candidates for the degree other graduates of the University of Adelaide or of other universities whose qualifications satisfy the Faculty that they are likely to be able satisfactorily to undertake the work for the degree.

(c) A provisionally-accepted candidate shall, within such time as the Faculty shall in each case prescribe or allow, undertake an approved course of advanced study and pass an examination at First or Second-Class Honours standard before his acceptance as a candidate will be confirmed. Failure to pass the qualifying examination at the required standard at the first attempt shall, unless the Faculty decides otherwise, cancel the provisional acceptance.

(d) A candidate shall not be admitted to the degree before the expiration of one year from his admission to the Honours degree specified in section (a) (i) above, or to the degree which the Faculty accepts as equivalent thereto under section (a) (ii) above, or before the expiration of two academic years from his admission to the degree accepted by the Faculty under section (b) above.

(e) Subject to the approval of the Council the Faculty may, in special cases and subject to such conditions (if any) as it may see fit to impose in each case, accept as a candidate for the degree a person who, irrespective of whether or not he is a university graduate, has given evidence satisfactory to the Faculty of his fitness to undertake work for the degree.

2. A candidate may qualify for the degree by *either*:

(a) satisfactorily completing an approved programme of research work on an approved topic and submitting a satisfactory thesis thereon; *or*

(b) (i) passing an examination set after completion of an approved course of postgraduate study; and

(ii) satisfactorily completing an approved programme of research work on an approved topic and submitting a satisfactory dissertation thereon.

3. (a) A person who wishes to become a candidate for the degree shall apply to the Academic Registrar indicating in general terms the subject of any research work to be undertaken, and where applicable, his proposed course of study for examination.

(b) If it accepts him, provisionally or otherwise, as a candidate for the degree, the Faculty may appoint a supervisor to guide him in his work.

4. A candidate's progress shall be reviewed by the Faculty at the end of each academic year. If, in the opinion of the Faculty of Economics, a candidate is not making satisfactory progress the Faculty may, with the consent of the Council, withdraw its approval of his candidature and the candidate shall cease to be enrolled for the degree.

5. On completion of his work, the candidate shall lodge with the Registrar three copies of his thesis or dissertation prepared in accordance with directions given to candidates from time to time.*

6. The Faculty shall appoint examiners to report upon the thesis or dissertation. The examiners shall report to the Faculty and may recommend (i) that the degree be awarded; or (ii) that the thesis or dissertation be returned to the candidate for revision and resubmission; or (iii) that the degree be not awarded.

7. A candidate who complies with all the foregoing conditions and satisfies the examiners of his thesis or dissertation may, on the recommendation of the Faculty of Economics, be admitted to the degree.

8. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 22 December, 1966.

* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

FACULTY OF ENGINEERING

REGULATIONS, SCHEDULES AND SYLLABUSES OF DEGREES

Bachelor of Engineering (B.E.)

Regulations and Schedules - - - - - - 794
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Chemical Engineering - - - - - - 808
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Master of Engineering (M.E.)

Regulations - - - - - - - - - 842

Master of Engineering Science (M.Eng.Sc.)

Regulations and Schedules - - - - - - 845

Master of Applied Science (M.App.Sc.)

Regulations - - - - - - - - - 851

Doctor of Philosophy (Ph.D.)

Regulations and Schedules: under "Board of Research Studies"—*see* Table of Contents.

OF THE DEGREE OF

BACHELOR OF ENGINEERING

REGULATIONS

1. There shall be an Ordinary and an Honours degree of Bachelor of Engineering.

2. Schedules defining the courses of study, including lectures, laboratory and other practical work to be undertaken, the examinations to be passed and the fees to be paid by candidates, shall be drawn up by the Faculty of Engineering and be submitted to the Council.

Such schedules shall become effective as from the date of approval by the Council or such other date as the Council may determine, and shall be published in the next University Calendar which is issued after that approval has been given.

†3. Except by permission of the Faculty a candidate shall not be admitted to the class in any subject for which he has not completed the pre-requisite work prescribed in the syllabus for that subject.

The Ordinary Degree.

‡4. (a) To qualify for the Ordinary degree a candidate shall regularly attend lectures and do written, laboratory, and other practical work (where such is required), and pass examinations in the subjects prescribed for one of the following Engineering courses:

(a) Chemical Engineering;
(b) Electrical Engineering;
(c) Mechanical Engineering;
(d) Civil Engineering.

††(b) Before being admitted to the degree a candidate shall also submit satisfactory evidence that he has completed a period of practical experience in work approved by the Faculty of Engineering as appropriate to the course which he has followed.

*5. (a) All annual examinations, other than supplementary, shall take place towards the end of the academic year, except that practical examinations, and examinations in a subject in which the course of instruction has been completed by the end of the second term may be held at any convenient time fixed by the Council.

* Amended 8 December, 1949.
† Allowed 9 January, 1958.
†† Allowed 21 December, 1967.
‡ Amended 8 December, 1949, 15 January, 1959, 4 April, 1963, and 28 January, 1965.

**(b) A candidate shall enter for examination on the form and by the date prescribed by the Council, but shall not be eligible to present himself for examination unless he has regularly attended the prescribed lectures and has done written and laboratory or other practical work, where required, to the satisfaction of the professors and lecturers concerned.

(c) Written and practical work done by candidates by direction of the professors or lecturers, and the results of terminal or other examinations in any subject, may be taken into consideration at the final examination in that subject.

‡(d) There shall be three classifications of pass at an annual examination in any subject or division of a subject for the Ordinary degree, as follows: Pass with Distinction, Pass with Credit, Pass. The names of candidates who pass with Distinction or with Credit shall be arranged in order of merit within the classification; the names of other candidates who pass shall be arranged in alphabetical order either in one list or in two divisions as the Council may, on the recommendation of the Faculty, determine. If the Pass list be published in two divisions, a pass in the higher division may be prescribed in the syllabuses as pre-requisite for admission either to further courses in that subject or to other subjects.

(e) A candidate who fails to pass in any subject shall again attend lectures and do practical work in that subject, to the satisfaction of the professors and lecturers, unless exempted by the Faculty of Engineering. Any such exemption shall hold for one academic year only.

(f) Supplementary examinations will be held only in special circumstances approved by the Faculty after consideration of individual cases.

6. Except in case of illness or other sufficient cause allowed by the Council, no candidate shall be credited in any year with attendance at lectures or laboratory work in a subject unless he has attended at least three-fourths of the lectures and laboratory work respectively in that subject.

7. No candidate shall be granted exemption from attendance at lectures or practical work in any subject, except upon grounds approved by the Council.

8. A candidate who has twice failed to pass the examination in any subject or division of a subject may not present himself again for instruction or examination therein unless his plan of study is approved by the Dean. If he fails a third time he may not proceed with the subject again except by special permission of the Faculty, and under such conditions as the Faculty may prescribe.

For the purpose of this regulation a candidate who is refused permission to sit for examination in any subject or division of a subject shall be deemed to have failed to pass the examination.

** Allowed 20 December, 1956.

‡ Allowed 22 December, 1955.

9. A student who has passed examinations *in pari materia* in another faculty or otherwise, or who desires that his work at other universities or technical schools should be counted *pro tanto* for the degree of Bachelor of Engineering, may on application be granted such exemption from the requirements of these regulations as the Council shall determine.

The Honours Degree.

†10. The Honours degree shall be available in each of the following courses:

(i) Chemical Engineering;

(ii) Electrical Engineering;

(iii) Mechanical Engineering;

(iv) Civil Engineering.

*11. (a) The work for the Honours degree shall be taken concurrently with the professional engineering subjects of the final year of the course for the Ordinary degree as set out in the schedules for that degree.

§(b) No candidate shall proceed to the Honours degree except with the approval of the Head of his Department.

(c) In order to qualify for the Honours degree a candidate must (i) pass in the professional engineering subjects prescribed for the final year of the course for the Ordinary degree at a standard generally higher than that required for the Ordinary degree; (ii) concurrently with the final-year work for the Ordinary degree attend further lectures and pass examinations on work at an advanced level.

‡(d) The names of candidates who pass with Honours shall be arranged alphabetically in the following classes under each Department: First Class, Second Class Division A, Second Class Division B. A candidate who fails to obtain first or second class Honours may be awarded the Ordinary degree provided he has in all other respects completed the work for that degree.

††(e) Before being admitted to the degree a candidate shall also submit satisfactory evidence that he has completed a period of practical experience in work approved by the Faculty of Engineering as appropriate to the course which he has followed.

Regulations allowed 11 December, 1947.

† Allowed 11 November, 1954; amended 4 April, 1963, and 28 January, 1965.

* Allowed 11 November, 1954; amended 28 January, 1965; and 4 November, 1965.

‡ Amended 4 October, 1962.

†† Allowed 9 January, 1958, amended 21 December, 1967.

§ Amended 24 December, 1969.

COURSES AND SCHEDULES

(Prescribed by the Council under Regulation 2.)

Aeronautical Engineering

The University of Sydney has established a special four-year course in Aeronautical Engineering. Adelaide students who have successfully completed the first two years of the course in any branch of Engineering, may apply for admission to the third year of the course in Aeronautical Engineering in the University of Sydney. Those who have completed only the first year may apply for admission to the second year.

Applications, together with documentary evidence of academic standing in the University of Adelaide, should be sent to the Registrar of the University of Sydney.

Agricultural Engineering

The University of Melbourne has established a four-year degree course in Agricultural Engineering. Adelaide students who have successfully completed the first two years of the course in Chemical, Electrical or Mechanical Engineering, provided they have taken Chemistry I, may apply for admission to the third year of the course in Agricultural Engineering in the University of Melbourne. Those who have completed only the first year of the course in Chemical, Electrical or Mechanical Engineering may apply for admission to the second year.

Applications, together with documentary evidence of academic standing in the University of Adelaide, should be sent to the Registrar of the University of Melbourne.

1. Arrangement of Courses.

The courses shall occupy four years of full-time study. Details of these courses are set out in clauses 4, 5, 6 and 7.

Syllabuses of subjects for the degree of B.E. are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

2. Completion of Subjects.

It is not necessary for a candidate to take all the subjects of any one year simultaneously or to complete all the subjects set out for one year before enrolling for any subject of the following year provided that the pre-requisite subjects have been passed. But a candidate who desires to take a third-year subject before completing the first year, or a fourth-year subject before completing the second year, must obtain the permission of the Faculty.

3. APPROVAL OF SUBJECTS.

During the enrolment period before the beginning of each academic year each candidate must obtain the approval of the Assistant to the Dean of the Faculty of Engineering to enrol for the subjects he wishes to study.

NOTE: In the following schedules of courses, in the column headed "Hours a Week", a single figure, such as 2, means 2 hours a week throughout the year. A figure with a superscript, such as 2^2, means 2 hours a week for two terms.

4. CIVIL ENGINEERING COURSE.

Details of the subjects Engineering I, Engineering II and Engineering III are given in clause 9.

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
QM01	Mathematics I	Lectures	4
		Tutorials	2
SP01	Physics I	Lectures	3
		Tutorial	1
		Practical	3
NX01	Engineering I	Lectures	3
		Tutorial	1
		Practical	3
SG01	Geology I	Lectures	3
		Practical	3

SECOND YEAR

QN12	Applied Mathematics IIB	Lectures	4
		Tutorial	1
NC02	Civil Engineering I	Lectures	4
		Practical	9^1, 6^2
		Field Work	
NX12	Engineering IIC	Lectures	3
		Practical	3

THIRD YEAR

NC03	Civil Engineering IIA	Lectures	3
		Tutorial	1
		Practical	5
NC13	Civil Engineering IIB	Lectures	3
		Tutorial	1
		Practical	5
NX53 or NX63	Engineering IIIC A or Engineering IIIC B	Lectures	4
		Tutorial	1
		Practical	4

FOURTH YEAR

NC14	Civil Engineering IIIA	Lectures	3, 1^2
		Practical	3
NC44	Civil Engineering IIIB	Lectures	3
		Practical	8
NC34	Civil Engineering IIIC Project and Report	Seminars	3
		Total 150 hours	

5. Electrical Engineering Course.

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
QM01	Mathematics I	Lectures	4
		Tutorials	2
SP01	Physics I	Lectures	3
		Tutorial	1
		Practical	3
SC01	Chemistry I	Lectures	3
		Tutorial	1
		Practical	3
NX01	Engineering I	Lectures	3
		Tutorial	1
		Practical	3

SECOND YEAR

QN12	Applied Mathematics IIB	Lectures	4
		Tutorial	1
SP02	Physics II	Lectures	3
		Tutorial	1
		Practical	6
NE03	Electrical Engineering I	Lectures	3
		Tutorials	2
		Practical	3

THIRD YEAR

NE13	Electrical Engineering II	Lectures	4
		Tutorials	2
		Practical	6
NX23	Engineering IIE	Lectures	2
		Practical	4
QT02	Mathematical Statistics II*	Lectures	4
		Tutorials	2
	or		
QM02	Pure Mathematics II	Lectures	4
		Tutorial	1

Note: A candidate of high academic ability who has completed the Third Year is recommended to spend an additional year at this stage to qualify for the degree of Bachelor of Science, in order to improve his qualifications to undertake research in engineering science.

* Or such other subject offered by the Faculty of Science or the Faculty of Mathematical Sciences as may be approved in individual cases by the Faculty of Engineering.

FOURTH YEAR

NE14	Electrical Engineering IIIA	Lectures	5
NE24	Electrical Engineering IIIB	Lectures	4
NE34	Electrical Engineering IIIC	Lectures	1
		Practical	12

6. Mechanical Engineering Course.

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a Week
QM01	Mathematics I	Lectures	4
		Tutorials	2
SP01	Physics I	Lectures	3
		Tutorial	1
		Practical	3
NX01	Engineering I	Lectures	3
		Tutorial	1
		Practical	3
SC01	Chemistry I	Lectures	3
		Tutorial	1
	or	Practical	3
AY01	Psychology I	Lectures	3
		Practical	2
	or		
NX11	Economics I (Engineering)	Lectures	2
		Tutorial	1

SECOND YEAR

QN12	Applied Mathematics IIB	Lectures	4
		Tutorial	1
NM02	Mechanical Engineering I	Lectures	3
		Tutorials	3
		Practical	3
NX42	Engineering IIM	Lectures	3
		Practical	5

THIRD YEAR

NM03	Mechanical Engineering IIA	Lectures	3
		Tutorial	1
		Practical	3
NM13	Mechanical Engineering IIB	Lectures	3
		Tutorials	4
		Practical	3
NX73	Engineering IIIM A	Lectures	4
		Tutorial	1
		Practical	3[2]
	or		
NX83	Engineering IIIM B	Lectures	4
		Practical	3
	or		
NX43	Engineering IIIM C*	Lectures	4
		Practical	3[2]
		Tutorial	1

* Available in 1975 only to those students who enrolled in the Mechanical Engineering course before 1973.

FOURTH YEAR

NM24	Mechanical Engineering IIIA*	Lectures	5[2]
		Tutorial	1[2]
		Practical	3[2]
NM34	Mechanical Engineering IIIB*	Lectures	5[2]
		Tutorials	3[1], 6[1]
		Practical	3[1]
NM44	Mechanical Engineering IIIC	Lectures	2[2], 4[1]
		Tutorials	6[1]
		Practical	3[1], 6[1]
NM85	Engineering Management	Lectures	1, 1[1]

* Examinations in Mechanical Engineering IIIA and IIIB will be held during the vacation between second and third terms.

7. Chemical Engineering Course.

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a Week
QM01	Mathematics I	Lectures	4
		Tutorials	2
SP01	Physics I	Lectures	3
		Tutorial	1
		Practical	3
SC01	Chemistry I	Lectures	3
		Tutorial	1
		Practical	3
NX01	Engineering I	Lectures	3
		Tutorial	1
		Practical	3

A candidate who has completed the First Year and who wishes to qualify for the B.Sc. and B.E. degrees concurrently is recommended to undertake two years of full-time study within the Faculty of Science before proceeding to further studies within the Faculty of Engineering.

SECOND YEAR

QN12	Applied Mathematics IIB	Lectures	4
		Tutorial	1
SC02	Physical and Inorganic Chemistry II	Lectures	3
		Tutorial	1
		Practical	6
NH12	Chemical Engineering I	Lectures	3
		Tutorials	3
		Practical	2

THIRD YEAR

NH13	Chemical Engineering IIA	Lectures	3
		Tutorials	4
		Practical	3
NH23	Chemical Engineering IIB	Lectures	3
		Tutorials	5
		Practical	3
NX93	Engineering IIIH	Lectures	4
		Practical	6

FOURTH YEAR

NH14	Chemical Engineering IIIA*	Lectures	4^1, 3^1
		Tutorials	4^2
		Practical	8^2
NH24	Chemical Engineering IIIB*		
	(a) Reactor Design	Lectures	1^2
		Tutorials	1^2
		Practical	3^1
	Fuels	Lectures	1^1
		Tutorial	1^1
	(b) Process Control	Lectures	2^2
		Tutorials	1^1
		Practical	4^2
	(c) Seminar	Tutorials	3^2
	(d) Materials Engineering	Lectures	2^2
		Practical	3^2

Any one student must pass in *either* parts (a), (b) and (c) *or* in parts (b) and (d).

NH34	Chemical Engineering IIIC*	Lectures	2^1, 1^1
		Tutorials	1^2
		Design Project	40^1

*** Examinations in Chemical Engineering IIIA, IIIB and part of IIIC will be held in the second and third weeks of third term.**

8.

(a). A candidate who has not passed in Engineering I but who has passed in Mathematics I, Physics I, and Chemistry I, and one other first year subject acceptable to the Faculty of Engineering may complete the academic requirements for the degree of Bachelor of Engineering in Chemical Engineering by passing in the following subjects.

SECOND YEAR

Normal 2nd year of the Chemical Engineering Course.

THIRD YEAR

NX01	Engineering I	Lectures	3
		Tutorials	1
		Practical	3
NX52	Engineering IIH	Lecture	1
		Practical	3[1]
NH13	Chemical Engineering IIA	Lectures	3
		Tutorials	4
		Practical	3
NH23	Chemical Engineering IIB*	Lectures	3
		Tutorials	3
		Practical	3

* A written report on vacation experience will be required *in lieu* of part (c) of Chemical Engineering IIB.

FOURTH YEAR

Normal Chemical Engineering 4th year.

(b) A candidate who has passed in Mathematics I, Physics I, Chemistry I, Applied Mathematics II, and Physical and Inorganic Chemistry II, plus one other First Year subject and one other Second Year subject acceptable to the Faculty of Engineering may complete the academic requirements for the degree of Bachelor of Engineering in Chemical Engineering by passing in the following subjects.

Before embarking on the work of the Third Year of the Chemical Engineering course:

NH62	Chemical Engineering IS	Lectures	1
		Tutorials	3

This subject is available throughout the year as part of Chemical Engineering I and will also be offered as a special short course of about four weeks' duration towards the end of each long vacation.

THIRD YEAR

Subject No. in Syllabus	Subject		Hours a Week
NX01	Engineering I	Lectures	3
		Tutorials	1
		Practical	3
NX52	Engineering IIH	Lecture	1
		Practical	3[1]
NH13	Chemical Engineering IIA	Lectures	3
		Tutorials	4
		Practical	3
NH23	Chemical Engineering IIB*	Lectures	3
		Lectures	3
		Practical	3

* A written report on vacation experience will be required in lieu of part (c) of Chemical Engineering IIB.

FOURTH YEAR

NH14	Chemical Engineering IIIA	Lectures ...	4^1, 3^1
		Tutorials ...	4^2
		Practical ...	8^3
NH64	Chemical Engineering IIIBS–		
	(a) Reactor Design	Lectures ...	1^2
		Tutorials ...	1^2
		Practical ...	3^1
	Fuels	Lectures ...	1^1
		Tutorial ...	1^1
	(b) Process Control	Lectures ...	2^2
		Tutorials ...	1^1
		Practical ...	4^2
	(c) Seminar	Tutorials ...	3^2
	(d) Materials Science	Lectures ...	2
		Practical ...	3^2

Any one student must pass either parts (a), (b) and (c) or parts (b) and (d). No candidate who has previously passed in NH12 Chemical Engineering I may take the latter option.

NH34	Chemical Engineering IIIC	Lectures ...	2^1, 1^1
		Tutorials ...	1^2
		Design Project	40^1

(c) A candidate who has completed the academic requirements for the degree of B.Sc. including the subjects listed above plus Reaction Kinetics as part of a Third Year subject in Physical and Inorganic Chemistry may proceed to the degree of B.E. in Chemical Engineering by passing in the subjects listed in Schedule 8(b) or by passing in the following subjects.

NH62	Chemical Engineering IS	See Schedule 8(b).

THIRD YEAR

NX01	Engineering I	Lectures ...	3
		Tutorial ...	1
		Practical ...	3
NX52	Engineering IIH	Lectures ...	1
		Practical ...	3^1
NH13	Chemical Engineering IIA	Lectures ...	3
		Tutorials ...	4
		Practical ...	3
NH63	Chemical Engineering IIBS	Lectures ...	3
		Tutorials ...	3
		Practical ...	3

FOURTH YEAR

Normal 4th year of the Chemical Engineering Course.

9. Engineering I, Engineering II and Engineering III.

(a) *Engineering I*

Subject No. in Syllabus	Subject		Hours a week
NX01	Engineering I	Lectures ...	3
		Tutorial ...	1
		Practical ...	3

This subject must be taken in First Year by all Engineering candidates. It consists of five parts:

Part 1. Statics
Part 2. Dynamics
Part 3. Graphics
Part 4. Engineering Drawing
Part 5. General Engineering

(b) *Engineering II and Engineering III*

These shall be made up of selected parts from the following list:

Part	Subject		Hours a week
1	Stress Analysis	Lectures ...	1
		Practical ...	3[1]
2	Structural Engineering	Lectures ...	1
		Practical ...	3
3	Theory of Machines	Lectures ...	1
		Practical ...	3[1]
4	Machine Design	Lectures ...	1
		Practical ...	3
5	Electrical Circuits and Machines	Lectures ...	1
		Practical ...	3[1]
6	Electronics	Lectures ...	1
		Practical ...	3[1]
7	Engineering Materials	Lectures ...	1
		Practical ...	3[1]
8	Materials Engineering	Lectures ...	2
		Practical ...	3[1]
9	Mathematics III (Engineering)	Lectures ...	2
		Tutorial ...	1
10	Economics (Engineering)	Lectures ...	2
		Tutorial ...	1

A candidate from the Civil Engineering Department will do Engineering IIC and IIIC; from Electrical Engineering, IIE; from Mechanical Engineering, IIM and IIIM; and from Chemical Engineering, IIIH. The parts making up each of these subjects are listed below.

Syllabus No.	Subject	Parts	Hours a week	
NX12	Engineering IIC	5, 6, 7	Lectures ...	3
			Practical ...	3
NX53	Engineering IIIC A	3, 4, 9	Lectures ...	4
			Tutorial ...	1
			Practical ...	3, 3[1]
NX63	Engineering IIIC B	3, 4, 10	Lectures ...	4
			Tutorial ...	1
			Practical ...	3, 3[1]
NX23	Engineering IIE	1, 4	Lectures ...	2
			Practical ...	4
NX42	Engineering IIM	1, 2, 7	Lectures ...	3
			Practical ...	5
NX73	Engineering IIIM A	5, 6, 9	Lectures ...	4
			Tutorial ...	1
			Practical ...	3[2]
NX83	Engineering IIIM B	5, 6, 8	Lectures ...	4
			Practical ...	3
NX43	Engineering IIIM C	5, 6, 10	Lectures ...	4
			Practical ...	3[2]
			Tutorial ...	1
NX52	Engineering IIH	5	Lecture ...	1
			Practical ...	3[1]
NX93	Engineering IIIH	1, 4, 5	Lectures ...	3
			Practical ...	3, 3[2]

A pass in Engineering I, II or III will be granted on the subject as a whole and not in individual parts.

10. PRACTICAL EXPERIENCE.

(a) *General*:

A total of sixteen weeks' practical experience is required under regulations 4(b) and 11(e), and this should be completed during the university vacations before beginning the work of the fourth year of the course. A candidate should normally complete the requirements of this schedule before enrolling in the fourth year of the course.

The Faculty may grant either partial or total exemption from the requirements of this schedule to a candidate who produces satisfactory evidence of practical experience obtained before he first enrolled in the Faculty; and in special cases, the Faculty may grant dispensation from the requirements.

Credit will not normally be given for periods of less than three consecutive weeks.

A candidate should seek a variety of practical experience appropriate to his academic level.

Before beginning a period of practical experience, a candidate may ensure that it will be satisfactory to the Faculty by consulting the Head of the Department concerned. In doubtful cases an inquiry should be addressed to the Dean through the Academic Registrar.

Before the end of the first term in each year of his course, a candidate should submit to the Academic Registrar, on the prescribed form, a certificate from his employer of the practical experience gained during the preceding year.

(b) *Chemical Engineering*:

At least eight weeks of the required sixteen weeks must be spent in an approved chemical factory or research establishment on plant operation or industrial research or development. In addition, during the May vacation in the fourth year, each student must visit at least eight chemical plants.

(c) *Electrical Engineering*:

As part of the sixteen weeks' practical experience specified in clause (a), candidates must complete the two week Vacation Course in Workshop Practice arranged by the Faculty, and this will usually be taken in the second year of the course.

(d) *Mechanical Engineering*:

As part of the sixteen weeks' practical experience specified in clause (a), candidates must complete the course of Workshop Practice arranged by the Faculty, and this will normally be taken in the second year of the course. For the purpose of assessing practical experience, this course will have an equivalent duration of one week.

11. Honours Degree in Engineering.

A candidate for the Honours degree in Chemical, Civil, Electrical or Mechanical Engineering under regulation 11 and syllabus numbers NH99, NC99, NE99, and NM99 shall complete the full course for the final year of his respective course, and in addition, special Honours work comprising two hours of Honours lectures a week with, in Civil and Mechanical Engineering, an associated laboratory project.

12. Transfers Between Courses.

In special circumstances, and by decision of the Faculty of Engineering in each case, a student who wishes to transfer from one Engineering course, or from any other course in the University or elsewhere, to either the Civil or Electrical or Mechanical Engineering course may present a first-year subject already passed instead of one of the first-year subjects (other than QM01 Mathematics I, SP01 Physics I or NX01 Engineering I) shown in schedules 4, 5 and 6. A student wishing to transfer to the Chemical Engineering course may, with permission of the Faculty, present a first- (or later) year subject in place of SP01 Physics I. Such permission will be granted only in special circumstances.

Any student contemplating such transfer should consult the Assistant to the Dean of the Faculty of Engineering.

OF THE DEGREE OF

BACHELOR OF ENGINEERING

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Pre-requisite subjects:

Unless otherwise stated, a pass in a pre-requisite subject will mean a pass at Division I or higher standard.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Engineering: N.

The second letter identifies the department teaching the subject, as follows:

Chemical Engineering - - -	H	Electrical Engineering - - -	E
Civil Engineering - - - -	C	Mechanical Engineering - -	M

X indicates that two or more departments are responsible for the subject.

The first digit—

0–5: Indicates that the subject forms part of a sequence.

6–9: Indicates that the subject does not form part of a sequence.

The second digit—

1–4: Indicates year of subject,* e.g. first, second, etc.

(5–8: Not used.)

9: Indicates subject available to Honours students only.

* Except in the cases of NE03 Electrical Engineering I and NM85 Engineering Management, which are given in the second and fourth years respectively.

NOTE: Some subjects listed in the schedules of the degree of B.E. are taught by departments of other faculties. In the syllabus numbers of those subjects the two digits do not necessarily have the significance shown above. For syllabuses of these subjects and half-subjects see the table of subjects at the end of the volume.

CHEMICAL ENGINEERING COURSE

FIRST-YEAR SUBJECTS.

QM01 Mathematics I.

SP01 Physics I.

SC01 Chemistry I.

For syllabuses see under the degree of B.Sc. in the Faculties of Mathematical Sciences and Science respectively.

NX01 Engineering I.

1. STATICS.

Resultant of coplanar forces and spatial force and couple systems. Conditions of equilibrium. Vectorial representation. Solution of pinjointed frames. Transverse and axial loadings. Bending moment and shear force diagram. Centroid, centre of pressure. Moments and products of inertia and related theorems. Elements of hydrostatics. Virtual work.

2. DYNAMICS.

Kinematics of particles and rigid bodies: rectilinear, and curvilinear motion; motion relative to moving axis. Kinetics of particles and rigid bodies: work, energy, power momentum in mechanical and electromechanical systems. Conservation of energy and momentum.

Behaviour and uses of electromagnetic fields and their interaction with charges and current. Elementary transducers. Energy conversion, stored energy. Induced fields.

3. GRAPHICS AND ENGINEERING DRAWING.

Pictorial presentation of data. Graphical mathematics. Graphical integration and differentiation. Empirical equations. Functional scales, adjacent charts, network charts, nomography. Descriptive geometry.

First and third angle projection. Pictorial projection. Sketching. Drawing as a means of communication. Geometry of manufacturing processes. Functional dimensioning. Limits and fits: interchangeable assemblies. Standards and standardisation. Introduction to design.

Text-books:

Hoelscher, R. P., and others, *Graphics for engineers* (John Wiley).

Standards Assoc. of Australia. S.A.A. CZ1, *Engineering drawing practice* (The Assoc.).

Chiswell, B., and Grigg, E. C. M., *S.I. units* (Wiley).

Anderson, J. C., and others, *Data and formulae for engineering students*, 2nd edition.

Beer, F. P., and Johnston, E. R., *Vector mechanics for engineers* (McGraw-Hill, I.S.E.).

4. GENERAL ENGINEERING.

A series of lectures or tutorials on the broad scope of Engineering including its historical background and sociological implications.

Students are given an opportunity during the course of inspecting the facilities and learning something of the research objectives of the Engineering Departments of the University.

SECOND-YEAR SUBJECTS.

QN12 Applied Mathematics IIB.

SC02 Physical and Inorganic Chemistry II.

For syllabuses see under the degree of B.Sc. in the Faculties of Mathematical Sciences and Science respectively.

NH12 Chemical Engineering I.

Pre-requisite subjects: Pass at Division I or higher standard in SC01 Chemistry I, QM01 Mathematics I and SP01 Physics I.

This subject is divided into two parts:

(a) Materials Science.

The course consists of two lectures and three hours laboratory work a week throughout the year.

It covers the following topics: Mechanical and rheological properties of real and idealised materials, atomic arrangements in solids, crystallography, imperfections in crystals. Phase equilibria in metals and alloys, the structure and properties of ceramic phases, plastic deformation of crystalline materials. Phase transformations and heat treatment of steels. Polymer structure, composition and mechanical properties, methods of testing, methods of processing. Corrosion theory and application. Composite materials.

Text-book:

Van Vlack, L. H., *Materials science for engineers* (Addison-Wesley).

Reference books:

Moffatt, W. G. (ed.), *The structure and properties of materials*, vols. 1-III (Wiley).
Alfrey, T., and Gurnee, E. F., *Organic polymers* (Prentice-Hall).
Billmeyer, F. W., *Textbook of polymer science* (Wiley).
Bockris, J. O'M., and others, *An introduction to electrochemical science* (Wykeham Series).
Guy, A. G., *Introduction to materials science* (McGraw-Hill).
Guy, A. G., *Elements of physical metallurgy* (Addison-Wesley).
Kingery, W. D., *Introduction to ceramics* (Wiley).
Samans, C. H., *Metallic materials in engineering* (Macmillan).
Scully, J. C., *The fundamentals of corrosion* (Pergamon).

(b) Chemical Engineering Principles.

One lecture and one three-hour tutorial per week covering an introduction to Chemical Engineering calculations, equilibrium stage operations, fuels and energy, and instrumentation.

Text-books:

Himmelblau, D. M., *Basic principles and calculations in chemical engineering*, 3rd edition (Prentice-Hall).
Harker, J. H., and Allen, D. A., *Fuel science* (Oliver and Boyd).

Reference books:

Considine, D. M., *Process instruments and control handbook* (McGraw-Hill).
Fribance, A. E., *Industrial instrumentation fundamentals* (McGraw-Hill).
Williams, E. T., and Johnson, R. C., *Stoichiometry for chemical engineers*, International Student edition (McGraw-Hill); *or*
Whitwell, J. C., and Toner, R. K., *Conservation of mass and energy* (Ginn-Blaisdell); *or*
Henley, E. J., and Rosen, E. M., *Material and energy balance computations* (Wiley).
Smith, B. D., *Design of equilibrium stage processes* (McGraw-Hill).
Brian, P. L. T., *Staged cascades in chemical processing* (Prentice-Hall).

THIRD-YEAR SUBJECTS.

NH13 Chemical Engineering IIA.

Pre-requisite subjects: Pass at Division I or higher standard in NH12 Chemical Engineering I *or* NH62 Chemical Engineering IS and *either* QN02 Applied Mathematics II *or* QN12 Applied Mathematics IIB.

LECTURES: Three hours a week throughout the year dealing with the general theory of molecular and turbulent transport of properties, fluid mechanics, heat transfer processes and mechanical processes.

TUTORIALS: Three hours a week throughout the year devoted to problems designed to illustrate the practical applications of the theory covered in lectures.

LABORATORY WORK: Three hours a week throughout the year on quantitative laboratory work designed to illustrate the principles of transport theory and fluid mechanics as applied to unit operations.

Text-books:

Holman, J. P., *Heat transfer*, 3rd edition (McGraw-Hill).
Daily, J. W., and Harleman, D. R. F., *Fluid dynamics* (Addison-Wesley); *or*
De Nevers, N., *Fluid mechanics* (Addison-Wesley).
Foust, A. S., *Principles of unit operations* (Wiley).

Reference books:

Perry, J. H., *Chemical engineers' handbook*, 4th edition (McGraw-Hill).
Coulson, J. M., and Richardson, J. F., *Chemical engineering*, 2 vols., 2nd edition (Pergamon Press).
Bird, R. B., and others, *Transport phenomena* (Wiley).
McCabe, W. L., and Smith, J. C., *Unit operations of chemical engineering*, 2nd edition (McGraw-Hill).
Welty, J. R., Wilson, R. E., and Wicks, C. E., *Fundamentals of momentum, heat and mass transfer* (Wiley International Edition).
Sissom, L. E., and Pitts, D. R., *Elements of transport phenomena* (McGraw-Hill).

NH23 Chemical Engineering IIB.

Pre-requisite subjects: Pass at Division I or higher standard in SC02 Physical and Inorganic Chemistry II and *either* QN02 Applied Mathematics II *or* QN12 Applied Mathematics IIB.

This subject is divided into three parts:

(a) THERMODYNAMICS AND KINETICS.

LECTURES: Two lectures a week throughout the year devoted to chemical engineering thermodynamics, reaction kinetics and reactor design.

TUTORIALS: Two hours a week for three terms devoted to problems designed to illustrate the practical applications of the theory covered in lectures.

Text-books:

Smith, J. M., and Van Ness, H. C., *Introduction to chemical engineering thermodynamics*, 2nd edition (McGraw-Hill).
Laidler, K. J., *Reaction kinetics*, vols. 1 and 2 (Pergamon).
Smith, J. M., *Chemical engineering kinetics*, 2nd edition (McGraw-Hill).
Hamblin, F. D., *Abridged thermodynamic and thermochemical tables, S.I. units* (Pergamon).

Reference books:

Balzhiser, R. E., and others, *Chemical engineering thermodynamics* (Prentice-Hall).
Denbigh, K. G., *Principles of chemical equilibrium*, 3rd edition (C.U.P.).
Denbigh, K. G., and Turner, J. C. R., *Chemical reactor theory*, 2nd edition (C.U.P.).
Levenspiel, O. L., *Chemical reaction engineering* (Wiley).
Kramers, H., and Westerterp, K. R., *Elements of chemical reactor design and operation* (Chapman and Hall).

(b) Introduction to Process Control.

Lectures: One lecture a week for two terms devoted to an introduction to the elements of process control and process dynamics.

Tutorials: One hour a week for two terms.

Laboratory Work: Three hours a week.

Text-book:

Weber, T. W., *An introduction to process dynamics and control* (McGraw-Hill).

Reference book:

Harriott, P., *Process control* (McGraw-Hill).

(c) Seminar.

Three hours a week in first and second terms. Each student is required to submit an essay at the end of first term and present it at a seminar in second term.

NX93 Engineering IIIH.

Pre-requisite subjects: Pass at Division I or higher standard in QM01 Mathematics I and NX01 Engineering I.

This course is made up of parts 1, 4 and 5 of Engineering II and III. Refer Schedule 9(b).

1. Stress Analysis.

The course consists of one lecture a week throughout the year and the equivalent of three hours a week of laboratory work for one term.

The following topics will be covered:

Stress and strain, normal and shear. Tensile compressive and torsion tests to destruction. Elastic and plastic states. Load deformation relation for bars and columns. Torsion of tubes and shafts. Bolted and rivetted joints. Thin walled pressure vessels. Distribution of stress due to bending, curvature moment relations, and deflections of simply supported and encastré beams by integration and moment area methods. Shear. Introduction to composite and reinforced beams. Plastic moments, simple plastic analyses of redundant beams. Buckling of columns.

Text-books:

Stephens, R. C., *Strength of materials* (Arnold); *or*

Case, J., and Chilver, A. H., *Strength of materials and structures*, 2nd edition (Arnold).

4. Machine Design.

A short course of 27 lectures and of 81 hours' drawing-office tutorial work in the fundamentals of design of machine elements and power transmission systems.

Text-books:

Faires, V. M., *Design of machine elements* (Macmillan).

Siegel, M. J., and others *Mechanical design of machines* (International Text-book Co.).

5. Electrical Circuits and Machines.

The course consists of one lecture a week throughout the year and the equivalent of three hours a week of laboratory work for one term.

The lecture course comprises:

(a) One lecture a week for one term devoted to network theory, including transient and steady state analysis of simple networks, network theorems, and the solution of three-phase networks.

(b) One lecture a week for one term devoted to self and mutual inductance and coupled coils, magnetic circuits and the calculation of m.m.f., transformers, direct current motors and generators.

(c) One lecture a week for one term devoted to synchronous motors, and generators, single phase and three-phase induction motors, and machine characteristics.

Practical work in the laboratory is designed to illustrate the subject matter of the lectures.

Text-book:

Smith, R. J., *Circuits, devices and systems* (Wiley).

Reference books:

Hayt, W. H., and Kemmerley, J. E., *Engineering circuit analysis* (McGraw-Hill).
Hirst, A. W., *Applied electricity* (Blackie).
Fitzgerald, A. E., and Higginbotham, D. E., *Basic electrical engineering* 3rd edition (McGraw-Hill).

FOURTH-YEAR SUBJECTS.

NH14 Chemical Engineering IIIA.

Pre-requisite subject: NH13 Chemical Engineering IIA.

LECTURES: Three hours a week for two terms devoted to applications of transport theory and of fluid and particle mechanics in the unit operations of chemical engineering; one hour a week for one term on advanced fuel technology.

TUTORIALS: Three hours a week for two terms. Problems studied are of a practical nature, but involve the application of fundamental principles rather than the use of handbooks.

PRACTICAL WORK: Eight hours a week for two terms; a series of projects based on the course of lectures and providing exercise in the preparation of engineering reports.

Text-books:

Students are expected to own a copy of Perry, J. H., *Chemical engineers' handbook*, 5th edition (McGraw-Hill).
Beér, J. M., and Chigier, N. A., *Combustion aerodynamics* (Applied Science).

Reference books:

Lewis, B., and von Elbe, G., *Combustion, flames, and explosions of gases*, 2nd edition (Academic Press).
Orr, C. C., *Particulate technology* (Macmillan).
Kunii, D., and Levenspiel, O., *Fluidisation engineering* (Wiley).

NH24 Chemical Engineering IIIB.

This subject is divided into four parts from which the student must take *either* Parts (a), (b) and (c) *or* Parts (b) and (d). This latter option may not be available every year.

(a) REACTOR DESIGN.

LECTURES: Two hours a week for one term dealing with advanced kinetics and reactor design. One hour a week for one term on gas absorption with chemical reaction.

TUTORIALS: Two hours a week for one term.

Text-book:

Smith, J. M., *Chemical engineering kinetics*, 2nd edition (McGraw-Hill).

Reference books:

Cooper, A. R., and Jeffreys, G. V., *Chemical kinetics and reactor design* (Prentice-Hall).
Denbigh, K. G., and Turner, J. C. R., *Chemical reactor theory*, 2nd edition (C.U.P.).
Danckwerts, P. V., *Gas liquid reactions* (McGraw-Hill).

(b) Process Dynamics and Control.

Lectures: Two hours a week for the first two terms dealing with the principles of (a) process dynamics and simulation, and (b) process control. The theory is developed to a stage where it may be applied to a wide variety of practical problems in design and operation of chemical process plant.

Tutorial: Two hours a week for the first two terms.

Practical Work: Four hours a week for two terms with experiments illustrating problems in process dynamics simulation and control of simple process plant.

Text-book:

Harriott, P., *Process control* (McGraw-Hill).

Reference books:

Shinskey, F., *Process control systems* (McGraw-Hill).

Tyner, M., and May, F. P., *Process engineering control* (Ronald Press).

Franks, R. G. E., *Modelling and simulation in chemical engineering.*

(c) Seminar.

Three hours a week in first and second terms. Each student is required to submit an essay at the end of first term and present it at a seminar in second term.

(d) Materials Engineering.

Lectures: Two lectures a week for two terms dealing with the following topics: The selection properties and fabrication of materials for engineering applications involving corrosive and high temperature environments, structural and low alloy steels. The relation of structural variables in polymers to their engineering properties, engineering properties of specific polymers. Processing and selection of plastics.

Practical Work: Six hours per week for two terms. The course will involve laboratory techniques and experiments related to the lecture course.

Text-books:

Candidates are advised to consult the lecturers about text and reference books in this subject before the beginning of first term.

NH34 Chemical Engineering IIIC.

Pre-requisite or concurrent subjects: NH14 Chemical Engineering IIIA and NH24 Chemical Engineering IIIB.

This subject is divided into two parts:

(a) Industrial Economics and Operations Research.

Lectures: Two lectures a week for two terms dealing with topics in Industrial Economics and Operations Research.

The lectures deal generally with:

(1) The allocation of scarce economic resources between a number of competing ends; more specifically these lectures deal with the effective allocation of land, labour, capital and enterprise during all phases of the development and operation of a chemical manufacturing enterprise. The treatment includes research and development, patents, market analysis, plant location, process development, pre-investment estimation, capital investment evaluation, selection and purchase of labour and equipment, construction planning and control, production planning and control, cost planning and control, basic management principles, industrial safety, company control, capital procurement, company finance, and a general treatment of the structure and environment of industry.

(2) A review of the potentialities of the methods of operations research, with special reference to problems arising in Chemical Engineering practice.

Reference books:

Ackoff, R. L., and Sasieni, M. W., *Fundamentals of operations research* (Wiley).

Buchanan, R. H., and Sinclair, C. G., *Costs and economics of the Australian process industries* (West, 1964, with 1966 supplement).

Grant, E. L., and Ireson, W. G., *Principles of engineering economy* (Ronald Press).

Hunter, A., *The economics of Australian industry* (Melbourne Univ. Press).

Kirkbride, C. G., *Chemical engineering fundamentals* (McGraw-Hill).

Peters, M. S., and Timmerhaus, K. D., *Plant design and economics for chemical engineers*, 2nd edition (McGraw-Hill).

Schweyer, H. E., *Process engineering economics* (McGraw-Hill).

(b) PLANT DESIGN.

TUTORIAL: One tutorial a week for two terms dealing with sources and estimation of data, costing and economic analysis of alternative proposals, the application of Process Engineering and Operations Research techniques to the selection, sizing, design and optimisation of equipment and processes, project scheduling and control, and plant operation and safety considerations.

PROJECT: The project occupies approximately 300 hours of full-time work during the months of September-November after the normal Departmental examinations. It involves the economic comparison of alternative processes for the manufacture of a nominated chemical product, the study of a selected process, calculation of material and energy balances, preparation of flow sheets, design of selected plant items, estimation of plant cost and process economics, preparation of a design report and drawing of plant lay-out.

Preliminary reading:

Jones, D. G., *Chemistry and industry* (O.U.P.).

Text-book:

Peters, M. S., and Timmerhaus, K. D., *Plant design and economics for chemical engineers*, 2nd edition (McGraw-Hill).

Reference books:

Allen, D. H., *A guide to the economic evaluation of projects* (Institution of Chemical Engineers).

Rudd, D. F., and Watson, C. C., *Strategy of process engineering* (Wiley).

Literature of chemical technology (American Chemical Society).

Backhurst, J. R., and Harker, J. H., *Process plant design* (Heinemann).

Bodman, S. W., *The industrial practice of chemical process engineering* (M.I.T.).

Brown, R., and Campbell, G. A., *How to find out about the chemical industry* (Pergamon).

Buchanan, R. H., and Sinclair, C. G., *Costs and economics of the Australian process industries* (West, 1964, with 1966 supplement).

Cremer, H. W., *Chemical engineering practice*, vol. 1 (General), vol. 9 (Design and Construction), vol. 10 (Ancillary Services), vol. 11 (Works Design, etc.) (Butterworth).

Faith, W. L., and others, *Industrial chemicals*, 3rd edition (Wiley).

Hackney, J. W., *Control and management of capital projects* (Wiley).

Hougen, O. A., and others, *Chemical process principles*, vol. 1, 2nd edition (Wiley).

Institution of Chemical Engineers Engineering Practice Committee, *A guide to capital cost estimation and notes on project evaluation* (Institution of Chemical Engineers).

Jeffreys, G. V., *A problem in chemical engineering design—the manufacture of acetic anhydride* (Institution of Chemical Engineers).

Jelen, F. C., *Cost and optimization engineering* (McGraw-Hill).
Kern, D. Q., *Process heat transfer* (McGraw-Hill).
Landau, R., *The chemical plant: from process selection to commercial operation* (Reinhold).
Ludwig, E. E., *Applied process design for chemical and petrochemical plants*, vols. 1-3 (Gulf).
Lyle, O., *The efficient use of steam* (H.M.S.O.).
Perry, J. H., *Chemical engineers' handbook*, 5th edition (McGraw-Hill).
Popper, H., *Modern cost-engineering techniques* (McGraw-Hill).
Rase, H. F., and Barrow, M. H., *Project engineering of process plants* (Wiley).
Sherwood, T. K., *A course in process design* (M.I.T.).
Shreve, R. N., *The chemical process industries*, 3rd edition (McGraw-Hill).

NOTE: Students who have completed one or more years' work in the Faculty of Science: refer Schedule 8.

Certain courses differing from those listed in the preceding pages are prescribed for students who, having completed one or more years' work in suitable subjects in the Faculty of Science, wish to qualify for the degree of Bachelor of Engineering in Chemical Engineering. These are as follows:

NII62 Chemical Engineering IS.

This course is Chemical Engineering I, part (b) (Chemical Engineering Principles).

For syllabus see NH12 Chemical Engineering I above.

NH63 Chemical Engineering IIBS.

This subject is divided into three parts.

(a) Materials Science. The syllabus for this part of the subject is as for NH12. Chemical Engineering I, part (a).

(b) Introduction to Process Control. The syllabus for this part of the subject is as for NH23 Chemical Engineering IIB, part (b).

(c) Written report on vacation experience.

NH64 Chemical Engineering IIIBS.

This subject is divided into four parts of which the student must take either parts (a), (b) and (c), or parts (b) and (d).

(a) Reactor Design.
(b) Process Control. } See NH24 Chemical Engineering IIIB above.
(c) Seminar.

(d) Materials Science. The syllabus for this part of the subject is as for Chemical Engineering I, part (a).

NX52 Engineering IIH.

This course consists of part 5 of Engineering II and III, Electrical Circuits and Machines (*see* Schedule 9(b)).

For syllabuses see NX93 Engineering IIIH above.

CIVIL ENGINEERING COURSE.

FIRST-YEAR SUBJECTS.

QM01 Mathematics I.

SP01 Physics I.

SG01 Geology I.

For syllabuses see under the degree of B.Sc. in the Faculties of Mathematical Sciences and Science respectively.

NX01 Engineering I.

For syllabus see under Chemical Engineering course, first year.

SECOND-YEAR SUBJECTS.

QN12 Applied Mathematics IIB.

For syllabus see under the degree of B.Sc. in the Faculty of Mathematical Sciences.

NC02 Civil Engineering I.

Pre-requisite subjects: Pass at Division I or higher standard in QM01 Mathematics I and NX01 Engineering I.

The course consists of four lectures a week and is an introductory course in stress analysis, structural analysis, design of structural elements and in surveying. Six hours a week for two terms, nine hours a week for one term will be occupied by laboratory, drawing office and field exercises. In addition, a field camp extending over two weeks is held in the long vacation.

Text-books:

Clark, D., *Plane and geodetic surveying for engineers*, volume I, 6th edition (Constable).

Case, J., and Chilver, A. H., *Strength of materials and structures*, 2nd edition (Arnold).

Bresler, B., and others, *Design of steel structures*, 2nd edition (Wiley).

Nash, W. A., *Strength of materials* (Schaum).

Wilbur, J. B., and Norris, W. A., *Elementary structural analysis*, 2nd edition (McGraw-Hill).

Standards Association of Australia (Metric Units) as advised.

Reference books:

Bannister, A., and Raymond, S., *Surveying*, 3rd edition (Pitman).

Hall, A. S., *An introduction to the mechanics of solids* (Wiley).

Stephens, R. C., *Strength of materials* (Arnold).

Drucker, D. C., *Introduction to mechanics of deformable solids* (McGraw-Hill).

Hsieh, Yuan-yu, *Elementary theory of structures* (Prentice-Hall).

McCormac, J. C., *Structural analysis*, 2nd edition (International Textbook Company).

Whyte, W. S., *Basic metric surveying* (Butterworth).

Students should provide themselves with six- or seven-figure logarithmic tables, such as *Chamber's shorter six-figure mathematical tables*, or *Chamber's seven-figure mathematical tables.*

NX12 Engineering IIC.

Pre-requisite subjects: Pass at Division I or higher standard in QM01 Mathematics I; Pass at Division II or higher standard in SP01 Physics I. A knowledge of matriculation Chemistry will be assumed.

Engineering IIC is made up of parts 5, 6 and 7 of Engineering II and III. Refer Schedule 9(b).

5. Electrical Circuits and Machines.

The course consists of one lecture a week throughout the year and the equivalent of three hours a week of laboratory work for one term.

The lecture course comprises:

(a) One lecture a week for one term devoted to network theory, including transient and steady state analysis of simple networks, network theorems, and the solution of three-phase networks.

(b) One lecture a week for one term devoted to self and mutual inductance and coupled coils, magnetic circuits and the calculation of m.m.f., transformers, direct current motors and generators.

(c) One lecture a week for one term devoted to synchronous motors and generators, single phase and three-phase induction motors, and machine characteristics.

Practical work in the laboratory is designed to illustrate the subject matter of the lectures.

Text-book:

Smith, R. J., *Circuits, devices and systems* (Wiley).

Reference books:

Hayt, W. H., and Kemmerley, J. E., *Engineering circuit analysis* (McGraw-Hill).

Hirst, A. W., *Applied electricity* (Blackie).

Fitzgerald, A. E., and Higginbotham, D. E., *Basic electrical engineering*, 3rd edition (McGraw-Hill).

6. Electronics.

The course consists of one lecture a week throughout the year and the equivalent of three hours a week laboratory work for one term.

Conduction in solids. The junction diode. Thermionic emission. The vacuum diode. Rectifier circuits, filtering. Detector circuits. Wave shaping circuits. Diode logic circuits and symbols, truth tables.

Bipolar junction transistors, construction operation and characteristic curves. Common emitter and common collector circuits. Small signal parameters, equivalent circuits. Biasing systems, design methods. Field effect transistors and thyristors, construction and operation. Control methods in thyristor circuits.

Multistage amplifiers, RC and transformer coupling, frequency response. Large-signal amplifiers, push pull amplifiers, classes of operation. Feedback in amplifiers, effect on stability and performance. Regulated power supplies and operational amplifiers.

Practical work in the laboratory is designed to illustrate the subject matter of the lectures.

Text-book:

Smith, R. J., *Circuits, devices and systems* (Wiley).

Reference books:

Lowenberg, E. C., *Theory and problems of electronic circuits* (Schaum).

Van der Ziel, A., *Introduction to electronic circuits* (Allyn and Bacon).

7. ENGINEERING MATERIALS.

The course consists of one lecture a week throughout the year and the equivalent of three hours a week of laboratory work for one term.

The following topics will be covered:

Stress strain behaviour in the real and idealised state; atomic bonding and packing; crystal structure; X-rays; the formation of polycrystalline materials; structure and properties of ceramics; equilibrium and non-equilibrium phase reactions; heat treatment; metallography and selection of steels, cast irons, aluminium alloys and copper alloys; deformation and failure of crystalline materials; corrosion; the structure, properties and applications of polymeric materials.

Text-book:

Van Vlack, L. H., *Materials science for engineers* (Addison-Wesley).

Reference books:

Guy, A. G., *Introduction to materials science* (McGraw-Hill).

Moffat, W. G. (ed.), *The structure and properties of materials*, vols. I-III (Wiley); *or*

Cullity, B. D., *Elements of X-ray diffraction* (Addison-Wesley).

Van Vlack, L. H., *Elements of materials science* (Addison-Wesley).

Ruoff, A. L., *Introduction to materials science* (Prentice-Hall).

Guy, A. G., *Elements of physical metallurgy* (Addison-Wesley).

Polakowski, N. H., and Ripling, E. J., *Strength and structure of engineering materials* (Prentice-Hall).

Van Vlack, L. H., *Physical ceramics for engineers* (Addison-Wesley).

THIRD-YEAR SUBJECTS.

NC03 Civil Engineering IIA.

Pre-requisite subjects: Pass in NX12 Engineering IIC; Pass at Division I or higher standard in NX01 Engineering I; Pass at Division II or higher standard in QN12 Applied Mathematics IIB.

This course consists of three lectures and six hours' practical or tutorial work a week throughout the year, and is designed for students intending to complete a degree in Civil Engineering to cover the topics of Hydraulics and Instrumentation.

(a) HYDRAULICS.

LECTURES: Fluid properties and the nature of fluid motion — steady, unsteady, uniform, non-uniform, rotational and irrotational. Fundamental laws of fluid motion, potential flow; stream line plotting; equation of motion for inviscid (Euler) and real fluids (Navier-Stokes), the equation of continuity in general form for compressible and incompressible flow; dimensional analysis and dimensionless groups; study of flow in closed conduits — pipelines, networks. steady and unsteady flow, water hammer and pendulation, surge-tank analysis; flow in open channels, hydraulic jump, surface profiles; flow through porous media, fluid forces on a body in a free stream; elements of boundary layer theory; theory of similitude applied to hydraulic and aerodynamic model studies of hydraulic structures, vortex behaviour; performance of pumps and turbines with their characteristics influencing their selection for particular applications; hydraulic measurements—pressure, velocity, discharge, depth, orifices, weirs, etc.; cavitation of hydraulic structures. Hydrology and flood control.

PRACTICAL: Experimental work in the laboratory and field occupies about two-thirds of the time and the balance is spent in the design office.

(b) INSTRUMENTATION.

LECTURES. Elements of system engineering applied to instrumentation and data collection and recording; physical measurements, detailed examination of transducers for engineering measurements of strain, displacement, pressure, velocity, acceleration, flow discharge, time, temperature and radio activity; input circuits and signal processing facilities; elements of suitable electronic circuits (amplifiers, oscillators, counting and triggering circuits, filters, etc.); recording media chart, magnetic tape (F.M., digital), C.R.O.; analogue–digital conversion; digital transducers, digital data handling and recording techniques for computer entry; specialized measurement procedures, high speed photography (single shot and cine), radio isotope tagging procedures.

PRACTICAL. Laboratory experiments, demonstrations, design seminars and field exercises are intended to illustrate the application of the lecture subject matter.

Text-books:

Rouse, H. (ed.), *Engineering hydraulics* (Wiley); *or*
Vennard, J. K., *Elementary fluid mechanics*, 4th edition (Wiley); *or*
Streeter, V. L., *Fluid mechanics* (McGraw-Hill).

Reference books:

Rouse, H., and Ince, S., *History of hydraulics* (Iowa Institute of Hydraulics).
Jaeger, C., *Engineering fluid mechanics* (Blackie).
Prandtl, L., *Essentials of fluid dynamics* (Blackie).
Francis, J. R. D., *A text-book of fluid mechanics* (Arnold).
Vallentine, H. R., *Applied hydrodynamics* (Butterworth).
Chow, V. T., *Open channel hydraulics* (McGraw-Hill).
Norrie, D. H., *An introduction to incompressible flow machines* (Arnold).
Wisler, C., and Brater, E., *Hydrology* (Wiley).
Chiswell, B., and Grigg, E. C., *S.I. units* (Wiley).
Oliver, B. M., and Cage, J. M., *Electronic measurements and instrumentation* (McGraw-Hill).
Doeblin, E. O., *Measurement systems: applications and design* (McGraw-Hill).
Smith, R. J., *Circuits devices and systems*, 2nd edition (Wiley).
Studer, J. J., *Electronic circuits and instrumentation systems* (Wiley).
Prensky, S. D., *Electronic instrumentation* (Prentice-Hall).
Susskind, A. K., *Notes on analogue-digital conversion techniques* (Wiley)
Alley, C. L., and Atwood, K. W., *Semi-conductor devices and circuits* (Wiley).

NC13 Civil Engineering IIB.

Pre-requisite subjects: Pass in NC02 Civil Engineering I; Pass at Division II or higher standard in QN12 Applied Mathematics IIB.

This course consists of three lectures, one tutorial and five hours' practical work a week throughout the year and is designed for students intending to complete a degree in Civil Engineering.

LECTURES:

(a) *Structural Analysis*: 26 lectures on the analysis of continuous beams, rigid frames; deflections of pin-jointed frames; analysis of redundant pin-jointed frames; plastic analysis and design.

(b) *Concrete Structures*: 18 lectures on properties of concrete; concrete mix design; principles of limit state design; analysis and design of reinforced concrete, rectangular and tee beams subject to flexure, shear and axial loads, slabs, columns, walls and footings; introduction to prestressed concrete.

(c) *Design Economics*: 9 lectures on criteria for decision making in structural design; application of critical path analysis to design and construction; the Engineer in the design team.

(d) *Soil Mechanics*: 18 lectures on nature and classification of soils, measurement of strength and properties of soil; consolidation; earth pressures.

(e) *Matrix Methods*: 9 lectures on the assembly and solution of structural equation systems on the computer.

DESIGN PROJECTS:

The analysis and design of a steel and of a concrete structure. Each project occupies one three-hour tutorial period a week in the drawing office for half the year.

LABORATORY WORK:

Three hours a week for one term is given in concrete, in soil mechanics and in structures.

Text-books:

Smith, G. N., *Elements of soil mechanics for civil and mining engineers* (Crosby-Lockwood).

Lecture notes for course on *Ultimate load design* (Concrete Institute of Australia).

Hughes, B. P., *Limit state theory for reinforced concrete* (Pitman).

Australian reinforced concrete design handbook, 2nd edition (Cement and Concrete Association of Australia).

Wilbur, J. B., and Norris, C. H., *Elementary structural analysis*, 2nd edition (McGraw-Hill).

Bresler, B., and others, *Design of steel structures*, 2nd edition (Wiley).

National Association of Australian State Road Authorities, *Highway bridge design specifications*, 4th edition, 1970.

Standards Association of Australia (Metric or Imperial Units as advised):

S.A.A. loading code.

S.A.A. steel structures code.

S.A.A. code for welding in building.

S.A.A. code for concrete structures. AS. 1480-1974.

S.A.A. code for prestressed concrete. AS. 1481.

Reinforced concrete detailing manual (Cement and Concrete Association of Australia).

Reference books:

Lambe, T. W., and Whitman, R. V., *Soil mechanics* (Wiley).

Wu, T. H., *Soil mechanics* (Allyn and Bacon).

Ferguson, P. M., *Reinforced concrete fundamentals*, 3rd edition (Wiley).

Wang, C. K., and Salmon, C. G., *Reinforced concrete design*, 2nd edition (Intext Press).

Libby, J. R., *Modern prestressed concrete* (Van Nostrand).

McGuire, W., *Steel structures* (Prentice-Hall).

Steel designers manual, 3rd edition (Crosby Lockwood).

Blodgett, O. W., *Design of welded structures* (The James F. Lincoln Arc Welding Foundation).

Jaeger, J. C., and Cook, N. G. W., *Fundamentals of rock mechanics* (Methuen).

Johnson, R. P., *Structural concrete* (McGraw-Hill).

Engineering IIIC.

Pre-requisite subjects: Pass in NC02 Civil Engineering I and NX12 Engineering IIC; Pass at Division II or higher standard in QN12 Applied Mathematics IIB.

Civil Engineering students must take one of the following Engineering IIIC courses which are made up of parts of Engineering II and III (refer Schedule 9(b)):

EITHER

NX53 Engineering IIICA.

Parts 3, 4 and 9.

OR

NX63 Engineering IIICB.

Parts 3, 4 and 10.

The syllabuses for these parts are as follows:

3. THEORY OF MACHINES.

An introductory course of 27 lectures and 27 hours of drawing-office tutorial exercises in kinematics, dynamics of machines and automatic control.

Text-book:

Prentis, J. M., *Dynamics of mechanical systems* (Longman).

4. MACHINE DESIGN.

A short course of 27 lectures and of 81 hours' drawing-office tutorial work in the fundamentals of design of machine elements and power transmission systems.

Text-book:

Faires, V. M., *Design of machine elements* (Macmillan).

Siegel, M. J., and others, *Mechanical design of machines* (International Text-book Company).

9. MATHEMATICS III (ENGINEERING).

Pre-requisite to this part: a pass at Division I or higher standard in QN12 Applied Mathematics IIB.

Engineering analysis, numerical analysis, operations research.

Reference books:

Crandall, S. H., *Engineering analysis* (McGraw-Hill).

Potts, R. B., and Oliver, R. M., *Flows in transportation networks* (Academic Press).

Shaw, F. S., *An introduction to relaxation methods* (Dover).

10. ECONOMICS (ENGINEERING).

This part consists of the two half-subjects EE1G Macroeconomics IH and EE2G Microeconomics IH.

For syllabuses see under the degree of B.Ec. in the Faculty of Economics.

FOURTH-YEAR SUBJECTS.

NC14 Civil Engineering IIIA.

Pre-requisite subjects: NC03 Civil Engineering IIA and NC13 Civil Engineering IIB.

It is also necessary for the work associated with the practical field camp, normally held at the end of NC02 Civil Engineering I, to have been satisfactorily completed.

A course of about 80 lectures dealing with soil mechanics, transportation, surveying, and hydraulics.

One session of three hours a week is required for practical work.

Text-books:

Clark, D., *Plane and geodetic surveying for engineers*, Vols. I and II (Constable).

Lambe, T. W., and Whitman, R. V., *Soil mechanics* (Wiley).

Reference books:

Rouse, H., *Engineering hydraulics* (Wiley).

Ippen, A. T. (ed.), *Estuary and coastline hydrodynamics* (McGraw-Hill).

James, L. D., and Lee, R. L., *Economics of water resources planning* (McGraw-Hill).

Wiegel, R. L., *Oceanographical engineering* (Prentice-Hall).

Streeter, V. L., *Handbook of fluid dynamics* (McGraw-Hill).

Terzaghi, K., and Peck, R. B., *Soil mechanics in engineering practice*, 2nd edition. (Wiley).

Wu, T. H., *Soil mechanics* (Allyn and Bacon).

Jaeger, J. C., and Cook, N. W., *Fundamentals of rock mechanics* (Methuen).

NC44 Civil Engineering IIIB.

Pre-requisite subjects: NC03 Civil Engineering IIA and NC13 Civil Engineering IIB.

A course of about 80 lectures dealing with the theory and design of structures. Students must undertake the design of selected engineering projects.

Text-books:

Hoff, N. J., *The analysis of structures* (Wiley).

Hall, A. S., and Woodhead, R. W., *Frame analysis* (Wiley).

Neal, B. G., *The plastic methods of structural analysis*, 2nd edition (Wiley).

Livesley, R. K., *Matrix methods of structural analysis* (Pergamon).

Lin, T. Y., *Design of prestressed concrete structures*, 2nd edition (Wiley).

Reference books:

McGuire, W., *Steel structures* (Prentice-Hall).

Willems, N., and Lucas, W. M., *Matrix analysis for structural engineers* (Prentice-Hall).

NC34 Civil Engineering IIIC.

Students will be required to submit a report on a project of an experimental nature conducted during the year and to give a seminar on a related subject.

This subject must be taken concurrently with NC14 Civil Engineering IIIA.

ELECTRICAL ENGINEERING COURSE.

FIRST-YEAR SUBJECTS.

QM01 Mathematics I.

SP01 Physics I.

SC01 Chemistry I.

For syllabuses see under the degree of B.Sc. in the Faculties of Mathematical Sciences and Science respectively.

NX01 Engineering I.

For syllabus see under Chemical Engineering course, first year.

SECOND-YEAR SUBJECTS.

QN12 Applied Mathematics IIB.

SP02 Physics II.

For syllabuses see under the degree of B.Sc. in the Faculties of Mathematical Sciences and Science respectively.

NE03 Electrical Engineering I.

Pre-requisite subjects: Pass at Division I or higher standard in SP01 Physics I and QM01 Mathematics I.

Pre-requisite or concurrent subject: QN12 Applied Mathematics IIB.

LECTURES:

Three lectures a week throughout the year.

TUTORIAL:

Two hours a week throughout the year devoted to the working and discussion of problems, and the discussion of practical and theoretical topics.

PRACTICAL:

Three hours practical a week throughout the year, comprising a series of experiments and exercises designed to support the subject matter of the lectures.

(a) NETWORK TOPOLOGY:

Kirchoff's laws, models and element equations, mesh, mode and mixed methods of analysis, free and forced response of networks, convolution, network theorems, steady state a.c. methods, transformers, polyphase systems, resonance and complex frequency, two ports, Laplace and Fourier Transform methods.

(b) ELECTRONICS:

A brief treatment of solid state and vacuum electronics. Solid state devices, their characteristics and equivalent circuits. In particular, rectifiers, limiters, clamps and gates. Single stage amplifiers with resistive and reactive loads. Multistage amplifiers with RC, LC and transformer coupling. High frequency equivalent circuits and frequency response. Class A, AB and B operation, power amplifiers. Feedback amplifiers. Controlled rectifiers.

(c) ENERGY STORAGE AND CONVERSION:

Physical aspects; the magnetic circuit; a.c. excitation of magnetic structures; transformers. Electromechanical energy conversion principles, stored energy, forces and torques of electromagnetic origin. Theory and operation of d.c. machines.

Text-books:

Either

Angelo, E. J., *Electronic circuits* (McGraw-Hill).

or

Alley, C. L., and Atwood, K. W., *Electronic engineering* (Wiley).

Reference books:

Lowenberg, E. C., *Theory and problems of electronic circuits* (Schaum).

Fitzgerald, A. E., Kingsley, C., and Kusko, A., *Electric machinery*, 3rd edition (McGraw-Hill).

Gray, P. E., and Searle, C. L., *Electronic principles* (Wiley).

Vacation Course in Workshop Practice.

(See Schedule 10.)

The course consists of two weeks full-time instruction in an approved engineering workshop during a vacation. The course deals with the basic machine-tools and processes with the aim of developing an understanding of fabrication techniques necessary to modern production processes.

Reference books:

Steeds, W., *Engineering materials, machine tools and processes* (Longmans).

Sachs, G., *Fundamentals of the working of metals* (Pergamon).

Degarmo, E. P., *Materials and processes in manufacturing* (Macmillan).

Bolz, R. W., *Production processes* (Penton).

THIRD-YEAR SUBJECTS.

NE13 Electrical Engineering II.

Pre-requisite subjects: Pass in NE03 Electrical Engineering I; Pass at Division I or higher standard in QN12 Applied Mathematics IIB.

Pre-requisite or concurrent subject: SP02 Physics II.

LECTURES: Four lectures a week throughout the year.

TUTORIAL: Two hours a week throughout the year devoted to the working and discussion of problems, and the discussion of practical and theoretical topics.

PRACTICAL: Practical work of six hours a week, comprising a series of experiments and exercises.

(a) FIELDS, LINES AND GUIDES.

An elementary treatment of transmission lines, plane waves, guided waves and radiation using circuit and field concepts where appropriate. An introduction to waveguides and microwave components.

(b) ENERGY CONVERSION (26 lectures).

Transient analysis of d.c. machines. Steady state performance of three phase induction and synchronous machines. Single phase motors. Symmetrical components.

(c) ELECTRONICS.

A further development of amplifier techniques. Modulation and detection. Introduction to analogue computers and computer logic circuits. Multivibrators, astable, bistable and monostable.

(d) CONTROL.

Transfer functions; transient and steady state analyses; root locus; Bode and Nyquist plots; absolute and relative stability; series compensation using root locus and frequency response techniques.

(e) NETWORKS.

An introduction to image parameter and effective parameter filter theory; convolution.

Text-books:

Adler, R. B., and others, *Electromagnetic energy transmission and radiation* (Wiley).

Fitzgerald, A. E., and others, *Electric machinery*, 3rd edition (McGraw-Hill).

D'Azzo, J. J., and Houpis, C. H., *Feedback control system analysis and synthesis* (McGraw-Hill).

Alley, C. L., and Atwood, K. W., *Electronic engineering* (Wiley).

Reference books:

Dorf, R. C., *Modern control systems* (Addison Wesley).

International Telephone and Telegraph Corporation, *Reference data for radio engineers.*

Magnusson, P. C., *Transmission lines and wave propagation*, 2nd edition (Allyn and Bacon).

Majmudar, H., *Electromechanical energy converters* (Allyn and Bacon).

Plonsey, R., and Collin, R. E., *Principles and applications of electromagnetic fields* (McGraw-Hill).

Ginzton, E. L., *Microwave measurements* (McGraw-Hill).

Lindmayer, J., and Wrigley, C. Y., *Fundamentals of semi-conductor devices* (Van Nostrand).

Kuo, B. C., *Linear networks and systems* (McGraw-Hill).

Smith, S. P., *Problems in electrical engineering* (Constable).

Terman, F. E., *Radio engineers' handbook* (McGraw-Hill).

Thaler, G. J., and Wilcox, M. L., *Electric machines* (Wiley).

Van Valkenburg, M. E., *Network analysis* (Prentice-Hall).

Gray, P. E., and Searle, C. L., *Electronic principles* (Wiley).

Johnson, W. C., *Transmission lines and networks* (McGraw-Hill–Kogakusha International student ed.).

Zeines, B., *Introduction to network analysis.*

Zverev, A. I., *Handbook of filter synthesis* (Wiley).

Additional references may be given during the course.

NX23 Engineering IIE.

Pre-requisite subjects: Pass at Division II or higher standard in SP01 Physics I; Pass at Division I or higher standard in QM01 Mathematics I and NX01 Engineering I.

NX23 Engineering IIE is made up of parts 1 and 4 of Engineering II and III. Refer Schedule 9(b).

1. STRESS ANALYSIS.

The course consists of one lecture a week throughout the year and the equivalent of three hours a week of laboratory work for one term.

The following topics will be covered:

Stress and strain, normal and shear. Tensile compressive and torsion tests to destruction. Elastic and plastic states. Load deformation relation for bars and columns. Torsion of tubes and shafts. Bolted and rivetted joints. Thin walled pressure vessels. Distribution of stress due to bending, curvature moment relations and deflections of simply supported and encastré beams by integration and moment area methods. Shear. Introduction to composite and reinforced beams. Plastic moments, simple plastic analyses of redundant beams. Buckling of columns.

Text-books:

Stephens, R. C., *Strength of materials* (Arnold); *or*

Case, J., and Chilver, A. H., *Strength of materials and structures*, 2nd edition (Arnold).

4. MACHINE DESIGN.

A short course of 27 lectures and of 81 hours' drawing-office tutorial work in the fundamentals of design of machine elements and power transmission systems.

Text-books:

Faires, V. M., *Design of machine elements* (Macmillan).

Siegel, M. J., and others, *Mechanical design of machines* (International Text-book Company).

EITHER

QM02 Pure Mathematics II.

OR

QT02 Mathematical Statistics II.

For syllabuses see under the degree of B.Sc. in the Faculty of Mathematical Sciences.

FOURTH-YEAR SUBJECTS.

NE14 Electrical Engineering IIIA.

Pre-requisite subjects: Pass in NE13 Electrical Engineering II; Pass at Division II or higher standard in SP02 Physics II.

LECTURES: Five lectures a week throughout the year, divided approximately as follows:

(a) MICROWAVE ENGINEERING (18 lectures).

Electromagnetic theory, propagation in free space and in waveguides, fields in guides, modes, coupling, microwave circuit theory, directional couplers, cavities, periodic structures, non-reciprocal components.

(b) ANTENNAS AND PROPAGATION (18 lectures).

Advanced electromagnetism, antenna parameters, theoretical methods: assumed circuit distribution, modal analysis and synthesis, integral equations, geometrical optics; applications to particular antennas, ground wave propagation, ionospheric propagation.

(c) DIGITAL SYSTEMS (36 lectures).

Number systems, arithmetic and logical operations, combinational logic, minimisation techniques, arithmetic units, organisation of a computer, instructions sets and addressing modes, parallel adder, carry look ahead, sequential circuits (asynchronous and clocked), J.K. flip flop, BCD and Gray codes, A/D conversion, memory systems.

(d) COMMUNICATION THEORY (18 lectures).

Signals and spectra; network theory; random signals and noise; noise in amplifiers; modulation systems; sampling; pulse code modulation; information theory; coding.

(e) DESIGN FOR INTEGRATED CIRCUITS (27 lectures).

Semiconductor preparation, processing and properties, planar technology, component formation and isolation, thick and thin film technology, equivalent circuits, interconnections, design of circuits suitable for integration.

Text-books:

Camenzind, H. R., *Circuit design for integrated electronics* (Addison-Wesley).

Carlson, A. B., *Communication systems* (McGraw-Hill).

Collin, R. E., *Foundations for microwave engineering* (McGraw-Hill).

Davies, K., *Ionospheric radio propagation* (U.S. Govt. Printing Office, Dover).

Jordan, E. C., and Balmain, K. G., *Electromagnetic waves and radiating systems* (Prentice-Hall).

Nashelsky, L., *Digital computer theory* (Wiley).

Grove, A. S., *Physics and technology of semi-conductor devices* (Wiley).

Reference books:

Bennett, W. R., *Electrical noise* (McGraw-Hill).

Ginzton, E. L., *Microwave measurements* (McGraw-Hill).

Doyle, J. M., *Thin film and semiconductor integrated circuitry* (McGraw-Hill).

Hancock, J. C., *An introduction to the principles of communication theory* (McGraw-Hill).

Harrington, R. F., *Time harmonic electromagnetic fields* (McGraw-Hill).

Haykin, S. S., *Synthesis of resistor capacitor active filter networks* (McGraw-Hill).

Hill, F. J., and Peterson, G. R., *Introduction to switching theory and logical design* (Wiley).

Hoernes, G. E., and Heilveil, M. F., *Introduction to Boolean algebra and logic design* (McGraw-Hill).

Hoeschele, D. F., *Analog-to-digital, digital-to-analog conversion techniques* (Wiley).

International Telephone and Telegraph Corporation, *Reference data for radio engineers.*

Jasik, H., *Antenna engineering handbook* (McGraw-Hill).

Kraus, J. D., *Antennas* (McGraw-Hill).

Ledley, R. S., *Digital computer and control engineering* (McGraw-Hill).

Lewin, D., *Logical design of switching circuits* (Nelson).

Lynn, D. K., and others, *Analysis and design of integrated circuits* (McGraw-Hill).

Marcus, M. P., *Switching circuits for engineers,* 2nd edition (Prentice-Hall).

Mitra, S. K., *Analysis and synthesis of linear active networks* (Wiley).

Newcomb, R. W., *Active integrated circuit synthesis* (Prentice-Hall).

Terman, F. E., *Radio engineers' handbook* (McGraw-Hill).

Terman, F. E., and Pettit, J. M., *Electronic measurements* (McGraw-Hill).

Richards, R. K., *Electronic digital systems* (Wiley).

Roddy, D., *Introduction to microelectronics* (Pergamon).

Wickes, W. E., *Logic design with integrated circuits* (Wiley).

Zverev, A. I., *Handbook of filter synthesis* (Wiley).

NE24 Electrical Engineering IIIB.

Pre-requisite subjects: Pass in NE13 Electrical Engineering II; Pass at Division II or higher standard in SP02 Physics II.

LECTURES: Four lectures a week throughout the year, chosen from the following topics, some of which may be presented as options. Different topics may be substituted according to circumstances.

(a) NETWORKS (18 lectures).

Synthesis of passive and active networks: LC and RC immittances, transfer functions, approximations and active RC circuits.

(b) Power Systems (18 lectures).

Network representation, theorems, solution methods, symmetrical components, system stability, machine behaviour, steady state and transient stability, network analyser, protection.

(c) Control Systems (18 lectures).

Performance specifications for control system design. Small signal analysis and describing function techniques for non-linear systems. Introduction to state variable methods. Phase plane techniques. Design of state variable feedback controllers.

(d) Machine Language Programming (9 lectures).

Computers as system components, structure of mini computers, instructions, assemblers and loaders, input and output and interrupt features.

(e) Microwave Solid State Electronics (9 lectures).

Principles and application of varistors, varactors, negative resistance diodes, controllable impedence diodes, avalanche diodes, transferred electron devices.

(f) Reliability (9 lectures).

Reliability as a performance characteristic, definitions, types of failure, probability, confidence levels and limits of mean time between failures, prediction from life test data, testing.

(g) Physiology (9 lectures).

Cell membranes, nerve conduction, sensory neurophysiology, retinal processes, colour vision, control system analysis.

(h) Electron Dynamics.

Properties of the atom. Emission and deflection of electrons. The C.R.O., cyclotron, mass spectrometer etc.

(i) Network Theory (27 lectures).

Applied Maths Unit N308: Graph Theory, flow theorems, network optimisation, algorithms.

(j) Specialist Lectures (20 lectures).

Given by practising engineers from industry and government establishments on topics such as operation of power systems, television techniques, telecommunication and radar.

Text-books:

Fitzgerald, A. E., and others, *Electric machinery*, 3rd edition (McGraw-Hill).

D'Azzo, J. J., and Houpis, C. H., *Feedback control system analysis and synthesis* (McGraw-Hill).

Reference books:

Bazovsky, I., *Reliability theory and practice* (Prentice-Hall).

Carlson, A. B., *Communication systems* (McGraw-Hill).

Crary, S. B., *Power system stability*, vols. I and II (Wiley).

Dorf, R. C., *Modern control systems* (Addison Wesley).

Dummer, G. W. A., and Griffin, N. B., *Electronics reliability—calculation and design* (Pergamon).

Elgerd, O. I., *Control systems theory* (McGraw-Hill).

Huskey, H. D., and Korn, G. A. (eds.), *Computer handbook* (McGraw-Hill).

Kuo, F. F., *Network analysis and synthesis* (Wiley).

Melsa, J. L., and Schultz, D. G., *Linear control systems* (McGraw-Hill)

Mullard Australia Pty. Ltd., *Power engineering using thyristors*, vol. I (Mullard).

Truxal, J. G., *Automatic feedback control system synthesis* (McGraw-Hill).

Westinghouse Electric Manufacturing Corporation, *Electrical transmission and distribution reference books.*

Hughes, W. L., *Nonlinear electrical networks* (Ronald Press).

Reif, F., *Fundamentals of statistical and thermal physics* (McGraw-Hill).
Shinners, S. M., *Control system design* (Wiley).
Stevenson, W. D., *Elements of power system analysis* (McGraw-Hill).
Watson, H. A. (ed.), *Microwave semiconductor devices and their circuit applications* (McGraw-Hill).

NE34 Electrical Engineering IIIC.

Pre-requisite subjects: Pass in NE13 Electrical Engineering II; Pass at Division II or higher standard in SP02 Physics II.

(a) Management and Industrial Organisation (27 lectures).

Given by visiting lecturers on industrial relations, occupational safety, trade unions, decision making, management accounting, personnel management, industrial legislation, industrial development, international trade, organisation structures, nature of management etc.

Reference book:

Bethel, L. L., and others, *Industrial organisation and management*, 4th edition (McGraw-Hill).

(b) Experimental Investigation and Seminar (300 hours).

Each candidate will be required to submit reports on one or more projects carried out during the year. This will involve theoretical surveys and the design, development and testing of equipment. The candidate will also be required to present the results of his investigation in the form of seminars and demonstrate his equipment where appropriate.

Reference books:

Candidates should consult the books listed under Section II of the Notes and Instructions to Candidates for Higher Degrees (by thesis).

MECHANICAL ENGINEERING COURSE.

FIRST-YEAR SUBJECTS.

QM01 Mathematics I.

SP01 Physics I.

EITHER

SC01 Chemistry I.

For syllabuses see under the degree of B.Sc. in the Faculty of Mathematical Sciences and Science respectively.

OR

AY01 Psychology I.

For syllabus see under the degree of B.A. in the Faculty of Arts.

OR

NX11 Economics I (Engineering).

This subject consists of the two half-subjects EE1G Macroeconomics IH and EE2G Microeconomics IH.

For syllabuses see under the degree of B.Ec. in the Faculty of Economics.

NX01 Engineering I.

For syllabus see under Chemical Engineering course, first year.

SECOND-YEAR SUBJECTS.

QN12 Applied Mathematics IIB.

For syllabus see under the degree of B.Sc. in the Faculty of Mathematical Sciences.

NM02 Mechanical Engineering I.

Pre-requisite subjects: Pass at Division II or higher standard in SP01 Physics I; Pass at Division I or higher standard in QM01 Mathematics I and NX01 Engineering I; pre-requisite or concurrent subject: NX42 Engineering IIM.

An introductory course in kinematics and dynamics of mechanisms, analysis of machine elements and manufacturing processes leading to a synthesis of systems with emphasis on production technology and systems design. The course is presented in three parts:

Part 1. Theory of machines.

Part 2. Production technology.

Part 3. Machine design.

Preliminary reading:

Street, A., and Alexander, W., *Metals in the service of man* (Penguin).

Begeman, M. L., and Amstead, B. H., *Manufacturing processes*, 6th edition (Wiley).

Krick, E. V., *An introduction to engineering and engineering design* (Wiley).

Text-books:

As for Engineering I, plus

Faires, V. M., *Design of machine elements* (Macmillan).

Mabie, H. H., and Ocvirk, E. W., *Mechanisms and dynamics of machinery*, 2nd edition (Wiley).

Datsko, J., *Material properties and manufacturing processes* (Wiley).

Reference books:

Siegel, M. J., and others, *Mechanical design of machines* (International Text-book Co.).

British Standards Institution. Handbook No. 2 (1953): *Workshop practice. Standard Specifications* and *Codes of Practice* as required for project work.

Baumeister, T., and Marks, L. S. (eds.), *Standard handbook for mechanical engineers* (McGraw-Hill).

Machinery's Handbook (Industrial Press).

Kalpakjian, S., *Mechanical processing of materials* (Van Nostrand).

Moore, H. D., and Kibbey, D. R., *Manufacturing materials and processes* (Irwin).

Sachs, G., *Fundamentals of the working of metals* (Pergamon).

Ruddle, R. W., *The solidification of castings* (Institute of Metals).

Black, P. H., *Theory of metal cutting* (McGraw-Hill).

Bolz, R. W., *Production processes; the producibility handbook* (Penton).

NX42 Engineering IIM.

Pre-requisite subjects: Pass at Division II or higher standard in SP01 Physics I; Pass at Division I or higher standard in QM01 Mathematics I and NX01 Engineering I.

Engineering IIM is made up of parts 1, 2 and 7 of Engineering II and III. Refer Schedule 9(b).

1. Stress Analysis.

The course consists of one lecture a week throughout the year and the equivalent of three hours a week of laboratory work for one term.

The following topics will be covered:

Mechanical properties of materials, stresses and strains, normal and shear, stress-strain relationships, temperature stresses, elastic theory. Cylinders; thick and thin walled theories. Torsion in round shafts and tubes. Beams; distribution of stress due to bending, curvature-moment relationships. Beams; longitudinal and normal shear stresses. Beams; composite and reinforced bending stresses. Beams; deflections of simply supported and encastré beams by integration and moment area methods. Statically indeterminate beams. Columns; short, eccentric loads; long, buckling loads, tie-bars. Combined stresses, failure theories, stress concentration. Experimental stress analysis to illustrate the above.

Text-books:

Stephens, R. C., *Strength of materials* (Arnold); *or*

Case, J., and Chilver, A. H., *Strength of materials and structures*, 2nd edition (Arnold).

2. Structural Engineering.

The course consists of one lecture and three hours' practical or design work a week for two terms.

The following topics will be covered:

Design of tension and compression members. Statically indeterminate problems in tension and compression. R.C. columns. Riveted, bolted and welded joints. Beams; built-up beams, composite beams, R.C. and prestressed concrete beams. Statically indeterminate beams—moment distribution—slope deflection equations. Simple trusses and rigid pointed frames, simple foundations, slabs.

Text-books:

Standards Association of Australia:

Code AS. 1480-1973, S.A.A. *code for concrete structures.*

Code AS. 1250-1972.

Code AS. 1170, S.A.A. loading code Part 1, *Dead and live loads,* Part 2, *Wind forces.*

Reference books:

Norris, C. H., and Wilbur, J. B., *Elementary structural analysis* (McGraw-Hill).

Cement and Concrete Assoc. of Aust., *Australian reinforced concrete handbook,* 2nd edition (The Association).

7. ENGINEERING MATERIALS.

The course consists of one lecture a week throughout the year and the equivalent of three hours a week of laboratory work for one term.

The following topics will be covered:

Stress-strain behaviour in the real and idealised state; atomic bonding and packing; crystal structure; engineering applications of X-rays; the formation of single crystal and polycrystalline materials; equilibrium and non-equilibrium phase reactions; heat treatment; metallography and selection of steels; cast irons; deformation and failure of crystalline materials; corrosion; the structure, properties and applications of polymeric materials.

Text-book:

Van Vlack, L. H., *Materials science for engineers* (Addison-Wesley).

Reference books:

Guy, A. G., *Introduction to materials science* (McGraw-Hill).

Moffatt, W. G. (ed.), *The structure and properties of materials,* vols. I-III (Wiley).

Cullity, B. D., *Elements of X-ray diffraction* (Addison-Wesley).

Van Vlack, L. H., *Elements of materials science* (Addison-Wesley).

Guy, A. G., *Elements of physical metallurgy* (Addison-Wesley).

Polakowski, N. H., and Ripling, E. J., *Strength and structure of engineering materials* (Prentice-Hall).

Van Vlack, L. H., *Physical ceramics for engineers* (Addison-Wesley).

THIRD-YEAR SUBJECTS.

NM03 Mechanical Engineering IIA.

Pre-requisite subjects: Pass in NM02 Mechanical Engineering I and NX42 Engineering IIM; Pass at Division I or higher standard in QN12 Applied Mathematics IIB.

An introductory course in fundamental and applied thermodynamics, heat transfer, and fluid mechanics, including about 96 lectures and tutorials and 80 hours' laboratory work.

(a) THERMODYNAMICS.

Basic laws of thermodynamics. Behaviour of gases, gas mixtures and gas-vapour mixtures. Introduction to combustion. Ideal cycle analysis of engineering systems. Introduction to heat transfer.

Text-books:

Van Wylen, G. J., and Sonntag, R. E., *Fundamentals of classical thermodynamics,* 2nd edition (Wiley).

Kreith, F., *Principles of heat transfer,* 3rd edition (INTEXT Educational Publishers).

Haywood, R. W., *Thermodynamic tables—S.I. units* (C.U.P.).

Reference books:

Wallace, F. J., and Linning, W. A., *Basic engineering thermodynamics* (Pitman).

Rogers, G. F. C., and Mayhew, Y. R., *Engineering thermodynamics work and heat transfer*, S.I. edition (Longmans).

Lee, J. F., and Sears, F. W., *Thermodynamics* (Addison-Wesley).

Haywood, R. W., *Analysis of engineering cycles* (Pergamon).

Faires, V. M., *Thermodynamics*, 5th edition (Macmillan).

Reynolds, W. C., and Perkins, H. C., *Engineering thermodynamics* (McGraw-Hill).

Reynolds, A. J., *Thermofluid dynamics* (Wiley).

Holman, J. P., *Heat transfer*, 3rd edition (McGraw-Hill).

Wood, B. D., *Applications of thermodynamics* (Addison-Wesley).

Simonson, J. R., *An introduction to engineering heat transfer* (McGraw-Hill).

(b) Fluid Mechanics.

Forces and acceleration in fluid flows; flow measurement; conservation laws applied to fluid flow; pipe systems and incompressible flow machines; dimensional analysis and similarity; potential flow; circulation and aerofoil theory; an introduction to turbulence and boundary layer theory.

Text-books:

Sabersky, R. H., and Acosta, A. J., *Fluid flow: a first class course in fluid mechanics* (Macmillan).

Duncan, W. J., Thom, A. S., and Young, A. D., *Mechanics of fluids*, S.I. Unit edition (Arnold).

Reference books:

Daugherty, R. L., and Franzini, J. B., *Fluid mechanics with engineering applications* (McGraw-Hill).

Batchelor, G. K., *An introduction to fluid dynamics* (C.U.P.).

Glauert, H., *The elements of aerofoil and airscrew theory* (C.U.P.).

Tietjens, O. C., and Prandtl, L., *Applied hydro- and aero-mechanics* (McGraw-Hill).

Mises, R. Von, *Theory of flight* (McGraw-Hill).

Pankhurst, R. C., and Holder, D. W., *Wind-tunnel technique* (Pitman).

NM13 Mechanical Engineering IIB.

Pre-requisite subjects: Pass in NM02 Mechanical Engineering I and NX42 Engineering IIM; Pass at Division I or higher standard in QN12 Applied Mathematics IIB.

An introductory course in mechanical system dynamics and design, including lectures, tutorials, design tutorials and laboratory work.

(a) Mechanical System Dynamics.

Kinematics and dynamics of machinery, including spur, bevel, helical and worm gearing; universal couplings; governors; gyroscopes; flywheels' crank effort diagrams; synthesis; force analysis of plane mechanisms; dynamic balancing of rotating and reciprocating systems; forced vibrations; whirling of shafts. Instrumentation for dynamic measurements, recording and analysis, including electronic techniques. Introduction to automatic control.

Text-books:

Hannah, J., and Stephens, R. C., *Mechanics of machines (Advanced theory and examples)* (Arnold).

Goldberg, J. H., *Automatic controls* (Allyn and Bacon).

Reference books:

Hirschhorn, J., *Dynamics of machinery* (Nelson).

Martin, G. H., *Kinematics and dynamics of machines* (McGraw-Hill).

Shigley, J. E., *Kinematic analysis of mechanisms* (McGraw-Hill).

Malvino, A. P., *Electronic instrumentation fundamentals* (McGraw-Hill).

Cerni, R. H., and Foster, L. E., *Instrumentation for engineering measurements* (Wiley).

Brookes, A. M. P., *Basic instrumentation for engineers and physicists* (Pergamon).

Di Steffano, J. J., and others, *Feedback and control systems* (Schaum).

(b) MECHANICAL SYSTEM DESIGN.

A course of lectures and tutorials on the design of machine elements and power transmission systems. The application of technical design factors when influenced by economic factors, current practice and manufacturing methods. Materials and their use; fabrication processes; the use of stock components; the application of combined stresses and theories of failure; fatigue and creep; factors of safety and design stresses; applications of basic principles in the design of shafts subject to combined loading; bearings, couplings and clutches; belt drives, gearing, brakes and other machine components and assemblies.

Text-books:

Faires, V. M., *Design of machine elements* (Macmillan).

British Standards Institution:

B.S. 436, *Machine cut gears. A. Helical and straight spur* (B.S.I.).

B.S. 436, Part 1, 1967, *Spur and helical machine cut gears* (B.S.I.).

B.S. 545, 1949, *Bevel gears (machine cut)* (B.S.I.).

Standards Association of Australia, A.S. B66, 1969, *Worm gearing* (inch series).

Reference books:

Siegel, M. J., and others, *Mechanical design of machines* (International Text Book Co.).

Black, P., *Machine design* (McGraw-Hill).

Barwell, F. T., *Lubrication of bearings* (Butterworth).

Baumeister, T., and Marks, L. S. (eds.), *Standard handbook for mechanical engineers* (McGraw-Hill).

Battelle Memorial Institute, *Prevention of failure of metals under repeated stress.*

Machinery's handbook (Industrial Press).

British Standards' Institution Handbook No. 2 (1953), *Workshop practice.*

Merritt, H. E., *Gears* (Pitman).

Buckingham, E., *Spur gears* (McGraw-Hill).

Standard specifications and codes of practice as required for project work.

Engineering IIIM.

Pre-requisite subjects: Pass in NM02 Mechanical Engineering I and NX42 Engineering IIM; Pass at Division I or higher standard in QN12 Applied Mathematics IIB.

Mechanical Engineering students must take one of the following Engineering IIIM courses which are made up of parts of Engineering II and III (refer Schedule 9(b):

EITHER

NX73 Engineering IIIMA.

Parts 5, 6 and 9.

OR

NX83 Engineering IIIMB.

Parts 5, 6 and 8.

OR

NX43 Engineering IIIMC.

Parts 5, 6 and 10.

The syllabuses for these parts are as follows:

5. ELECTRICAL CIRCUITS AND MACHINES.

The course consists of one lecture a week throughout the year and the equivalent of three hours a week of laboratory work for one term.

The lecture course comprises:

(a) One lecture a week for one term devoted to network theory, including transient and steady state analysis of simple networks, network theorems, and the solution of three-phase networks.

(b) One lecture a week for one term devoted to self and mutual inductance and coupled coils, magnetic circuits and the calculation of m.m.f., transformers, direct current motors and generators.

(c) One lecture a week for one term devoted to synchronous motors and generators, single phase and three-phase induction motors, and machine characteristics.

Practical work in the laboratory is designed to illustrate the subject matter of the lectures.

Text-book:

Smith, R. J., *Circuits, devices and systems* (Wiley).

Reference books:

Hayt, W. H., and Kemmerley, J. E., *Engineering circuit analysis* (McGraw-Hill).

Hirst, A. W., *Applied electricity* (Blackie).

Fitzgerald, A. E., and Higginbotham, D. E., *Basic electrical engineering*, 3rd edition (McGraw-Hill).

6. ELECTRONICS.

The course consists of one lecture a week throughout the year and the equivalent of three hours a week laboratory work for one term.

Conduction in solids. The junction diode. Thermionic emission. The vacuum diode. Rectifier circuits, filtering. Detector circuits. Wave shaping circuits. Diode logic circuits and symbols, truth tables.

Bipolar junction transistors, construction operation and characteristic curves. Common emitter and common collector circuits. Small signal parameters, equivalent circuits. Biasing systems, design methods. Field effect transistors and thyristors, construction and operation. Control methods in thyristor circuits.

Multistage amplifiers, RC and transformer coupling, frequency response. Large-signal amplifiers, push pull amplifiers, classes of operation. Feedback in amplifiers, effect on stability and performance. Regulated power supplies and operational amplifiers.

Practical work in the laboratory is designed to illustrate the subject matter of the lectures.

Text-book:

Smith, R. J., *Circuits, devices and systems* (Wiley).

Reference books:

Lowenberg, E. C., *Theory and problems of electronic circuits* (Schaum).

Van der Ziel, A., *Introduction to electronic circuits* (Allyn and Bacon).

8. MATERIALS ENGINEERING.

A course of lectures and practical work from the following topics:

The metallography, properties and heat treatment of steels, cast irons, aluminium alloys and copper-based alloys; the selection of tool steels; the processes and metallurgy of welding; the plastic deformation and failure of metals and alloys; corrosion; the structure and properties of polymeric materials.

9. MATHEMATICS III (ENGINEERING).

Pre-requisite to this part: a pass in QN02 Applied Mathematics II (old course), *or* QN12 Applied Mathematics IIB at Division I or higher standard.

Engineering analysis, numerical analysis, operations research.

Reference books:

Crandall, S. H., *Engineering analysis* (McGraw-Hill).

Potts, R. B., and Oliver, R. M., *Flows in transportation networks* (Academic Press).

Shaw, F. S., *An introduction to relaxation methods* (Dover).

10. ECONOMICS (ENGINEERING).

This part consists of the two half-subjects EE1G Macroeconomics IH and EE2G Microeconomics IH.

For syllabuses see under the degree of B.Ec. in the Faculty of Economics.

FOURTH-YEAR SUBJECTS.

Except by special permission of the Faculty of Engineering a student shall not proceed to any subject in the fourth year of the course until he has completed the first three years of the course.

NM24 Mechanical Engineering IIIA.

Pre-requisite subjects: All subjects included in the first three years of the Mechanical Engineering course, except by special permission of the Faculty of Engineering.

An advanced course in fundamental and applied thermodynamics, heat transfer and fluid mechanics. The course is covered by about 90 lectures and tutorials and 120 hours' of laboratory or project work.

(a) THERMODYNAMICS.

A course of lectures and laboratory work in thermodynamics and heat transfer. Including advanced thermodynamics of fluids with application to internal combustion engines, gas turbines, steam turbines, refrigeration, psychrometry and air conditioning, compressed air; fuels and combustion; heat transmission with application to boilers, condensers, and other heat exchangers; nuclear power plant.

Text-books:

Van Wylen, G. J., and Sonntag, R. E., *Fundamentals of classical thermodynamics*, 2nd edition (Wiley).

Threlkeld, J. L., *Thermal environmental engineering* (Prentice-Hall).

Holman, J. P., *Heat transfer*, 3rd edition (McGraw-Hill).

Haywood, R. W., *Thermodynamic tables in S.I. units* (C.U.P.).

Reference books:

Reynolds, W. C., and Perkins, H. C., *Engineering thermodynamics* (McGraw-Hill).

Schmidt, E., *Thermodynamics* (Clarendon Press).

Obert, E. F., *Internal combustion engines* (International Text Book Co.).

Pye, D. R., *Internal combustion engine*, Vols. I and II (O.U.P.).

Taylor, C. F., *The internal combustion engine in theory and practice*, Vol. I (Wiley).

Cohen, H., and Rogers, G. *Gas turbine theory* (Longmans).

Jennings, B. H., and Rogers, W. L., *Gas turbine analysis and practice* (McGraw-Hill).

Kearton, W. J., *Steam turbine theory and practice* (Pitman).

Simonson, J. R., *An introduction to engineering heat transfer* (McGraw-Hill).

Eckert, E. R. G., and Drake, R. M., *Heat and mass transfer* (McGraw-Hill).

Jordan, R. C., and Priester, G. B., *Refrigeration and air conditioning* (Constable).

Stoecker, W. F., *Refrigeration and air conditioning* (McGraw-Hill).

Faires, V. M., *Thermodynamics*, 5th edition (Macmillan).

American Society of Heating, Refrigerating and Air-conditioning Engineers, *Guide and data book—fundamentals and equipment, Guide and data book—applications.*

Rogers, G. F. C., and Mayhew, Y. R., *Engineering thermodynamics work and heat transfer, S.I. units* (Longmans).

Wallace, F. J., and Linning, *Basic engineering thermodynamics, S.I. units* (Pitman).

Reynolds, A. J., *Thermofluid dynamics* (Wiley).

(b) Fluid Mechanics.

A course of lectures and laboratory work in fundamental and applied fluid dynamics including: laminar and turbulent boundary layers; compressible fluid flow; compressible flow machines.

Text-books:

Ferguson, T. B., *The centrifugal compressor stage* (Butterworth).

Liepmann, H. W., and Roshko, A., *Elements of gas dynamics* (Wiley).

Reference books:

Goldstein, S., *Modern developments in fluid dynamics* (O.U.P.).

Prandtl, L., *The essentials of fluid dynamics* (Blackie).

Tietjens, O. G., and Prandtl, L., *Applied hydro and aero mechanics* (Dover).

Ower, E., and Pankhurst, R. C. ,*The measurement of air flow* (Pergamon).

Pankhurst, R. C., and Holder, D. W., *Wind-tunnel technique* (Pitman).

Glauert, H., *The elements of aerofoil and airscrew theory* (C.U.P.).

Howarth, L., *Modern developments in fluid dynamics—high speed flow* (O.U.P.).

Dixon, S. L., *Fluid mechanics, thermodynamics of turbomachinery* (Pergamon).

Cohen, B., and Rogers, G., *Gas turbine theory* (Longmans).

Courant, R., and Friedrichs, K. O., *Supersonic flow and shock waves* (Interscience).

Cox, R. N., and Crabtree, L. F., *Elements of hypersonic aerodynamics* (E.U.P.).

Schlichting, H., *Boundary layer theory* (McGraw-Hill).

NM34 Mechanical Engineering IIIB.

Pre-requisite subjects: All subjects included in the first three years of the Mechanical Engineering course, except by special permission of the Faculty of Engineering.

An advanced course of lectures, tutorials and laboratory work in mechanical system dynamics and design, involving lectures and tutorials and laboratory and drawing office tutorial work.

(a) Mechanical System Dynamics.

A course in system dynamics including *Mechanical vibrations*: Two-degree-of-freedom systems, dynamic absorbers, vehicle suspension; multi-degree-of-freedom systems, normal coordinates and principal modes, matrix iteration methods, Holzer method for torsional systems; analysis of continuous systems; non-linear vibrations; application of Lagranges equations.

Automatic control: Transient and frequency response of linear dynamic systems. Complex plane diagrams, poles and zeros. Elements of control systems; proportional, integral and derivative control; optimisation.

Engineering acoustics: Acoustic fields, acoustic wave propagation; transmission of sound through walls; sound sources and sound radiation; room acoustics.

Text-books:

As for Mechanical Engineering IIB, together with
Thomson, W. T., *Vibration theory and applications* (Prentice-Hall).
Ford, R. D., *Introduction to acoustics* (Elsevier).

Reference books:

Prentis, J. M., *Dynamics of mechanical systems* (Longmans).
Phelan, R. M., *Dynamics of machinery* (McGraw-Hill).
Den Hartog, J. P., *Mechanical vibrations* (McGraw-Hill).
Macduff, J. N., and Curreri, J. R., *Vibration control* (McGraw-Hill).
Burton, R., *Vibration and impact* (Addison-Wesley).
Raven, F. H., *Automatic control engineering* (McGraw-Hill).
Harris, C. M., *Handbook of noise control* (McGraw-Hill).
Kinsler, L. E., and Frey, A. R., *Fundamentals of acoustics* (Wiley).
Beranek, L. L., *Noise and vibration control* (McGraw-Hill).
Di Stefano, J. J., and others, *Feedback and control systems* (Schaum).

(b) Mechanical System Design.

A course of lectures and drawing office tutorial work on advanced aspects of the design of machine members, mechanical assemblies and systems including treatments of various types of gears, lubrication and bearing design; reciprocating engine components; mathematical and experimental stress analysis, fatigue, creep, design for high speed operation; curved beam theory; the economics of product design and design in relation to manufacturing method.

The work includes a design project involving many aspects of engineering science and practice including thermodynamics, fluid mechanics, dynamics of machines, stress analysis, social and economic factors.

Text-books:

As for Mechanical Engineering IIA, IIIA and IIB and IIIB, together with
Juvinall, R. C., *Engineering considerations of stress strain and strength* (McGraw-Hill); *or*
Timoshenko, S., and Goodier, I. N., *Theory of elasticity*, 3rd edition (McGraw-Hill).

Reference books:

As for Mechanical Engineering IIB, together with the following:
Dixon, J. R., *Design engineering* (McGraw-Hill).
Rogowski, A. R., *Elements of internal combustion engines* (McGraw-Hill).
Lichty, L. C., *Internal combustion engines* (McGraw-Hill).
Mackerle, J., *Air-cooled motor engines* (Cleaver Hume).
Howarth, M. H., *The design of high speed diesel engines* (Constable).
Chou, P. C., and Pagano, N. J., *Elasticity* (Van Nostrand); *or*
Timoshenko, S., *Theory of elastic stability* (McGraw-Hill).
Timoshenko, S., *Theory of plates and shells* (McGraw-Hill).
Lubahn, J. D., and Felgar, *Plasticity and creep of metals* (Wiley).
Cazaud, R., *Fatigue of metals*, tr. by Fenner (Chapman and Hall).
Marin, J., *Mechanical properties of materials and design* (McGraw-Hill).
Finnie, I., and Heller, W. R., *Creep of engineering materials* (McGraw-Hill).
Durelli, A. J., and Riley, W. F., *Introduction to photomechanics* (Prentice-Hall).
Shames, I. H., *Mechanics of deformable solids* (Prentice-Hall).
Merritt, H. E., *Gears* (Pitman).
Shaw, M. C., and Macks, E. F., *Analysis and lubrication of bearings* (McGraw-Hill).
Barwell, F. T., *Lubrication of bearings* (Butterworth).

NM44 Mechanical Engineering IIIC.

Pre-requisite subjects: All subjects included in the first three years of the Mechanical Engineering course, except by special permission of the Faculty of Engineering.

1. Two seminars are to be presented by each final-year student on selected topics, one sociological and one technical.

2. A limited research-type project is undertaken by each student during the final year, and involves a written thesis submitted by the end of November.

3. A major design project is undertaken by each student during the final year and is to be presented by the end of November.

NM85 Engineering Management.

Pre-requisite subjects: All subjects included in the first three years of the Mechanical Engineering course, except by special permission of the Faculty of Engineering.

This course, covering certain of the more important managerial and non-technical factors which regulate the practice of Engineering, has been designed to meet the requirements of the engineering student about to enter professional practice.

The course is given in two parts which must be taken concurrently. Part A is concerned with the principles of organisation and management and Part B with accounting principles from an engineering viewpoint.

PART A.—INDUSTRIAL ORGANISATION AND MANAGEMENT.

Part A comprises one lecture a week throughout the year and several visits to engineering works. The course gives an introduction to economic development, forms of business ownership, business finance, organisation, industrial engineering, quality control, plant location and layout, industrial relations, and linear programming as an aid to business decision making.

Text-books:

Riggs, J. L., *Production systems: planning, analysis, and control* (John Wiley).

Reference books:

Robertson, S. A., *Engineering management* (Blackie).
Buffa, E. S., *Modern production management* (John Wiley).
Lewis, W. A., *The theory of economic growth* (George Allen and Unwin).
S.A. Laws, Statutes, etc., *Companies Act*, 1962.
Paish, F. W., *Business finance* (Pitman).
Albers, H. H., *Organised executive action* (John Wiley).
Maynard, H. B., *Industrial engineering handbook* (McGraw-Hill).
Taylor, F. W., *Principles of scientific management* (Harpers).
Barnes, R. M., *Work sampling* (John Wiley).
Juran, J. M., *Quality control handbook* (McGraw-Hill).
Ferguson, R. O., and Sargent, L. F., *Linear programming* (McGraw-Hill).

PART B.—ESSENTIALS OF ACCOUNTING.

Part B comprises one lecture a week and one tutorial a fortnight for two terms. Written assignments will be set each fortnight. The scope of the course is as follows:

The double-entry framework and the recording of business transactions; preparation of accounting reports for different kinds of accounting entities; analysis and interpretation of accounting reports; introduction to financial mathematics; limitations of accounting data.

Text-book:

Anthony, R. N., *Essentials of accounting* (Addison-Wesley).

Reference books:

Mathews, R. L., *The accounting framework* (Cheshire).
Gordon, M. J., and Shillinglaw, G., *Accounting, a management approach*, 4th edition (Irwin).

HONOURS DEGREE OF BACHELOR OF ENGINEERING

Work for the Honours degree of Bachelor of Engineering is taken concurrently with that of the final year of the Ordinary degree course.

NH99 Chemical Engineering for the Honours degree of B.E.

The work for the Honours degree will consist of the work prescribed for the Ordinary degree plus such other work as the Chairman of the Department may deem desirable. Honours candidates will be required to show a much greater depth of understanding than that required of Pass degree candidates.

NC99 Civil Engineering for the Honours degree of B.E.
and
NC89 Civil Engineering IIID.

The work for the Honours degree will consist of the full course of lectures prescribed for the final year of the Ordinary degree and in addition candidates taking Honours will:

(a) take the subject NC89 Civil Engineering IIID, consisting of special lectures at an advanced level, and pass an examination in that subject; and

(b) undertake a laboratory project, which may be an extension of the project taken in the practical work of the Ordinary degree or may be a separate project.

NE99 Electrical Engineering for the Honours degree of B.E.

The work for the Honours degree will consist of the full course of lecture and laboratory project work prescribed for the final year of the Ordinary degree and in addition candidates taking Honours will attend special lectures at an advanced level. Honours candidates will be required to reach a significantly higher standard in all sections of the work than that required of Pass degree candidates.

(a) Optical Electronics (9 lectures).

Electroluminescence, light emitting diodes, lasers, modulation, guiding structures, detectors, noise, communication.

(b) Communications Theory (9 lectures).

Detection of signals in noise, classification of signals and receivers, coherent or synchronous detection, matched filter, minimum mean square error filters, decision theory, Bayes criterion, ideal observer, minimax criterion, Neyman-Pearson criterion, operating characteristic, best estimates.

(c) Signal Processing (18 lectures).

Orthogonal functions and transforms, ubiquity of convolution, exponential transforms—Fourier, Laplace, z, sources of orthogonal functions, discrete and fast transforms, circular convolution, time-bandwidth product, spectral estimation, Fourier transforms in nature, holography, envelope-phase relations, cepstral alanysis, digital filters, nonlinear processing.

(d) Control (9 lectures).

Decoupled systems, observability and controllability. Introduction to optimal control, calculus of variations, maximum principle, simple minimum time, minimum fuel problems.

Reference: McClausland, I., *Introduction to optimal control* (Wiley).

(e) Generalised Systems (9 lectures).

Nature of systems engineering. Classification methods for complex systems. Effective computability, the quantal limit. Optimisation methods: linear and stochastic programming. Theory of games. Optimal strategies. Solution by linear programming techniques.

NM99 Mechanical Engineering for the Honours degree of B.E.

The work for the Honours degree will include the full course of lectures prescribed for the final year of the Ordinary degree and, in addition, will include an elective course of special lectures or tutorials appropriate to the more advanced work of the honours design and research type projects. The laboratory project in the Honours course is more ambitious than that for the Ordinary degree and is to be submitted as a thesis in the first week of December.

HONOURS DEGREE OF BACHELOR OF APPLIED SCIENCE

NH89 Applied Chemistry for the Honours degree of B.App.Sc.

NH79 Primary Metallurgy for the Honours degree of B.App.Sc.

NH69 Secondary Metallurgy for the Honours degree of B.App.Sc.

Candidates may choose one of Applied Chemistry, Primary Metallurgy, and Secondary Metallurgy as a principal subject. The course will consist of lectures, seminars and courses of reading in advanced aspects of the principal subject and in such other subjects as the Chairman of the Department may deem necessary. Each candidate will be required to give all the time not required for lectures to research and design projects. Candidates may be required to satisfy the examiners that they have a reading knowledge of French and German.

OF THE DEGREE OF

MASTER OF ENGINEERING

REGULATIONS

1. The following persons may be candidates for the degree of Master of Engineering—

(a) *To proceed under Regulation* 3:

(i) a candidate who has qualified in the University of Adelaide for the Honours degree of Bachelor of Engineering or for the Ordinary degree of Bachelor of Engineering at a standard which the Faculty deems sufficiently high; or

(ii) a candidate who holds in another university a qualification accepted by the Faculty of Engineering as equivalent to the Honours degree of Bachelor of Engineering in the University of Adelaide; or

(iii) a candidate who has qualified for the degree of Bachelor of Engineering in the University of Adelaide and has had at least three years of appropriate practical engineering experience approved by the Faculty.

(b) *To proceed under Regulation* 4:

a candidate who has qualified for the degree of Bachelor of Engineering in the University of Adelaide: provided that a candidate who has qualified for only the Ordinary Degree in the University of Adelaide may not present a thesis relating to research work carried out by him in a department of the University of Adelaide unless he had had three years' post-graduate professional experience before commencing his research in the Department.

2. Subject to the approval of the Council, the Faculty may, in special cases, and subject to such conditions (if any) as it may see fit to impose in each case, accept as a candidate for the degree under regulation 3 a person who does not hold a degree of a university, but has given evidence satisfactory to the Faculty of his fitness to undertake work for the degree.

3. To qualify for the degree under this regulation a candidate shall:

(a) after consultation with the Head of the Department in which the work falls, submit in writing for approval by the Faculty a subject of advanced full-time study and research designed to extend over at least one calendar year;

(b) after approval of the subject by the Faculty undertake, within the University of Adelaide and under the direction of a supervisor or supervisors appointed by the Faculty, the course of advanced study and research;

(c) if so required by the Faculty pass an examination on his course of advanced study;

(d) present a thesis embodying the results of his research; and

(e) submit evidence satisfactory to the Faculty that he has had at least two years' appropriate practical engineering experience.

4. To qualify for the degree under this regulation a candidate shall—

(a) submit in writing for approval by the Faculty of Engineering the subject on which he proposes to present a thesis;

(b) not earlier than three academic terms after approval of the subject by the Faculty present a thesis which may be (i) an original design for some engineering work, or (ii) an account, giving evidence of ability on the part of the candidate to cope successfully with engineering difficulties, of some engineering work for the design or construction of which the candidate has been largely responsible, or (iii) an account of some original enquiry or investigation made by him into some matter connected with engineering;

(c) if so required by the Faculty, adduce evidence to its satisfaction of the originality of, and the degree of his responsibility for, his design or thesis;

(d) if so required by the Faculty pass an examination, written or oral or both, in the field of study immediately relevant to his thesis; and

(e) submit evidence satisfactory to the Faculty that he has had at least three years' practical experience in appropriate engineering work.

5. (a) On completion of his work the candidate shall lodge with the Registrar three copies of his thesis prepared in accordance with directions given to candidates from time to time.*

(b) Unless the Faculty expressly approve an extension of time in a particular case the thesis shall be submitted within twelve academic terms from the date of approval of the candidate's subject by the Faculty.

(c) On submission of the thesis the Faculty shall nominate examiners, who may recommend that the thesis—

(i) be accepted; or

(ii) be sent back to the candidate for revision; or

(iii) be rejected.

* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

6. The fees to be paid by candidates shall be prescribed from time to time by the Council, and the schedule of fees so prescribed shall be published in the University Calendar.

7. A candidate who fulfils the requirements of these regulations and satisfies the examiners under regulation 5 may on the recommendation of the Faculty be admitted to the degree of Master of Engineering.

Regulations allowed 12 December, 1963.

OF THE DEGREE OF

MASTER OF ENGINEERING SCIENCE

REGULATIONS

1. There shall be a degree of Master of Engineering Science.

2. The following may be accepted as a candidate for the degree:

(i) a person who has qualified in the University of Adelaide for the Honours degree of Bachelor of Engineering; or

(ii) a person who holds in another university a qualification accepted by the Faculty of Engineering as being equivalent to the Honours degree of Bachelor of Engineering in the University of Adelaide; or

(iii) a person who has qualified in the University of Adelaide for the degree of Bachelor of Engineering or who holds in another university a qualification accepted by the Faculty of Engineering as being equivalent to the degree of Bachelor of Engineering in the University of Adelaide, and who has had at least three years of appropriate practical experience approved by the Faculty.

3. With the approval of the Council the Faculty may, subject to such conditions (if any) as it may see fit to impose in each case, accept as a candidate for the degree a person who does not hold a degree of a university, or who holds a university degree not regarded as equivalent to the degree of Bachelor of Engineering in the University of Adelaide, but who has given evidence satisfactory to the Faculty of his fitness to undertake work for the degree.

4. A candidate shall be admitted on probation. The period of probation shall not exceed six months in the case of a full-time candidate nor twelve months in the case of a part-time candidate. At the end of the period each candidate's performance shall be reviewed by the Faculty of Engineering and his candidature confirmed, with or without special conditions, or terminated.

5. A candidate's progress shall be reviewed by the Faculty at the end of each academic year. If, in the opinion of the Faculty of Engineering, a candidate is not making satisfactory progress the Faculty may, with the consent of the Council, terminate his candidature.

6. To qualify for the degree a candidate shall:

(a) on completion of any preliminary work which may be prescribed in the schedules and after consultation with the Chairman of the Department in which the majority of his work falls, submit in writing to the Academic Registrar, for approval by the Faculty, the programme of advanced study and project work as prescribed in the schedules and designed to extend over either one calendar year if taken full-time or not less than two and not more than five calendar years if taken part-time;

(b) undertake, within the University and under the direction of a supervisor or supervisors appointed by the Faculty, the prescribed programme of advanced study and project work, except that if for academic reasons the Faculty so permits parts of the study may be undertaken at other tertiary educational institutions, but such parts shall not however count for more than one-sixth of the work for the degree;

(c) pass such examinations on his course of advanced study as may be required by the Faculty; and

(d) present a thesis embodying the results of his project work.

7. A candidate may not count a subject or closely related subject or part of a subject already presented for another degree or diploma.

8. (a) On completion of his work the candidate shall lodge with the Academic Registrar three copies of his thesis prepared in accordance with directions given to candidates from time to time.*

(b) Unless the Faculty expressly approves an extension of time in a particular case the thesis shall be submitted within six months of the completion of the candidate's programme.

(c) On submission or re-submission of the thesis the Faculty shall nominate examiners who may recommend that it:

(i) be accepted, with or without conditions; or

(ii) be accepted, with or without conditions, subject to satisfactory oral examinations; or

(iii) be sent back to the candidate for revision; or

(iv) be rejected.

9. A candidate who fulfils the requirements of these regulations may, on the recommendation of the Faculty, be admitted to the degree of Master of Engineering Science.

Regulations awaiting allowance at time of printing.

* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

SCHEDULES

(Made by the Council under Regulation 6.)

Schedule I: Preliminary Work

1. A person whose qualifications have been accepted under either section (i) or section (ii) of regulation 2 shall be deemed to have satisfied the requirements of this schedule.

2. Before being admitted either under section (iii) of regulation 2 or under regulation 3 a person shall complete the requirements of this schedule by undertaking, and satisfying the examiners in, such courses of study and/or other work as may in his case be prescribed by the Faculty of Engineering.

Schedule II: Courses of Study and Project Work

The programme of study and project work shall consist of:

(i) supervised project work which shall be not less than one-third of the work for the degree;

(ii) graduate courses and seminars; and

(iii) other relevant courses, making up not more than one-third of the work for the degree, as may be prescribed by the Faculty of Engineering.

OF THE DEGREE OF

MASTER OF ENGINEERING SCIENCE
(COURSE WORK)

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Engineering: N.

The second letter identifies the department teaching the subject, as follows:

Chemical Engineering - - -	H	Electrical Engineering - - -	E
Civil Engineering - - - -	C	Mechanical Engineering - -	M

The digits 05 indicate that it is a subject for the degree of Master of Engineering.

MASTER OF ENGINEERING SCIENCE.

This degree is awarded for work within the University, including supervised project work, thesis, and courses where relevant. The credit obtained for courses may not be more than two thirds of the total. The total period of study and project is designed to be one year.

Courses for each candidate are selected in consultation with a supervisor, and may include undergraduate courses given in other faculties. Courses available in departments within the Faculty of Engineering in 1975 are listed below, and will be offered according to demand. Additional courses may be available in special circumstances.

NH05 Chemical Engineering for the degree of M.Eng.Sc. (Course Work).

Transport Phenomena.
Process Analysis and Design.
Process Control.
Process Identification.
Atmospheric Particles.

NC05 Civil Engineering for the degree of M.Eng.Sc. (Course Work).

Concrete Structure.
Computer Analysis of Structures.
Coastal Zone Dynamics.
Transient Analysis of Hydraulic Systems.
Water Resource Systems.
Theory of Elasticity.
Geotechnical Engineering.
Finite Element Method of Analysis.
Plates and Shells.

NE05 Electrical Engineering for the degree of M.Eng.Sc. (Course Work).

Synthesis of Active and Passive Linear Circuits.
Computer Aided Analysis and Design.
Power System Dynamics.
Communication Systems.
Signals and Systems.
Digital Systems.

NM05 Mechanical Engineering for the degree of M.Eng.Sc. (Course Work).

Vibration and Random Processes.
Fundamental Fluid Mechanics and Acoustics.
Applied Acoustics and Noise Control.

OF THE DEGREE OF

MASTER OF APPLIED SCIENCE

REGULATIONS

1. The following persons may become candidates for the degree of Master of Applied Science: (a) Bachelors of Applied Science, (b) Bachelors of Engineering, (c) Bachelors of Science, and (d) other graduates whose academic qualifications are accepted by the Faculty of Engineering as sufficient:

Provided that, subject to the approval of the Council, the Faculty of Engineering may, in special cases and subject to such conditions (if any) as it may see fit to impose in each case, accept as a candidate for the degree a person who does not hold a degree of a University, but has given evidence satisfactory to the Faculty of his fitness to undertake work for the degree.

2. Unless the candidate has obtained the Honours degree of Bachelor of Applied Science or of Engineering or of Science, he shall, before submitting his thesis as provided for in regulation 5, pass such qualifying examination as the Faculty of Engineering may in the circumstances deem proper.

3. Subject to conditions to be determined in each case a graduate of a university recognised by the University of Adelaide, whose degree is accepted by the Faculty of Engineering as equivalent to one of the qualifications required in regulation 1, may be allowed by the Council to proceed to the degree in compliance with these regulations. Every such candidate must spend at least three consecutive academic terms or twelve calendar months at the University of Adelaide, or at an institution approved for the purpose by the University of Adelaide.

4. A candidate who holds the Honours degree of Bachelor of Applied Science or Bachelor of Engineering or its equivalent in a university recognised by the University of Adelaide may proceed to the degree of Master of Applied Science at the expiration of one year from the date of his admission to the Honours degree of Bachelor; no other candidate shall proceed to the degree before the expiration of two years from the date of his graduation.

5. To qualify for the degree a candidate shall submit a thesis upon an approved subject and shall adduce sufficient evidence that the thesis is his own work. The thesis shall give the results of original research or of an investigation on which the candidate has been engaged. A candidate may also submit other contributions to science in support of his candidature.

6. Every candidate shall give at least three terms' notice of his intended candidature, and shall indicate therewith in general terms the subject of the research work or investigation on which he proposes to submit a thesis. The Faculty of Engineering, if it approve the subject of his research, may appoint a supervisor to guide the candidate in his work. The candidate shall submit his thesis not earlier than three terms and, except by special permission of the Faculty, not later than nine terms after approval by the Faculty of the subject of his research.

7. The Faculty shall appoint a Board of Examiners to report upon the thesis and any supporting papers that the candidate may submit. The Board of Examiners may require any candidate to pass an examination in the branch of science to which his original research or investigation is cognate.

8. A candidate for the degree of Doctor of Philosophy or Doctor of Science whose work is considered by the Faculty, after report by the examiners appointed to adjudicate upon it, not to be of sufficient merit to qualify for the degree of Doctor but of sufficient merit for the degree of Master may be admitted to the degree of Master provided that he is qualified to become a candidate for the degree.

9. A candidate shall lodge with the Registrar three copies of his thesis prepared in accordance with directions given to candidates from time to time.*

10. A candidate who complies with the foregoing conditions and satisfies the Board of Examiners shall on the recommendation of the Faculty of Engineering be admitted to the degree of Master of Applied Science.

11. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 4 October, 1962.

* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

FACULTY OF LAW

REGULATIONS, SCHEDULES AND SYLLABUSES OF DEGREES

Bachelor of Laws (LL.B.)

Regulations and Schedules - - - - - - - 854
Syllabuses - - - - - - - - - - 861
Rules of Court regulating the admission of practitioners - 877

Master of Laws (LL.M.)

Regulations - - - - - - - - - - 883

Doctor of Philosophy (Ph.D.)

Regulations and Schedules: under "Board of Research Studies"—*see* Table of Contents.

Doctor of Laws (LL.D.)

Regulations - - - - - - - - - - 885

OF THE DEGREE OF

BACHELOR OF LAWS

REGULATIONS

1. There shall be an Ordinary and an Honours degree of Bachelor of Laws.

*2. (a) The Council after receipt of advice from the Faculty shall from time to time prescribe schedules (i) defining the subjects of study for the degree to be provided by the University, and the post-graduate subjects to be offered; (ii) defining the range of subjects satisfactorily to be completed, and the examinations to be passed by candidates; (iii) providing for, or empowering the Faculty to provide for, the subject or subjects to be pre-requisite for, or concurrent with, any subject, and the lectures, seminars, tutorials, moot court work, and written and other work to be undertaken by candidates; and (iv) fixing the fees to be paid by candidates. Provided that the following subjects of study shall always be offered: Elements of Law, Constitutional Law I, Criminal Law, The Law of Contract, The Law of Torts, The Law of Property, Trusts and Succession, Commercial Transactions, Family Law, The Law of Evidence and The Law of Procedure.

(b) The syllabuses of subjects shall be specified by the Head of the Department and submitted to the Faculty and the Council for approval.

(c) Schedules made and syllabuses approved by the Council shall become effective from the date of prescription by the Council or such other date as the Council may fix, and shall be published in the next edition of the University Calendar.

3. To qualify for the Ordinary degree a candidate shall comply with the provisions of schedules made under regulation 2 hereof.

4. (a) To qualify for the Honours degree a candidate shall comply with the provisions of schedules made under regulation 2 hereof.

(b) A candidate who satisfies the requirements of sub-regulation (a) of this regulation shall be awarded the Honours degree of Bachelor of Laws, but the Faculty shall decide within which of the following classes and divisions the degree shall be awarded:

* Amended 16 December, 1971 and further amendment awaiting allowance at time of printing.

First Class
Second Class
Division A
Division B
Third Class.

(c) A candidate who has been granted status by virtue of clause 7 of Chapter XXV of the University Statutes, or by virtue of regulation 11 of these regulations, may be awarded the Honours degree of Bachelor of Laws if the Council so decides, notwithstanding that he has not completely satisfied the requirements of sub-regulation (a) of this regulation.

5. (a) Except in cases approved by the Council annual examinations shall be held in November and supplementary examinations, where granted, shall be held in January, February or March in each year.

(b) A candidate may sit for a supplementary examination in any subject or subjects, if he is granted permission by the Faculty to do so on academic, medical or other special grounds.

†6. Students shall enter for annual and supplementary examinations on the form and by the date prescribed by the Council. No student shall present himself for an annual or supplementary examination in any subject if he has failed to do in a satisfactory manner such essays or other written work as may have been required of him in connection with that subject.

7. If in any subject a candidate does not pass either at the annual or at the supplementary examination he shall again comply with the requirements of regulation 6 in respect of such subject before again presenting himself for examination in that subject.

†8. The examiners in any subject may take into account not only work done at the annual or supplementary examination (which may, if the examiners so decide, include examination *viva voce*) but also, with the approval of the Faculty as to the number of marks which may be awarded therefor, other work prescribed or done in connection with that subject (including work done in connection with a moot) during the academic year immediately preceding the annual examination, if the students concerned had notice before beginning such other work that it would be so taken into account by the examiners.

9. There shall be three classifications of pass at an annual or supplementary examination in any subject or division of a subject for the Ordinary degree, as follows: Pass with Distinction, Pass with Credit, Pass. The names of candidates who Pass with Distinction or with

† Amended 28 February, 1974.

Credit shall be arranged in order of merit within the classification; the names of other candidates who pass shall be arranged in alphabetical order. The results of all annual and supplementary examinations shall be transmitted by the Academic Registrar to the Chief Justice of the Supreme Court of South Australia.

10. The Faculty may grant to any student such exemption from the requirements of regulations 6 and 7, and upon such conditions, as it shall decide.

11. A candidate may, at any time, apply to the Faculty for status under these regulations or under schedules made in accordance with regulation 2 and may be granted such status, and upon such conditions, as the Council on the recommendation of the Faculty, determines.

12. All previous regulations concerning the degree of Bachelor of Laws and the Final Certificate in Law are hereby repealed, provided that:

(a) a candidate who has completed subjects under the repealed regulations shall have status in the equivalent subjects under schedules made under these regulations; and

(b) a candidate who first enrolled in the Faculty of Law before 1967, shall, in order to qualify for the degree, in addition to complying with the requirements of regulation 3 or 4, pass in two subjects, other than Science subjects, available for the degree of Bachelor of Arts and approved by the Faculty of Law.

Regulations allowed 17 December, 1970.

SCHEDULES

(Made by the Council under Regulation 2.)

NOTE: Syllabuses of subjects for the degree of LL.B. are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I: THE ORDINARY DEGREE.

1. A candidate for the Ordinary degree shall:

(a) pass in the following subjects:

(i) Elements of Law
(ii) Constitutional Law I
(iii) Criminal Law
(iv) The Law of Torts
(v) The Law of Contract

(vi) The Law of Property
(vii) Constitutional Law II
(viii) Trusts and Succession
(ix) Commercial Transactions
(x) The Law of Evidence.

(b) Pass in five of the following subjects, provided that the Faculty may direct that a subject or subjects may not be offered in any one year:
(i) Administrative Law
(ii) Associations
(iii) Comparative Law
(iv) Conflict of Laws
(v) Criminology
(vi) Family Law
(vii) Industrial Law
(viii) Institutional Business Transactions
(ix) International Law
(x) Jurisprudence
(xi) Legal History
(xii) Roman Law
(xiii) Taxation Law
(xiv) The Law of Procedure.

(c) Satisfy the Board of Examiners (normally by production of a certificate from the lecturer in charge or from the Dean) that he has satisfactorily participated in one seminar course (Seminar Course A) to be arranged by the Faculty.

(d) Pass in one further subject listed in clause 1(b),
or satisfy the Board of Examiners that he has satisfactorily participated in a second seminar course (Seminar Course B) for which he has enrolled with the approval of the Dean,
or (for an honours candidate who has not qualified for the honours degree) present an honours dissertation considered by the Board of Examiners to be sufficient for the purpose of satisfying this requirement.

2. Candidates who have completed subjects for the degree prior to 1973 may continue under the schedules then in force, with such modification (if any) as shall be prescribed by the Dean.

3. A candidate who passed in Legal History prior to March 1974 shall count that subject in lieu of a seminar course and not as a subject listed in clause 1(b).

Schedule II: The Honours Degree

1. A candidate for the Honours degree of Bachelor of Laws shall:

(a) pass in the subjects listed in clause 1(a) of Schedule I;

(b) pass in five of the subjects listed in clause 1(b) of Schedule I;

(c) satisfy the Board of Examiners in respect of one seminar course (Seminar Course A) pursuant to clause 1(c) of Schedule I; and

(d) complete satisfactorily the Honours dissertation.

Provided that a candidate who passed in Legal History prior to March 1974 shall count that subject in lieu of a seminar course and not as a subject from clause 1(b) of Schedule I.

2. (a) Except with the permission of the Faculty, to be granted only in special cases, a candidate may enrol for the Honours dissertation if he has obtained:

(i) six or more honours points in the subjects (i)-(ix) listed in clause 1(a) of Schedule I and the first two subjects listed in clause 1(b) of Schedule I completed by the candidate; *or*

(ii) five or more honours points in the subjects (iv)-(ix) listed in clause 1(a) of Schedule I and the first two subjects listed in clause 1(b) of Schedule I completed by the candidate; *or* if the projects (i)-(iv) are taken in first year, four or more honours points in the subjects (v)-(ix) listed in clause 1(a) of Schedule I and the first two subjects listed in clause 1(b) of Schedule I; *or*

(iii) eight or more honours points in the subjects listed in clause 1(a) of Schedule I and five of the subjects listed in clause 1(b) of Schedule I.

(b) For the purpose of clause 2(a)(i) and (ii) of this schedule, where a candidate has completed more than two subjects listed in clause 1(b) of Schedule I, he shall count such points for those subjects as the Faculty may determine.

(c) For the purpose of clause 2(a)(iii) of this schedule, where a candidate has completed more than five of the subjects listed in clause 1(b) of Schedule I he shall count such points for those subjects as the Faculty may determine.

(d) No points shall be counted for a subject previously failed except with the permission of the Faculty.

(e) Honours points shall be calculated on the basis that a credit equals one and a distinction equals one and a half honours points.

Schedule III: Postgraduate Subjects.

Courses in Estate and Tax Planning and in Legal Ethics and Accounts will be offered as postgraduate subjects. Students for the degree of Bachelor of Laws may, with the approval of the Dean, attend one or both of these courses in their final year.

Schedule IV: Restriction of Courses.

1. Except with the permission of the Dean or his nominee the following subjects are pre-requisite subjects:

(a) Elements of Law, Constitutional Law I, Criminal Law and The Law of Torts for all other subjects; and

(b) The Law of Contract, The Law of Property and Constitutional Law II for all other subects except those listed in clause (a); and

(c) Commercial Transactions for the subjects Associations, Institutional Business Transactions, and Taxation Law.

2. Courses of study must be approved by the Dean or his nominee at enrolment each year.

NOTES (not forming part of the regulations or schedules):

1. The Faculty of Law recommends that candidates for the LL.B. degree take their subjects according to the following scheme:

First Year: Elements of Law, Constitutional Law I, Criminal Law, The Law of Torts.

Second Year: The Law of Contract, The Law of Property, Constitutional Law II.

Third Year: Trusts and Succession, Commercial Transactions, Seminar Course A, and two of the following subjects: Administrative Law, Comparative Law, Conflict of Laws, Criminology, Family Law, Industrial Law, International Law, Jurisprudence, Legal History, Roman Law.

Fourth Year: The Law of Evidence and *either* four of the following subjects, *or* three of the following subjects together with an honours dissertation or Seminar Course B: Administrative Law, Associations, Comparative Law, Conflict of Laws, Criminology, Family Law, Industrial Law, Institutional Business Transactions, International Law, Jurisprudence, Legal History, Roman Law, Taxation Law, The Law of Procedure. Provided that no subject shall be a subject for which the candidate has previously obtained credit.

2. The Faculty of Law recommends that candidates for the LL.B. degree who wish to take the B.A. degree concurrently should apply at the end of their first year for admission to the B.A. course in the following year, and take their subjects according to the following scheme:

First Year: The subjects listed under Note 1 for the first year of the LL.B. course.

Second, Third and Fourth Year: The subjects listed under Note 1 for the second and third years of the LL.B. course, and four subjects listed under sections 1, 2 and 3 of Group A and Group B in Schedule I of the degree of Bachelor of Arts.

Fifth Year: *Either* two Group C subjects from Schedule I of the degree of Bachelor of Arts;
or the subjects listed under Note 1 for the fourth year of the LL.B. course.

Sixth Year: *Either* the subjects listed under Note 1 for the fourth year of the LL.B. course;
or two Group C subjects from Schedule I of the degree of Bachelor of Arts.

OF THE DEGREE OF

BACHELOR OF LAWS

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed. Occasionally new editions of law books are published after the Calendar goes to press; as a general rule, lecturers will use these rather than the ones listed. However, there are important exceptions and students should make inquiries at the Law Library desk before buying such later editions.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first and second letters identify the Faculty of Law: LL.

The first digit differentiates subjects which may be taken in the same year.

The second digit—

1–4: Indicates year of subject, e.g. first, second, etc.
5: Indicates subjects normally available only to graduates.
7–8: Indicates subjects which may be taken in either the third or fourth years.
9: Indicates subject available to Honours students only.

FIRST-YEAR SUBJECTS.

LL01 Elements of Law.

An introduction to the study of law. History and organisation of the legal systems of England and Australia; nature of law, its making and application; precedent; interpretation of statutes.

Text-books:

Derham, D. P., Maher, F. K. H., and Waller, P. L., *An introduction to law*, 2nd edition (Law Book Co., 1971).

Hanbury, H. G., *English courts of law*, 4th edition (O.U.P., 1967).

Castles, A. C., *An introduction to Australian legal history* (Law Book Co., 1971).

Reference books (available in the Library):

Maher, F. K. H., Waller, P. L., and Derham, D. P., *Cases and materials on the legal process*, 2nd edition (Law Book Co., 1971).

Campbell, E., and McDougal, D., *Legal research: materials and methods* (Law Book Co., 1967).

Cross, R. N., *Precedent in English law*, 2nd edition (O.U.P., 1968).

Archer, P., *The Queen's courts*, 2nd edition (Pelican, 1963).

Allen, C. K., *Law in the making*, 7th edition (O.U.P., 1964).

Baalman, J., *Outline of law in Australia*, 3rd edition (Law Book Co., 1969).

Kiralfy, A. K. R., *The English legal system*, 4th edition (Sweet and Maxwell, 1967).

Plucknett, T. F. T., *Concise history of the common law*, 5th edition (Butterworth, 1956).

Williams, G. L., *Learning the law*, 9th edition (with Australian supplement) (Stevens, 1973).

Windeyer, W. J. V., *Lectures on legal history*, 2nd revised edition (Law Book Co., 1957).

Maxwell, P. B., *The interpretation of statutes*, 12th edition (Sweet and Maxwell, 1969).

Craies, W. F., *Treatise on statute law*, 6th edition (Sweet and Maxwell, 1963).

Radcliffe, G. R. Y., and Cross, G., *English legal system*, 5th edition (Butterworth, 1971).

Lloyd, D., *The idea of law* (Pelican, 1964).

LL11 Constitutional Law I.

The historical evolution, in an introductory manner, of the principal institutions of government in the United Kingdom, South Australia and the Commonwealth; the major sources of governmental authority in Australia, including the reception of English law into Australia; the main principles of British constitutional law as they apply in Australia, with particular reference to the constitutional structure of South Australia; an introduction to federalism.

Text-books:

Castles, A. C., *An introduction to Australian legal history* (Law Book Co., 1971).

Sawer, G., *Australian federalism in the courts* (M.U.P., 1967).

de Smith, S. A., *Constitutional and administrative law* (Pelican, 1971).

Cases, materials and readings in constitutional law (Mimeographed case-book issued by the Law School).

Reference books:

Campbell, E., *Parliamentary privilege in Australia* (M.U.P., 1966).
Campbell, E., and Whitmore, H., *Freedom in Australia*, 2nd edition (Sydney University Press, 1973).
Combe, G. D., *Responsible government in South Australia* (Government printer, Adelaide, 1957).
Crisp, L. F., *Australian national government* (Longmans, 1965).
Deakin, A., *The federal story*, 2nd edition (M.U.P., 1963).
Dicey, A. V., *Introduction to the study of the law of the constitution*, 10th edition (Macmillan, 1959).
Evatt, H. V., *The King and his dominion governors*, 2nd edition (Cheshire, 1967).
Fajgenbuam, J. I., and Hanks, P., *Australian constitutional law, cases, materials and text* (Butterworth, 1972).
Heuston, R. F. V., *Essays in constitutional law*, 2nd edition (Stevens, 1964).
Howard, C., *Australian federal constitutional law*, 2nd edition (Law Book Co., 1972).
Jennings, W. I., *The law and the constitution*, 5th edition (U. London P., 1959).
Keir, D. L., and Lawson, F. H., *Cases in constitutional law*, 5th edition (O.U.P., 1967).
Langmead, T. P., Taswell-, *English constitutional history*, 11th edition (Sweet and Maxwell, 1960).
Lovell, C. R., *English constitutional and legal history* (O.U.P., 1962).
Marshall, G., *Constitutional theory* (O.U.P., 1971).
Phillips, O. H., *Constitutional and administrative law*, 5th edition, paperback (Sweet and Maxwell, 1973).
Phillips, O. H., *Leading cases in constitutional and administrative law*, 4th edition, paperback (Sweet and Maxwell, 1973).
Stephenson, C., and Marcham, F. G., *Sources of English constitutional history* (Harper, 1937).
Tanner, J. R., *English constitutional conflicts of the seventeenth century, 1603-1689*, students' edition (C.U.P., 1961).
Vile, M. J. C., *Constitutionalism and the separation of powers* (O.U.P., 1967).
Wade, E. C. S., and Phillips, G. G., *Constitutional law*, 8th edition (Longmans, 1970).

NOTE: Students should purchase a copy of the South Australian *Constitution Act*, 1934-73, *Criminal Law Consolidation Act*, 1935-71 and *Police Offences Act*, 1953-1972 (Government Printer, Adelaide); and of the Commonwealth *Constitution*, and the *Statute of Westminster Adoption Act*, 1942 (with Index) (Government Printer, Canberra).

LL21 Criminal Law.

A general introduction to the criminal law.

Text-book:

Howard, C., *Australian criminal law*, 2nd edition (Law Book Co., 1970).
Brett, P., and Waller, P. L., *Cases and materials in criminal law*, 3rd edition (Butterworth, 1971).

Reference books:

Williams, G. L., *Criminal law*, 2nd edition (Stevens, 1961).
Russell, W. O., *On crime*, 12th edition, ed. J. W. C. Turner (Stevens, 1964)
Hall, J., *General principles of criminal law*, 2nd edition (Bobbs-Merrill, 1960).
Perkins, R. M., *Criminal law* (Foundation Press, 1957).
Smith, J. C., and Hogan, B., *Criminal law*, 1st edition (Butterworth, 1965).
Smith, J. C., and Hogan, B., *Criminal law*, 3rd edition (Butterworth, 1973).
Morris, N., and Howard, C., *Studies in criminal law* (Clarendon Press, Oxford 1964).

NOTE: Students should purchase a copy of the *Criminal Law Consolidation Act*, 1935-72, and the *Police Offences Act*, 1953-72 (Government Printer, Adelaide).

LL31 The Law of Torts.

General principles of the law of torts; specific torts.

Text-books:

Fleming, J. G., *The law of torts*, 4th edition (Law Book Co., 1971), *or*
Winfield, P. H., and Jolowicz, J. A., *The law of tort*, 9th edition (Sweet and Maxwell, 1971).

Reference books:

Morison, W. L., Sharwood, R. L., and Phegan, C. S., *Cases on torts* (Law Book Co., 1973).
Street, H., *The law of torts*, 5th edition (Butterworth, 1972).
Salmond, J. W., *Law of torts*, 16th edition (Sweet and Maxwell, 1973).
Clerk, J. F., and Lindsell, W. H. B., *Law of torts*, 13th edition (Sweet and Maxwell, 1969).
Weir, T., *A casebook on tort*, 2nd edition (Sweet and Maxwell, 1970).
Williams, G. L., *Joint torts and contributory negligence* (Stevens, 1951).
Wright, C. A., and Linden, A. M., *The law of torts: cases, notes and materials*, 5th edition (Butterworth, 1970).
Prosser, W. L., *Handbook of the law of torts*, 4th edition (West, 1971).
Fleming, J. G., *Introduction to the law of torts* (O.U.P., 1967).
Fridman, G. H. L., *Modern tort cases* (Butterworth, 1968).
Millner, M. A., *Negligence in modern law* (Butterworth, 1967).
Atiyah, P. S., *Vicarious liability in the law of torts* (Butterworth, 1967).
Atiyah, P. S., *Accidents, compensation and the law* (Weidenfeld and Nicholson, 1970).
Linden, A. M. (ed.), *Studies in Canadian tort law* (Butterworth, 1968).
Higgins, P. F. P., *Elements of torts in Australia* (Butterworth, 1970).

NOTE: Students should purchase a copy of the *Wrongs Act*, 1936-72, and of the *Survival of Causes of Action Act*, 1940 (Government Printer, Adelaide).

SECOND-YEAR SUBJECTS.

LL02 The Law of Contract.

General principles of the law of contract, including agency.

Text-books:

Cheshire, G. C., and Fifoot, C. H. S., *The law of contract*, 3rd Australian edition (Butterworth, 1974).
McGarvie, R. E., Pannam, C. L., and Hocker, P. J., *Cases and materials on contract*, 2nd edition (Law Book Co., 1971).

Reference books:

Anson, W. R., *Principles of the English law of contract*, 23rd edition (O.U.P., 1969).
Chitty, J., *Treatise on the law of contracts*, 23rd edition (Sweet and Maxwell, 1968).
Treitel, G. H., *The law of contract*, 3rd edition (Stevens, 1970).
Atiyah, P. S., *Introduction to the law of contract*, 2nd edition (O.U.P., 1971).
Smith, J. C., and Thomas, J. A. C., *Casebook on contract*, 5th edition (Sweet and Maxwell, 1973).
Williston, S., *Treatise on the law of contracts*, 3rd edition (Baker, Voorhis and Co., 1957-).
Corbin, A. L., *On contracts* (West, 1950-).
Bowstead, W., *Digest of the law of agency*, 13th edition (Sweet and Maxwell, 1968).
Powell, R., *Law of agency*, 2nd edition (Pitman, 1961).

NOTE: Students should purchase a copy of the *Sale of Goods Act*, 1895-1972 (Government Printer, Adelaide), and the *Misrepresentation Act*, 1971-1972 (Government Printer, Adelaide).

LL22 The Law of Property.

A study of the principles of the law of real and personal property.

Text-book:

Cases and materials on property law (issued by the Law School).

Statutes:

A list of statutes will be issued during the introductory lecture.

Recommended for Preliminary Reading:

Lawson, F. H., *Introduction to the law of property* (O.U.P., 1958).

Reference books:

A list of reference books will be issued during the introductory lecture.

LL32 Constitutional Law II.

The constitution of the Commonwealth of Australia; introduction to administrative law.

Text-books:

Cases, materials and readings in Australian constitutional law (Mimeographed casebooks issued by the Law School).

An introduction to Australian administrative law (Mimeographed casebooks issued by the Law School).

Sawer, G., *Cases on the constitution of the Commonwealth of Australia*, 3rd edition (Law Book Co., 1964) (and supplement).

Sawer, G., *Australian federalism in the courts* (M.U.P., 1967).

Reference books:

Brennan, T. C., *Interpreting the constitution* (M.U.P., 1935).

Cowen, Z., *Federal jurisdiction in Australia* (O.U.P., 1959).

Mitchell, R. Else-, *Essays on the Australian constitution*, 2nd edition (Law Book Co., 1961).

Howard, C., *Australian federal constitutional law*, 2nd edition (Law Book Co., 1972).

Lane, P. H., *The Australian federal system* (Law Book Co., 1972).

Moore, W. Harrison, *The constitution of the Commonwealth of Australia*, 2nd edition (Maxwell, 1910).

Quick, J., and Garran, R. R., *Annotated constitution of the Australian Commonwealth* (Angus and Robertson, 1901).

Wynes, W. A., *Legislative, executive and judicial powers in Australia*, 4th edition (Law Book Co., 1970).

Allen, C. K., *Law and orders*, 3rd edition (Stevens, 1965).

de Smith, S. A., *Judicial review of administrative action*, 3rd edition (Stevens, 1973).

Benjafield, D. G., and Whitmore, H., *Principles of Australian administrative law*, 4th edition (Law Book Co., 1971).

Griffith, J. A. G., and Street, H., *Principles of administrative law*, 4th edition (Pitman, 1967).

Robson, W. A., *Justice and administrative law*, 2nd edition (Stevens, 1947).

Statutes:

The following should be acquired before lectures commence.

The Constitution, and the *Statute of Westminster Adoption Act*, 1942 (with Index) (Government Printer, Canberra).

The High Court Procedure Act, 1903-66 and *The Judiciary Act*, 1903-69 (Government Printer, Canberra).

THIRD-YEAR SUBJECTS.

LL43 Trusts and Succession.

General principles of the law of trusts; such individual topics within the law of trusts as may be chosen by the lecturer; general principles of the law of wills, of testate and intestate succession and the administration of estates; such individual topics within these as may be chosen by the lecturer.

Text-books:

Hanbury, H. G., *Modern equity*, 9th edition (Stevens, 1969).

Maudsley, R. H., and Burn, E. H., *Cases and materials on trusts and trustees* (Butterworth, 1972).

Other books on particular subjects suggested in lectures.

Reference books:

Snell, E. H. T., *Principles of equity*, 27th edition (Sweet and Maxwell, 1973).

Ford, H. A. J., *Cases on trusts*, 2nd edition (Law Book Co., 1966).

Jacobs, K. S., *Law of trusts in N.S.W.*, 3rd edition (Butterworth, 1971).

Fricke, G., and Strauss, O. K., *Law of trusts in Victoria* (Butterworth, 1964).

Nathan, J. A., and Marshall, O. R., *A casebook on trusts*, 5th edition (Stevens, 1967).

Pettit, P. H., *Equity and the law of trusts*, 2nd edition (Butterworth, 1970).

Scott, A. W., *Abridgment of the law of trusts* (Little, Brown, 1960).

Parker, D. B., and Mellows, A. R., *The modern law of trusts*, 2nd edition (Sweet and Maxwell, 1970).

A reading list for Succession will be available during the enrolment period.

NOTE: Students should purchase copies of the following statutes: *Trustee Act*, 1936-68; *Law of Property Act*, 1936-72; *Administration and Probate Act*, 1919-1972; *Wills Act*, 1936-1972.

LL73 Commercial Transactions.

This course concentrates on transactions affecting the individual. A study of the law relating to agency, sale of goods, moneylending and instalment credit, and consumer protection.

Text-book:

Cases and materials on commercial transactions (issued by the Law School).

Statutes:

A list of statutes will be issued during the introductory lecture.

Recommended for Preliminary Reading:

Borrie, G., and Diamond, A. L., *The consumer, society and the law*, 2nd edition (Penguin, 1968).

Reference books:

A list of reference books will be issued during the introductory lecture.

FOURTH-YEAR SUBJECTS.

LL44 The Law of Evidence.

A study of the law of evidence as it applies in South Australia.

Text-books:

Cross, R. N., *Evidence*, Australian edition (Butterworth, 1970).

Glasbeeck, H. J., *Cases and materials on evidence* (Butterworth, 1974). 1948).

Reference books:

Cross, R. N., and Wilkins, N., *Outline of the law of evidence*, 3rd edition (Butterworth, 1971).

Cross, R. N., *Evidence*, 4th edition (Butterworth, 1974).

Stephen, J. F., *A digest of the law of evidence*, 12th edition (Macmillan, 1948).

Phipson, S. L., *The law of evidence*, 11th edition (Sweet and Maxwell, 1970).

Cowen, Z., and Carter, P. B., *Essays on the law of evidence* (Oxford, 1956).

Cockle, E., *Cases and statutes on the law of evidence*, 11th edition (Sweet and Maxwell, 1970).

Edwards, E. J., *Cases on evidence in Australia*, 2nd edition (Law Book Co., 1974).

Wells, W. A. N., *An introduction to the law of evidence* (Government Printer, Adelaide, 1963-).

Williams, G. L., *The proof of guilt*, 3rd edition (Stevens, 1963).

NOTE: Students should purchase copies of the *Evidence Act*, 1929-72 (Government Printer, Adelaide).

LL74 The Law of Procedure.

Pleading and practice in the Supreme Court and Local Court. Criminal procedure in the Supreme Court, District Criminal Court and in Courts of Summary Jurisdiction.

Text-books:

Hannan's Local Court practice, 2nd edition (Law Book Co., 1973).

Odgers, *Principles of pleading*, 20th edition (Law Book Co., 1971).

Reference books:

The Supreme Court practice (Sweet and Maxwell, 1973, and supplement).

Williams Supreme Court practice (Victoria), 2nd edition (Butterworth).

Chitty, T., *Queen's bench forms*, 18th edition (Sweet and Maxwell, 1956).

Matrimonial causes hand-book (Government Printer, Canberra, 1961).

Hannan, A. J., *Summary procedure of justices in South Australia*, 3rd edition (Law Book Co., 1957).

NOTE: Students should purchase copies of the *Supreme Court Act*, 1935-72, the *Supreme Court Rules* and amendments, the *Local and District Criminal Courts Act*, 1926-71 and the Rules made thereunder (Government Printer, Adelaide), the *Service and Execution and Process Act*, 1901-68 (Government Printer, Canberra), the *Evidence Act*, 1929-69, the *Criminal Law Consolidation Act*, 1935-71, the *Justices Act*, 1921-69, and the *Police Offences Act*, 1953-67 (Government Printer, Adelaide).

LL64 Institutional Business Transactions.

This course concentrates on, but is not exclusively devoted to, transactions in which financial institutions may be involved. It is a study of: the control by law of financial institutions; restrictive trade practices; the financing of business transactions; international trade law; bankers' securities and the relationship of banker and customer; negotiable instruments and the assignment of choses in action; guarantees and indemnities; insurance contracts.

Reference books:

Chorley, R. S. T., *The law of banking*, 5th edition (Pitman, 1967).

Chorley, R. S. T., and Smart, P. E., *Leading cases in the law of banking*, 3rd edition (Pitman, 1973).

Holden, J. M., *The law and practice of banking*, vol. I (1970) and vol. II (1971) (Pitman).

Paget, J. R., *Paget's law of banking*, 8th edition (Butterworth, 1972).

Reeday, T. G., *The law relating to banking*, 2nd edition (Butterworth, 1972).

Sheldon, H. P., *Practice and law of banking*, 10th edition (Macdonald and Evans, 1972).

Sykes, E. I., *The law of securities*, 2nd edition (Law Book Co., 1973).

Riley, B. B., *The law relating to bills of exchange in Australia*, 2nd edition (Law Book Co., 1964).

Borrie, G. J., and Grieg, D. W., *Commercial law*, Australian edition (Butterworth, 1971).

Chitty, *The law of contracts*, vol. II (Sweet and Maxwell, 1968).

Gower, L. C. B., *Principles of modern company law*, 3rd edition (Stevens, 1969).

Baxt, R., *Second Australian supplement to Gower's modern company law* (Law Book Co., 1974).

Ford, H. A. J., *Principles of company law* (Butterworth, 1974).

Payne, W., and Ivamy, E. R. H., *Carriage of goods by sea*, 9th edition (Butterworth, 1972).

Schmitthoff, C. M., *The export trade*, 5th edition (Stevens, 1969).

Gutteridge, H. C., and Megrah, M., *The law of banker's commercial credits*, 4th edition (Europa, 1968).

Cheshire, G. C., and Fifoot, C. H. S., *Law of contract*, 3rd Australian edition (Butterworth, 1974).

Starke, J. G., *Assignment of choses in action in Australia* (Butterworth, 1972).

Colinvaux, R., *The law of insurance*, 3rd edition (Sweet and Maxwell, 1970).

LL84 Taxation Law.

A basic course in income taxation concentrating on the treatment of individuals under the Commonwealth Income Tax Assessment Act.

SUBJECTS WHICH MAY BE TAKEN IN THIRD OR FOURTH YEAR.

NOTE: It is possible that one or more of the following subjects will not be available in 1975.

LL54 Associations.

A critical analysis of the law relating to partnerships, companies and unincorporated associations.

Text-book:

Afterman, A. B., and Baxt, R., *Cases and materials on corporations and associations* (Butterworth, 1972).

Reference books:

Ford, H. A. J., *Principles of company law* (Butterworth, 1974).

Gower, L. C. B., *Principles of modern company law*, 3rd edition (Stevens, 1969).

Baxt, R., *Australian supplement to Gower's modern company law*, 2nd edition (Law Book Co., 1974).

Hadden, T., *Company law and capitalism* (Weidenfeld and Nicolson, 1972).

Pennington, R. R., *Principles of company law*, 3rd edition (Butterworth, 1973).

Pennington, R. R., *The investor and the law* (MacGibbon, 1968).

Palmer, F. B., *Company law*, 21st edition (Stevens, 1968).

Higgins, P. F. P., *The law of partnership*, 2nd edition (Law Book Co., 1970).

Underhill, A., *Principles of the law of partnership*, 9th edition (Butterworth, 1971).

Lindley, N. L., *Treatise on the law of partnership*, 13th edition (Sweet and Maxwell, 1971).

C.C.H., *Corporate affairs reporter*.

NOTE: Students should purchase copies of the *Companies Act*, 1962-72 (S.A.), the *Partnership Act*, 1891-1935 (S.A.), and the *Associations Incorporation Act*, 1956-65 (S.A.).

LL07 Administrative Law.

Aspects of the historical and contemporary growth of the administrative process, its structure and its function; a general introduction to the powers and functions of local government authorities; parliamentary and administrative review of administrative action including delegated legislation; the ombudsman; the main principles of judicial review of administrative discretionary powers and of delegated legislation; the principles of natural justice as applied to administrative adjudication, the main remedies for securing judicial review; the legal liability of the Crown; reform of administrative law.

Text-books:

Benjafield, D. G., and Whitmore, H., *Principles of Australian administrative law*, 4th edition (Law Book Co., 1971).

Reference books:

Brett, P., and Hogg, P. W., *Cases and materials on administrative law*, 2nd edition, revised reprint (Butterworth, 1972).

de Smith, S. A., *Judicial review of administrative action*, 3rd edition (Stevens, 1973).

Griffith, J. A. G., and Street, H., *Principles of administrative law*, 4th edition (Pitman, 1967).

Schwartz, B., and Wade, H. W. R., *Legal control of government* (Oxford, 1972).

LL77 Comparative Law.

Comparison with other legal systems raises many fundamental questions which Australian lawyers may be called upon to answer. Should a bill of rights be embodied in the constitution? Does the common law still meet the needs of contemporary society or should it be replaced by codes? Should the letter or the spirit of legislation govern its interpretation? The emphasis in this course will be on a comparison between the Australian and the German legal systems although frequent reference will be made to the laws of other jurisdictions. German legislation and legal scholarship have been influential in many countries and are, therefore, suitable points of departure for a comparative evaluation of common law and civil law methods of settling private disputes.

Text-book:

Cohn, E. J., *Manual of German law*, vol. I, 2nd edition (Oceana, 1968).

Reference books:

Ryan, K. W., *An introduction to the civil law* (Law Book Co., 1962).

Cohn, E. J., *Manual of German law*, vol. II (Oceana, 1971).

Von Mehren, A. T., *The civil law system* (Prentice-Hall, 1957).

Schlesinger, R. B., *Comparative law*, 3rd edition (Foundation Press, 1970).

Schlesinger, R. B., *Formation of contracts*, 2 vols. (Oceana, 1968).

Lawson, F. H., *A common lawyer looks at the civil law* (Univ. of Michigan Law School, 1953).

Allan, D. E. (ed.), *Asian contract law* (Melbourne University Press, 1969).

Zweigert, K., and Koetz, H.,(*Einfuhrung in die Rechtsvergleichung auf dem Gebiete des Privatrechts*, 2 vols. (Mohr, 1969 and 1971).

LL57 Conflict of Laws.

(1) General principles and theory of conflict of laws, jurisdiction and choice of law in the general fields of matrimonial causes, actions *in personam*, title to property (both movable and immovable), and the status of children; recognition of foreign divorces, nullity decrees, adoptions and legitimations; recognition and enforcement of foreign money judgments.

(2) Conflict of laws in a federal system; diversity jurisdiction and choice of law; full faith and credit.

Text-books:

Kelly, D. St. L., *Localising rules in the conflict of laws* (Woodley Press, 1974).

Nygh, P. E., *Conflict of laws in Australia*, 2nd edition (Butterworth, 1971).

Reference books:

Cavers, D. F., *The choice of law process* (U. of Michigan P., 1965).

Cheshire, G. C., *Private international law*, 8th edition (Butterworth, 1970).

Cook, W. W., *The logical and legal bases of the conflict of laws* (Harvard U.P., 1949).

Cowen, Z., *American-Australian private international law* (Oceana, 1957).

Cowen, Z., *Federal jurisdiction in Australia* (O.U.P., 1959).

Cowen, Z., and Mendes da Costa, D., *Matrimonial causes jurisdiction* (Law Book Co., 1961).

Currie, B., *Selected essays on the conflict of laws* (Duke U.P., 1963).

Dicey, A. V., and Morris, J. H. C., *Conflict of laws*, 9th edition (Stevens, 1973).

Falconbridge, J. D., *Essays on the conflict of laws*, 2nd edition (Canada Law Book Co., 1954).

Morris, J. H. C., *Cases on private international law*, 4th edition (O.U.P., 1968).

Morris, J. H. C., *The conflict of laws* (Stevens, 1971).

Pryles, M. C., and Hanks, P., *Federal conflict of laws* (Butterworth, 1974).
Robertson, A. H., *Characterization in the conflict of laws* (Harvard U.P., 1940).
Sykes, E. I., *Cases and materials on private international law*, 2nd edition (Law Book Co., 1969).
Sykes, E. I., *Australian conflict of laws* (Law Book Co., 1972).
Von Mehren, A. T., and Trautman, D. T., *The law of multi-state problems* (Little, Brown, 1965).
Wolff, M., *Private international law*, 2nd edition (O.U.P., 1950).

LL87 Criminology.

An analysis of the etiological theories of criminal behaviour. In this context consideration will be given to a number of widely differing approaches including those of: the biological positivists, the analytical individualists, the social reactionists, the naturalists and phenomenologists, the Marxists and the "new" conflict theorists. The epidemiology of criminal behaviour including the techniques, uses and interpretation of criminal statistics. The law and practice of sentencing analysed and evaluated in the context of the varying theories of punishment. The historical and contemporary forms of Australian penal and corrective measures and the philosophy behind their use.

Text-books:

Chappell, D., and Wilson, P., *The Australian criminal justice system* (Butterworth, 1972).
Walker, N. D., *Crimes, courts and figures* (Penguin, 1971).
Criminal Law and Penal Methods Reform Committee of South Australia (Mitchell Committee), *Sentencing and corrections* (First Report, 1973).

Reference books:

Sutherland, E. H., and Cressey, D. R., *Criminology*, 8th edition (Lippincott, 1970).
Gibbons, D. C., *Society, crime and criminal careers: an introduction to criminology*, 2nd edition (Prentice-Hall, 1973).
Phillipson, M., *Sociological aspects of crime and delinquency* (Routledge, 1971).
Chapman, D., *Sociology and the stereotype of the criminal* (Tavistock, 1968).
Walker, N. D., *Crime and punishment in Britain* (Edinburgh University Press, 1968).
Taylor, I., Walton, P., Young, J., *The new criminology* (Routledge and Kegan Paul, 1973).
McClintock, F. H., and Avison, N., *Crime in England and Wales* (Heinemann, 1968).
West, D. J., *Present conduct and future delinquency* (Heinemann, 1969).
Hart, H. L. A., *Punishment and responsibility* (O.U.P., 1968).
Cross, A. R. N., *The English sentencing system* (Butterworth, 1971).
Hood, R. G., and Sparks, R., *Key issues in criminology* (Weidenfeld, 1970).
Playfair, G., *The punitive obsession* (Gollancz, 1971).
Walker, N. D., and McCabe, S., *Crime and insanity in England*, vol. II (Edinburgh U.P., 1973).
Barry, J. V., *Alexander Maconochie of Norfolk Island* (O.U.P., 1958).
Walker, N. D., *Sentencing in a rational society* (Penguin Press, 1969).
Morris, N., and Hawkins, G., *The honest politician's guide to crime control* (U.C.P., 1969).

LL17 Family Law.

The course includes a study of: the laws of marriage; matrimonial property; maintenance; matrimonial causes; legitimacy and legitimation; adoption; custody and guardianship of infants; and certain selected topics of private international law including the law of domicil.

Text-book:

Hambly, A. D., and Turner, J. N., *Cases and materials on Australian family law* (Law Book Co., 1971).

Reference books:

Bromley, P. M., *Family law*, 4th edition (Butterworth, 1971).

Finlay, H. A. (ed.), *Divorce, society and the law* (Butterworth, 1969).

Toose, P. B., Watson, R., and Benjafield, D., *Australian divorce law and practice* (Law Book Co., 1968, with 1973 supplement).

Finlay, H. A., and Bisset-Johnson, A., *Family law in Australia* (Butterworth, 1972).

Eekelaar, J., *Family security and family breakdown* (Pelican, 1972).

LL27 Industrial Law.

A study of contracts of employment, conciliation and arbitration, trade unions and industrial accidents.

The following statutes, which may be taken into the examination, should be acquired:

Conciliation and Arbitration Act, 1970-1972 (Government Printer, Canberra).

Compensation (Commonwealth Employees) Act, 1971 (Government Printer, Canberra).

Workmen's Compensation Act, 1971 (Government Printer, Adelaide).

Industrial Conciliation and Arbitration Act, 1972 (Government Printer, Adelaide).

Reference books:

Portus, J. H., *The development of Australian trade union law* (M.U.P., 1958).

Portus, J. H., *Australian compulsory arbitration*, 1900-1970 (Hicks/Smith, 1971).

Cooper, W. M., and Wood, J. C., *Outlines of industrial law*, 6th edition (Butterworth, 1972).

Munkman, J. H., *Employers' liability at common law*, 7th edition (Butterworth, 1971).

Nolan, J. R. W., and Cohen, K. A., *Federal industrial laws*, 4th edition (Butterworth, 1968).

Batt, F. R., *Law of master and servant*, 5th edition (Pitman, 1967).

Sykes, E. I., and Glasbeek, H. J., *Labour law in Australia* (Butterworth, 1972).

Glasbeek, H. J., and Eggleston, E. H., *Cases and materials on industrial law in Australia* (Butterworth, 1973).

Atiyah, P. S., *Accidents, compensation and the law* (Weidenfeld and Nicolson, 1970).

LL37 International Law.

The general principles of the law of peace, including treaties, states, territory, sovereignty, jurisdiction, immunities, responsibility and claims; the United Nations Charter, international organisations and the International Court of Justice.

Text-books:

Akehurst, M. B., *A modern introduction to international law* (Allen and Unwin, 1970).

Holder, W. E., and Brennan, G. A., *The international legal system* (Butterworth, 1972).

O'Connell, D. P., *International law*, students' edition (Stevens, 1971).

Reference books:

Bowett, D. W., *The law of international institutions*, 2nd edition (Stevens, 1970).

Brierly, J. L., *The law of nations*, 6th edition (O.U.P., 1963).

Brownlie, I., *Principles of public international law*, 2nd edition (O.U.P., 1972).

Colombos, C. J., *International law of the sea*, 6th edition (Longmans, 1967).

De Visscher, C., *Theory and reality in public international law*, revised edition (Princeton U.P., 1968).

Goodrich, L. M., Hambro, E., and Simons, A. P., *Charter of the United Nations*, 3rd edition (Columbia Univ, Press, 1969).

Green, L. C., *International law through the cases*, 3rd edition (Stevens, 1970).

Henkin, L., *How nations behave* (Pall Mall, 1968).

Higgins, R., *The development of international law through the political organs of the United Nations* (O.U.P., 1963).

Lauterpacht, H., *The development of international law by the International Court* (Stevens, 1958).

McDougal, M. S., and Associates, *Studies in world public order* (Yale U.P., 1960).

McNair, A. D., *The law of treaties* (O.U.P., 1961).

O'Connell, D. P., *International law*, 2nd edition (Stevens, 1970).

O'Connell, D. P., *State succession in municipal law and international law* (C.U.P., 1967).

Oppenheim, L. F. L., *International law*, vol. I, 8th edition (Longmans, 1955).

Shearer, I. A., *Extradition in international law* (Manchester U.P., 1971).

LL47 Jurisprudence.

The philosophy of law. Law as a part of social reality.

Books which it is recommended students obtain:

Berger, P. L., and Luckmann, T., *The social construction of reality* (Penguin, 1967).

Hart, H. L. A., *The concept of law* (O.U.P., 1961).

Weil, Simone, *The need for roots* (Routledge and Kegan Paul, to be republished).

LL28 Legal History.

The course consists of two main parts:

(i) The English background to the Australian legal system; the establishment of the Common Law Courts, Chancery, the Ecclesiastical Courts and Admiralty and the main features of their jurisdictions and procedures to the nineteenth century; Criminal Law and Procedure; the role of Justices of the Peace; Courts of Requests and other tribunals dealing with minor civil litigation; the English legal profession.

(ii) The Australian Colonial Legal systems; nineteenth century European law reform and its effects on the Australian legal system, with special reference to the philosophies of reform, Codification, the Judicature Acts, matrimonial causes, land law and commercial law; special Australian developments, including mining law and industrial law; the Australian legal profession, its development and training; the Australian Aborigine.

Text-book:

Castles, A. C., *An introduction to Australian legal history* (Law Book Co., 1971).

Reference books:

Historical records of Australia, series IV, vol. I.

Bennett, J. M., *A history of the New South Wales Bar* (Law Book Co., 1969).

Bennett, J. M., *A history of the New South Wales Supreme Court* (Law Book Co., 1974).

Bullen, E., *Precedents of pleadings in personal actions in the superior courts of common law*, 3rd edition (Stevens, 1968).

Clark, C. M. H., *A history of Australia*, vols. I, II (Melbourne U.P., 1962-).

Currey, C. H., *The Brothers Bent* (Sydney U.P., 1968).

Currey, C. H., *Sir Francis Forbes* (Angus and Robertson, 1968).

Dean, A., *A multitude of counsellors* (Cheshire, 1968).

Evatt, H. V., *Rum Rebellion* (O'Neill, 1971).

Hannan, A. J., *The life of Chief Justice Way* (Angus and Robertson, 1960).

Harding, A., *A social history of English law* (Pelican, 1966).

Holdsworth, W. S., *A history of English law*, especially vols. I, III, IV, VI, VII and VIII (Methuen).

Jenks, E., *A short history of English law*, 6th edition (Methuen, 1949).

Lovell, C. R., *English constitutional and legal history* (O.U.P., 1962).

Maitland, F. W., *The forms of action at common law* (C.U.P., 1948).

Melbourne, A. C. V., *Early constitutional development in Australia* (Queensland Univ. Press, 1963).

Milsom, S. F. C., *Historical foundations of the common law* (Butterworth, 1969).

Pollock, F., and Maitland, F. W., *History of English law before the time of Edward I*, 2nd edition, [1898] 1968.

Plucknett, T. F. T., *Concise history of the common law*, 5th edition (Butterworth, 1956).

Radcliffe, G. R. Y., and Cross, G., *English legal system*, 5th edition (Butterworth, 1971).

Select essays in Anglo-American legal history, vols. I, II, III (Little Brown, 1907).

Sutton, R., *Personal actions at common law* (Butterworth, 1929).

Smith, J. H., *Cases and materials on the development of legal institutions* (West, 1965).

Stephen, Sir J. F., *History of the criminal law of England*, 3v (Macmillan, 1883).

Stephenson, C., Marcham, F. G., *Sources of English constitutional history* (Harper, 1937).

Therry, *Reminiscences*, ed. J. M. Bennett (Royal Aust. Hist. Soc., 1974).

Walsh, W. F., *A history of Anglo-American law*, 2nd edition (Bobbs, Merrill, 1950).

Windeyer, W. J. V., *Legal history*, 2nd edition (Law Book Co., 1957).

LL67 Roman Law.

1. The history and sources of Roman law.

2. An outline of Roman family law and of the laws relating to the acquisition of property, to contracts, and to delicts.

3. A comparative study of the Roman law of sale and the South Australian law relating to the sale of goods.

4. A comparative study of the Roman law of damage to property and the South Australian law of negligence.

Text-book:

Lee, R. W., *The elements of Roman law*, 4th edition (Sweet and Maxwell, 1956), *or*

Nicholas, J. K. B., *Introduction to Roman law* (O.U.P., 1962).

Reference books:

de Zulueta, F. M. (ed.), *Gaius*, vols. I and II (O.U.P., 1946-53).

Moyle, J. B. (ed.), *Justinian's Institutes*, 5th edition, 2 vols. (O.U.P., 1913).

Buckland, W. W., *A text-book of Roman law*, 3rd edition (C.U.P., 1963).

Jolowicz, H. F., *Historical introduction to the study of Roman law*, 3rd edition (C.U.P., 1972).

Buckland, W. W., and McNair, A. D., *Roman law and common law*, 2nd edition, reprinted with corrections (C.U.P., 1965).

Schulz, F., *Classical Roman law* (O.U.P., 1951).

Schulz, F., *History of Roman legal science* (Oxford, 1953).

de Zulueta, F. M., *The Roman law of sale* (O.U.P., 1945).

Kaser, M., *Roman private law*, 2nd edition, translated by R. Dannenbring (Butterworth, 1968).

Lawson, F. H., *Negligence in the civil law* (Oxford, 1950).

LL08 Seminar Course A.

Seminar courses will be arranged by the Faculty of Law from time to time. For further details concerning seminar courses to be offered in 1975 students should consult the departmental notice board. The entry LL08(A) should be used by students who have not completed a seminar course previously.

LL18 Seminar Course B.

This entry should be used by students who have completed a seminar course previously and, for their second seminar course, by those students who wish to enrol for two seminar courses in 1975.

LL05 Estate and Tax Planning.

This course will not be offered in 1975.

LL15 Legal Ethics and Accounts.

A course of fourteen lectures on the rules and etiquette of professional practice, and on certain basic accounting procedures in the practioner's office. This subject is available to graduates in law, and, with the Dean's permission, to law students in their final year.

HONOURS DEGREE OF BACHELOR OF LAWS.

LL99 The Honours Dissertation.

Candidates for the Honours degree of Bachelor of Laws are required to complete satisfactorily a dissertation on a topic approved by the Department of Law. Candidates are strongly urged to commence working not later than 1 February, 1975; they will be required to submit the dissertation on or before 1 September, 1975.

RULES OF COURT REGULATING THE ADMISSION OF PRACTITIONERS, 1955-1972

BY virtue and in pursuance of section 72 of the Supreme Court Act, 1935-1972, and of all other powers us thereunto enabling, We, the Judges of the Supreme Court of South Australia, hereby make the following Rules further amending the Supreme Court Admission Rules dated the 7th day of July, 1955, as amended to date:

PRELIMINARY

1. These Rules may be cited as the "Supreme Court Admission Rules".

2. (1) The rules regulating the admission of Barristers, Attorneys, Solicitors, and Proctors made on the 17th day of August, 1936 are hereby annulled.

(2) The annulment shall not affect the previous operation of any rule so annulled, or anything duly done thereunder.

(3) Any person who, before the 31st day of December, 1952, had entered upon the course of study prescribed for the degree of Bachelor of Laws, or the Final Certificate in Law at the University of Adelaide by the regulations of the University then in force, and who shall be allowed by the Council of the University to complete the course for the degree or the Final Certificate under such regulations, shall be entitled to apply for admission as a practitioner, if he has qualified for admission under the annulled Rules, but Rules 8 to 10, 16 to 25, and 30 to 46 (all inclusive) of these rules shall apply to every such person.

3. In these Rules, unless the contrary intention appears—

"Board" or "Board of Examiners" means the Board of Examiners of the Supreme Court of South Australia:

"British subject" shall be deemed to include and always to have included a person having the status of a British subject:

"Court" means the Full Court:

"Degree of Bachelor of Laws" means the degree of Bachelor of Laws in the University of Adelaide and includes the degree of Bachelor of Laws or an equivalent degree of a University in the Commonwealth of Australia or its Territories certified by the Board of Examiners in accordance with the provisions of Rule 6(1)(c)(i) and (ii) of these rules:

"Law Society" means the Law Society of South Australia Incorporated:

"Master" means the Master of the Supreme Court of South Australia, and includes the Deputy Master:

"Practitioner" means a Barrister, Attorney, Solicitor, and Proctor of the Supreme Court of South Australia:

"Reciprocating part of the British Commonwealth" means any part of the British Commonwealth outside Australia, in regard to which the Court is satisfied that the standard of qualification for admission is at least equal to the standard in this State, and that corresponding eligibility for admission of Practitioners of the Supreme Court of this State exists:

"Supreme Court" means the Supreme Court of South Australia:

"The State" or "this State" means the State of South Australia:

"University" means the University of Adelaide:

Words importing the masculine gender shall be deemed and taken to include the feminine gender, and the singular to include the plural and the plural the singular.

4. The business of the Court is to be conducted as heretofore by admitted practitioners.

PERSONS ELIGIBLE FOR ADMISSION

5. (1) A person who is of good fame and character, and who has attained the age of twenty-one years, and is a British subject and has an adequate knowledge of South Australian law and practice may apply to be admitted as a practitioner if such person is:—

(a) A clerk who has served the prescribed period of articles of clerkship, and has passed or been credited with the examinations prescribed by these Rules.

(b) A member of the bar in England, or of Northern Ireland.

(c) A Scottish Advocate.

(d) A Solicitor of the Supreme Court of Judicature in England, or of the Supreme Court of Northern Ireland, or a person admitted or deemed to be admitted as a solicitor in Scotland.

(e) A Barrister or Solicitor of the Supreme, or Superior Court of a reciprocating part of the British Commonwealth.

(f) A Barrister or Solicitor of the Supreme Court of a State or Territory of the Commonwealth of Australia.

(2) An applicant mentioned in sub-paragraphs (b), (c), (d), (e) and (f) of the preceding sub-rule is in these Rules referred to as "an applicant previously admitted elsewhere."

(3) An applicant mentioned in subparagraph (a) of subrule (1) of this Rule shall be deemed to have an adequate knowledge of South Australian law and practice. Any other applicant shall be required to satisfy the Board of Examiners that he possesses such knowledge.

LAW EXAMINATIONS

6. (1) No person (other than a person previously admitted elsewhere) shall be admitted until he has satisfied the Board of Examiners that—

(a) he has taken, has passed or been credited with the Examination entitling him to take, the degree of Bachelor of Laws of the University and has produced to the Board of Examiners a certificate that he has attended and shown a satisfactory interest in a course of lectures given at the University or otherwise as approved by the Board in the subject Legal Ethics and Accounts; or

(b) he has passed or been credited with the examinations of the University in the following subjects, namely—

(i) Elements of Law;
(ii) Constitutional Law I;
(iii) Criminal Law;
(iv) The Law of Torts;
(v) The Law of Contract;
(vi) The Law of Property;
(vii) Constitutional Law II; or Family Law as one of the subjects in the course for the Ordinary degree of Bachelor of Laws of the University under the Regulations (including the Schedules thereto) for that degree as they existed prior to the 1st day of January, 1972;
(viii) Equity;
(ix) Commercial Transactions; or Mercantile Law I as one of the subjects in the course for the Ordinary degree of Bachelor of Laws of the University under the Regulations (including the Schedules thereto) for that degree as they existed prior to the 1st day of January, 1972;
(x) The Law of Evidence; and
(xi) The Law of Procedure; or in place of (x) and (xi) The Law of Evidence and Procedure as one of the subjects in the course for the Ordinary degree of Bachelor of Laws of the University under the Regulations (including the Schedules thereto) for that degree as they existed prior to the 1st day of January, 1972; and has produced to the Board of Examiners a certificate of the kind mentioned in sub-paragraph (a) of this sub-rule; or

(c) he has passed or been credited with the examinations entitling him to take the degree of a University in the Commonwealth of Australia or of its Territories, provided—

(i) that the Board of Examiners, after considering a report from the Faculty of Law of the University, certifies that the degree course of such University is of sufficient academic merit for the purpose of a law course, and
(ii) that the Board of Examiners certifies that the content of such course is adequate, and
(iii) that he has, if so required by the Board of Examiners, produced to the Board a certificate that he has attended and shown satisfactory interest in a course of lectures given at the University of Adelaide, or otherwise as approved by the Board, in the subject Legal Ethics and Accounts, or in a subject or subjects that the Board considers to be the equivalent thereof; and

(d) he has, in addition to the requirements of sub-paragraph (a), (b) or (c) of this sub-rule, as the case may be, or in substitution for the requirements of sub-paragraph (c)(ii) of this sub-rule where the Board of Examiners has not certified as to the adequacy of content of such course, if the Board of Examiners with the approval or on the direction of the Judges has so required, passed a special examination set by the Board in any subject or subjects, or, if the Judges prescribe any optional subject in the degree course of the University as a necessary subject for the purposes of this sub-rule, has passed or been credited with the examination in that subject, notwithstanding that he has taken or is entitled to take the degree.

(2) Where, as a result of any change which has been made in any course for which an applicant has enrolled at the University, a subject mentioned in sub-rule (1)(b) of this Rule is no longer offered for examination, and the applicant is unable by virtue of such change to be credited therewith, but has passed or been credited with the examination in some other subject or subjects which in the opinion of the Board is or are substantially equivalent to the subject no longer offered for examination, or ought to be treated as such, the Board may, for the purposes only of these Rules and the applicant's application for admission, where in the opinion of the Board it is necessary or desirable so to do, grant the applicant status in any such subject.

PERIOD OF ARTICLES

7. The period for which an applicant (not previously admitted elsewhere) is required to serve under articles is four years. Provided that—

(1) any applicant who has—
(a) passed or been credited with the examination in the subjects mentioned in sub-paragraph (b) of Rule 6(1), and
(b) served under articles for at least one year after the date of the written examination for the last of such subjects for which he sat,
shall be eligible for admission after serving under articles for not less than three years;

(2) any applicant who has obtained, or become qualified to receive the degree of Bachelor of Laws shall be eligible for admission after serving under articles for not less than three years;

(3) any applicant who has—
(a) obtained the said degree, and
(b) served under articles for at least one year after obtaining, or becoming qualified to receive, the same
shall be eligible for admission after serving under articles for not less than two years; and

(4) any applicant who has—

(a) obtained the said degree, and

(b) served in articles for at least one year after obtaining, or becoming qualified to receive, the same, and

(c) has attended and shown a satisfactory interest in a course of practical instruction approved by the Board of Examiners,

shall be eligible for admission after serving under articles for not less than one year;

and provided further—

(a) that the Judges may from time to time specify one or more subjects, either cumulatively or alternatively, as pre-requisite subjects for the purposes of this proviso and may from time to time revoke or alter such specification or specifications;

(b) an applicant who has not passed or been credited with an examination in a pre-requisite subject or subjects shall not, notwithstanding that he has obtained or become qualified to receive the degree of Bachelor of Laws of the University, be entitled to the benefit of sub-paragraphs (2), (3) and (4) of the first proviso hereto, but such an applicant, if he would, apart from this proviso, be eligible for admission under sub-paragraph (4) of the first proviso, shall be eligible for admission after serving under articles for not less than two years, or if he would, apart from this proviso, be eligible for admission under sub-paragraph (3) of the first proviso, shall be eligible for admission after serving under articles for not less than three years.

7A. An applicant who has become qualified to receive the degree of Bachelor of Laws, or who has passed or been credited with the examinations in the subjects mentioned in sub-paragraph (b) of Rule 6(1), shall for the purposes of Rule 7 be deemed to have become so qualified, or to have passed or been credited with such examinations, on the date of the last written examination the passage of which was necessary to entitle him to the said degree or to such pass or credit as the case may be.

8. In the case of a person articled to a practitioner practising in the country one year of the period of articles prescribed by the preceding Rule may be served with the Adelaide agent of such practitioner, and the employment of the clerk as a bona fide pupil of the Adelaide agent, or his partner (if any) for such period of one year shall be deemed to be service under his articles of clerkship.

9. Service as an associate to a Judge of the Supreme Court may be counted as service in articles but so as not to exceed one-half of the required period of articles.

10. No articles of clerkship shall bind a clerk to service after he has been admitted as a practitioner.

ENTRY INTO ARTICLES OF CLERKSHIP

11. No person may enter into articles of clerkship unless

(a) he has been matriculated, and, if he proposes to enter into articles prior to the 1st day of January, 1974, he has passed Elements of Law and one, but otherwise Elements of Law and two, other of the subjects prescribed as compulsory for the Ordinary degree of Bachelor of Laws of the University.

(b) he has given to the Master, and to the Law Society at least twenty-one clear days notice of his intention to enter into articles. Such notice shall be in Form A in the schedule hereto, and shall contain the particulars therein prescribed.

Provided that, where any person has been required by notice (Form B) to attend personally before the Board and to satisfy it of his good character and fitness to enter into articles, such person shall not enter into articles until the Board has given its consent in writing thereto.

12. The Board may require any person intending to enter into articles to attend before it, and to furnish such evidence of his good character and fitness as it thinks fit.

13. Notice to attend under Rule 12 shall be in writing (Form B), and may be given by the Law Society or by the Master, by posting the same to the address stated in the particulars furnished under sub-paragraph (c) of Rule 11, before the expiration of the period referred to in that sub-paragraph.

14. Within one month after the execution of his articles the articled clerk shall—

(a) file the articles in the office of the Master together with an affidavit verifying the due execution thereof;

(b) produce to the Master a certificate, or certificates by the University showing that the clerk has the qualifications required by Rule 11;

(c) file in the office of the Master a copy of every such certificate; and

(d) serve on the Law Society copies of the said affidavit and of every such certificate, and of any consent, decision or determination given or made by the Board pursuant to the proviso to Rule 11, or to Rule 7, as the case may require.

15. Within one month after the execution of any supplementary articles, or of any assignment of any articles, the clerk shall—

(a) file in the office of the Master the supplementary articles, or the assignment together with an affidavit verifying the due execution; and

(b) serve on the Law Society a copy of the said affidavit and of any decision or determination of the Board given or made pursuant to Rule 22(2), or to the proviso to Rule 7.

SERVICE UNDER ARTICLES

16. No clerk shall be articled to a practitioner who has not been in practice in this State as a principal for a continuous period of five years, unless the practitioner is the Crown Solicitor of this State or the Deputy Crown Solicitor for the Commonwealth in this State.

Provided that compliance with this Rule may be dispensed with by the Board of Examiners upon its being satisfied that it is proper in all the circumstances to do so.

17. No practitioner shall have more than two articled clerks serving under articles at the same time, provided that, for the purposes of this rule only, an articled clerk shall be deemed not to be serving under articles from and after the time at which he has served a period of articles adequate to entitle him (if he is in all other respects entitled) to move for admission. Notwithstanding the provisions of this Rule and of Rule 19 the Crown Solicitor for the State may have up to six articled clerks serving under articles at the same time and those clerks may for the purposes of carrying out the employment required by Sub-Rule (1) of Rule 19 be employed in such duties of a legal nature within the departments administered by the Attorney-General for the State of South Australia as the Crown Solicitor with the approval of the Attorney-General and the Board of Examiners may direct.

18. No practitioner shall take, or retain any articled clerk after he has ceased to practise as a practitioner, or whilst he is employed as a clerk by another practitioner.

19. (1) Subject to these Rules, every articled clerk shall during the whole term of his articles be actually employed in this State in the proper business, practice and employment of a practitioner under the personal supervision of—

(a) the practitioner practising in this State to whom he is articled; or
(b) a partner of the practitioner; or
(c) a practitioner who for the time being is carrying on the business of the practitioner to whom the clerk is articled.

Provided that (for the purposes of clause (b) or (c) as the case may be) the partner or practitioner shall have been in practice in this State as a principal for a continuous period of five years.

(2) The Deputy Crown Solicitor and the Assistant Crown Solicitors shall for the purpose of this Rule be deemed to be a partner of the Crown Solicitor for the State.

20. (1) No articled clerk shall during the period of his Articles engage in or pursue any activity occupation or business for reward other than the proper business of the practitioner to whom he is articled or his partner (if any) except with the approval of the Board of Examiners and the consent in writing of his principal in each instance previously obtained and then only to the extent, and subject to any conditions, specified in such approval and consent.

(2) An articled clerk or proposed articled clerk may with the consent in writing of his principal or proposed principal apply for the approval of the Board of Examiners by letter addressed to the Master setting out such facts as the Clerk considers may be necessary to enable the Board of Examiners properly to consider the application.

(3) A clerk articled to the Crown Solicitor of the State or the Deputy Crown Solicitor for the Commonwealth in this State, shall not be in breach of this Rule merely by reason of the fact that he is a public servant.

(4) An articled clerk engaging in part time service in the defence forces of the Commonwealth of Australia shall not be in breach of this Rule merely by reason of the fact that he so engages.

21. Absence on duty as a member of the naval, military, or air forces of the Commonwealth of Australia under the National Service Act 1951-1953 or otherwise shall not terminate a clerk's articles, but any period of such service which exceeds sixteen days in any one year shall not be deemed service under articles unless the Court otherwise determines.

22. (1) Where before the expiration of the period for which a clerk is articled the practitioner, to whom he is articled, ceases to practise as a practitioner or dies, or his articles are cancelled by mutual consent, the clerk may enter into supplementary articles to another practitioner for the residue of the said period.

(2) The Board of Examiners may terminate existing articles on application to it either by the principal, or by the Clerk, if the Board is satisfied that the clerk has ceased substantially to derive any benefit under the articles, or that the clerk is not receiving satisfactory general instruction, or that for any other sufficient reason it is advisable to terminate the articles; and the Board may thereupon allow the clerk to enter into supplementary articles to another practitioner for the residue of the period of service rquired by these Rules or for such longer period as the Board may determine.

(3) Service under supplementary articles in accordance with the provisions of this Rule shall be good service.

PRELIMINARIES TO THE APPLICATION FOR ADMISSION

23. (1) An applicant for admission shall not less than one calendar month before the sitting of the Court at which he intends to move for admission—

(a) file in the Master's Office notice of his application;
(b) post and keep posted in the Master's Office a copy of the said notice; and
(c) serve a copy of such notice on the Law Society.

(2) Such application shall state the applicant's place of residence, and shall be in Form D.

24. Every applicant shall as soon as practicable after filing and posting his notice of application publish notice of his intended application on two separate occasions in each of two daily newspapers published in Adelaide.

25. Not less than twelve clear days before his application for admission is to be made, the applicant shall—

(a) file in the Master's Office an affidavit by him (Form E), and any other affidavits upon which he relies;

(b) produce to the Master the original certificate that he has passed the prescribed law examinations, and any other certificate on which he relies, and shall file in the Master's Office a copy of every such certificate;

(c) file in the Master's Office a certificate (Form F) by the practitioner to whom he was articled or (if that is impracticable) by the practitioner under whose supervision he has been of the facts which entitle the applicant to admission; and

(d) serve a copy of every affidavit, and of every certificate on the Law Society.

APPLICATION BY AN APPPLICANT PREVIOUSLY ADMITTED ELSEWHERE

26. An applicant previously admitted elsewhere shall comply with the requirements of Rules 23 and 24 and shall as soon as practicable after filing and posting his notice of application, but not less than twelve clear days before his application for admission is to be made—

(a) file in the office of the Master—

(i) an affidavit proving that he is eligible for admission (Form G), and any other affidavits upon which he relies;

(ii) in the case of any applicant admitted elsewhere, except an applicant mentioned in Rule 5(1) (f) a certificate in Form H.

(b) produce to the Master his original certificate of admission, and his last annual certificate (if any), and any other certificate or document on which he relies, and shall file in the Master's Office a copy of every such certificate, or document;

(c) serve a copy of every affidavit, and of every certificate, or document on the Law Society.

27. (1) An applicant previously admitted elsewhere shall reside for at least three calendar months in the State continuously and immediately preceding the filing of his notice of application for admission.

(2) This rule shall not apply to an applicant who satisfies the Board of Examiners— that he ordinarily resides in and is domiciled in this State or in some other State or Territory of the Commonwealth.

28. (1) An applicant previously admitted elsewhere shall, in the first place, be admitted conditionally only for a period of one year.

(2) After the expiration of that period the applicant may be granted absolute admission if he satisfies the Court by affidavit that since his conditional admission and until the date of application for the order absolute he has continuously resided in this State or some other State or Territory of the Commonwealth and has not pursued any occupation or business other than the proper business of a legal practitioner (whether in South Australia or elsewhere) and that to the best of his knowledge there is no reason why his admission should not be made absolute.

APPLICATION FOR RE-ADMISSION

29. An applicant for admission who was previously a practitioner of this Court, but whose name has been removed from the Roll of Practitioners, shall—

(a) file, serve, and post notices, and affidavits and certificates; and

(b) advertise, and attend before the Board of Examiners; and

(c) comply with and be subject to these Rules, as if he were applying for admission as a clerk who has served his articles in accordance with these Rules. Provided that any affidavits on which the applicant relies in support of his application shall be filed not later than twenty-eight days before the application is to be made.

BOARD OF EXAMINERS

30. (1) The Board of Examiners shall consist of the Master, the Deputy Master, the President and Vice-President for the time being of the Law Society, and at least six practitioners to be appointed by the Chief Justice for such period as he fixes. In the event of a vacancy occurring during the period fixed, the Chief Justice may fill that vacancy.

(2) Until appointments are made under this Rule the present Examiners shall act on the Board.

(3) The Board shall meet when summoned by the Master.

(4) Any three members present shall form a quorum, provided that the Master, or Deputy Master shall be one of them.

(5) The Master, or in his absence the Deputy Master, shall be the Chairman of the Board.

(6) All questions coming before the Board shall be decided by a majority of those present, and the Chairman shall have a casting vote as well as a deliberative vote; but when the Board makes any report to the Court any member may make a dissenting or individual report.

31. (1) The Board shall inquire into every application for admission and report to the Court whether the applicant—

(a) is eligible for admission;

(b) is a fit and proper person to be admitted; and

(c) has complied with these Rules.

(2) Where the Board inquires into an application for re-admission it shall also report to the Court as to the fitness and capacity of the applicant to act as a practitioner in all business and matters usually transacted by, or entrusted to practitioners.

(3) Where the circumstances so require the report of the Board shall be prefaced by a statement of its findings in relation to the facts of the case.

32. The Board may require any applicant for admission, and a practitioner to whom the applicant was articled, or under whose supervision he has served, or with whom he has served as a bona fide pupil, to answer in writing, or to attend before it, and answer orally, such questions relevant to his application for admission as the Board thinks fit.

33. The Board of Examiners shall have the same powers in relation to witnesses, the production of articles, books, and documents, and the general conduct of any inquiry, as the Statutory Committee has under the Legal Practitioners Act 1936-1948; and the provisions of that Act relating to witnesses and persons summoned as witnesses, to proceeding in the absence of the person whose conduct is being inquired into, and to incriminating answers, shall apply mutatis mutandis in relation to inquiries by the Board under these Rules.

34. (1) For the purposes of any inquiry the Chairman of the Board shall have power to administer oaths and affirmations.

(2) Every summons to a person to appear before the Board shall be in writing signed on behalf of the Board by the Master, the Deputy Master or the Chief Clerk of the Supreme Court.

35. If any applicant has complied with these Rules except for—

(a) a failure to serve, publish, post, file, or produce a notice, document, certificate, or affidavit within due time, or at all; or

(b) some short interval in his service under articles,

the Board of Examiners may, if it thinks such non-compliance is not material, recommend to the Court that it make an order exempting the applicant from compliance or further compliance with these rules.

36. The Law Society shall be entitled to be represented before the Board on any inquiry, or any application before it by its secretary, or by a solicitor, or counsel.

37. The Board may request the Law Society to appoint a practitioner to investigate any matter arising on any inquiry, or application coming before it, or to assist the Board on any such inquiry, or application.

OBJECTIONS TO APPLICANT FOR ADMISSION

38. Any person may object to the admission of any applicant for admission as a practitioner of the Supreme Court on the ground—

(a) that the applicant is not a fit and proper person to be admitted; or

(b) that under these Rules the applicant is not eligible to be admitted.

39. (1) An objection shall be made by—

(a) filing in the Master's Office a notice of objection; and

(b) filing in the Master's Office an affidavit of the facts, information, or belief on which the objector relies.

(2) Forthwith upon such filing, copies of the notice, and affidavit shall be served on the applicant, and on the Law Society.

40. The Board of Examiners shall inquire into and report to the Court upon any objection which has been duly made.

APPLICATIONS AND APPEALS

41. Applications for admission shall be made only on the first Tuesday in the month of March, and on the first Monday in the months of June, and October, in each year, and on such other days as the Court may specially appoint.

42. If the Board of Examiners has recommended that an order be made exempting any person from compliance, or further compliance with any of these Rules the Court may, without any further evidence, or application, make such order upon the application for admission.

43. If any person is dissatisfied with any decision, or determination of the Board, he may appeal to the Court, and such appeal shall be heard by the Court at such time as it appoints.

44. (1) The appeal shall be by notice of motion in a summary way.

(2) The notice of appeal shall be given within fourteen days from the date of the decision or determination appealed against, and shall state the grounds of the appeal. The appellant shall serve the notice upon the Law Society, and upon any person affected by the appeal.

45. (1) Except as herein otherwise provided, the Court shall hear and determine all applications for admission, and other applications under these Rules, and all appeals, and shall make such orders therein as it thinks fit, including orders with respect to the costs of and incidental to any application, objection, or appeal.

(2) The Court may, if it thinks fit, act upon a report of the Board of Examiners without any further evidence.

EXEMPTIONS

46. The Court, if under special circumstances it thinks fit so to do, may exempt any person from compliance, or further compliance with any of these Rules either entirely, or partially, or subject to conditions. Without prejudice to the generality of the provisions of this Rule the Court may grant an exemption from compliance or further compliance with any of these Rules in a case where it is satisfied that by reason of any amendment to the Rules and a consequent transition period any person would otherwise be prejudiced.

OF THE DEGREE OF

MASTER OF LAWS

REGULATIONS

1. The Faculty of Law may accept as a candidate for the degree of Master of Laws any person who:

(a) has become entitled to receive the Honours degree of Bachelor of Laws of the University of Adelaide;

(b) has obtained in another university qualifications which in the opinion of the Faculty of Law are at least equivalent to those of the Honours degree of Bachelor of Laws at the University of Adelaide.

2. (a) The Faculty may accept as a probationary candidate for the degree any other graduate of the University of Adelaide or of another university if his qualifications are such as to satisfy the Faculty that he is likely to be able satisfactorily to undertake work for the degree.

(b) Every person who is accepted as a probationary candidate for the degree shall within such time as the Faculty shall in his case prescribe or allow pass at Honours standard and at the first attempt such examinations formal or informal or both as the Faculty may prescribe: should he fail so to pass such examinations his probationary candidature shall lapse, unless the Faculty under such conditions as it thinks fit determines that it be allowed to continue.

**3. Subject to the approval of the Council the Faculty may, in special cases and subject to such conditions as it may see fit to impose in each case, accept as a candidate or as a probationary candidate for the degree a person who does not hold a university degree, if it is satisfied that he is likely to be able satisfactorily to undertake work for the degree of Master of Laws.

4. To obtain the degree a candidate shall demonstrate in a thesis on a subject approved by the Faculty his ability to carry out independent research, to marshal logically and appropriately, and to analyse and assess, the material produced by that research, and to express clearly and effectively the conclusions to be drawn from that analysis and assessment. He shall on submission of the thesis adduce sufficient evidence that the thesis, which shall be prepared under the guidance of a supervisor or supervisors appointed by the Faculty, is his own work.

** Allowed 28 February, 1974.

5. Unless the faculty in any particular case expressly approve an extension of time the thesis of a full-time candidate for the degree shall be submitted within two calendar years, and the thesis of a part-time or external candidate shall be submitted within four calendar years, from the date of the commencement of his candidature or probationary candidature. No thesis may be submitted earlier than one calendar year from the date of the commencement of candidature.

°°6. A candidate's progress shall be reviewed by the Faculty each academic year. If in the opinion of the Faculty of Law a candidate for the degree is not making satisfactory progress the Faculty may with the consent of the Council withdraw its approval of his candidature and the candidate shall cease to be enrolled for the degree.

7. The candidature of every candidate shall commence on the approval by the Faculty of the subject of his research, unless the Faculty in special circumstances determines that it shall commence on some other specified date.

8. On the completion of this work the candidate shall lodge with the Academic Registrar three copies of his thesis prepared in accordance with directions given to candidates from time to time.*

9. The Faculty shall appoint examiners to report on the thesis. The examiners shall report to the Faculty and may recommend (i) that the degree be awarded; or (ii) that the thesis be returned to the candidate for revision and resubmission; or (iii) that the degree be not awarded.

10. If a thesis submitted for the degree of Doctor of Laws or Doctor of Philosophy be considered by the Faculty, after a final report by the examiners appointed to adjudicate upon it, not sufficiently meritorious to qualify the candidate submitting that thesis for the award of the degree the Faculty may if in its opinion the thesis submitted is of a standard sufficient to comply with the relevant requirements for the award of the degree of Master of Laws recommend that the latter degree be awarded.

11. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 9 January, 1969.
°° Awaiting allowance at time of printing.
° Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

OF THE DEGREE OF

DOCTOR OF LAWS

REGULATIONS

1. A Bachelor or Master of Laws may proceed to the degree of Doctor of Laws by complying with the following regulations, but shall not be admitted to the degree until the expiration of the fourth academic year from his admission to the degree of Bachelor of Laws or to a degree considered by the Council as equivalent thereto.

2. A candidate for the degree shall: (a) hold or have qualified for the honours degree of Bachelor of Laws; or (b) hold or have qualified for the degree of Master of Laws; or (c) have passed an examination approved by the Faculty of Law: provided that the Faculty of Law may accept in lieu of the foregoing an equivalent qualification obtained in any other university recognised by the University of Adelaide.

3. To qualify for the degree a candidate shall present a thesis on a subject of law proposed by him and approved by the Faculty of Law which (a) contains a substantial contribution to some branch of legal knowledge; (b) exhibits powers of original research and scholarship; and (c) whether or not previously published in full or in part shall in the opinion of the examiners merit publication as a book or monograph (other than as a collection of separate articles). Conjoint work, or a thesis previously accepted for a degree in this or in any other university, will not be accepted alone for the degree.

4. Every candidate may also present in support of his candidature other published books, monographs, or articles. If any of these publications record work carried out conjointly, the candidate shall state the extent to which he was responsible for the initiation and preparation of such publications.

5. The candidate shall lodge with the Academic Registrar three copies of the work prepared in accordance with the directions given in sup-paragraph (b) of clause 2B of Chapter XXV of the Statutes. If the work is accepted for the degree the Academic Registrar will transmit two of the copies to the University Library.

6. The Faculty of Law shall nominate examiners. Normally there will be three examiners, two of them external to the University; but exceptions may be made in special cases recommended by the Faculty and approved by the Council.

7. The examiners may, if they think fit, examine the candidate either orally or by written questions on the subject matter of his thesis.

8. A candidate who complies with the foregoing conditions and satisfies the examiners may, on the recommendation of the Faculty of Law, be admitted to the degree of Doctor of Laws.

9. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 4 October, 1962.

FACULTY OF MATHEMATICAL SCIENCES

REGULATIONS, SCHEDULES AND SYLLABUSES OF DEGREES AND DIPLOMA

Bachelor of Science in the Faculty of Mathematical Sciences (B.Sc.)

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Computing Science - - - - - - - 900
Mathematical Physics - - - - - - - 904
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Diploma in Computing Science (Dip.Comp.Sc.)

Regulations and Schedules - - - - - - 922
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Master of Science in the Faculty of Mathematical Sciences (M.Sc.)

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Doctor of Philosophy (Ph.D.)

Regulations and Schedules: under "Board of Research Studies"—*see* Table of Contents.

Doctor of Science in the Faculty of Mathematical Sciences (D.Sc.)

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OF THE DEGREE OF

BACHELOR OF SCIENCE

IN THE FACULTY OF MATHEMATICAL SCIENCES

REGULATIONS

1. There shall be an Ordinary and an Honours degree of Bachelor of Science in the Faculty of Mathematical Sciences. A candidate may obtain either degree or both.

2. The course of study for the Ordinary degree shall extend over three years of full-time study or the equivalent and that for the Honours degree over one additional year.

3. (a) In these regulations and in schedules made under them by the Council the following definitions shall apply:

"Subject" means a course of study at the University normally completed in one academic year.

"Unit" means a course of study at the University on a prescribed topic normally completed in one academic term.

(b) The Council, after receipt of advice from the Faculty of Mathematical Sciences, shall from time to time prescribe schedules defining (i) the subjects and units of study for the degree, (ii) the range of subjects and units to be satisfactorily completed and the examinations to be passed by candidates, and (iii) the fees to be paid by candidates.

(c) Such schedules shall become effective from the date of prescription by the Council or such other date as the Council may fix.

(d) The syllabuses of subjects and units shall be specified by the Head of the Department concerned and submitted to the Faculty and Council for approval.

(e) Schedules made and syllabuses approved by the Council shall be published in the next edition of the University Calendar.

4. (a) Except by permission of the Faculty, a candidate shall not be admitted to the class in any subject or unit, for which he has not satisfactorily completed the pre-requisite studies as prescribed in the syllabus for that subject or unit.

(b) Exemption from any part of the course on the first occasion on which a candidate takes a subject or unit will be granted only in special cases and on grounds approved by the Faculty.

5. (a) Examinations in any subject or unit shall be held in accordance with the provision of the relevant schedule made under these regulations.

(b) A candidate shall enter for examination in a subject on a form and by a date prescribed by the Council, but shall not be eligible to present himself for examination unless he has done prescribed work to the satisfaction of the teaching staff concerned.

(c) In determining a candidate's final results in a subject (or unit) the examiners may take into account the candidate's written or practical work and his results at any examinations in it.

(d) A candidate will be permitted to take a supplementary examination only in circumstances approved by the Faculty.

6. The names of the candidates who pass in any subject for the Ordinary degree shall be published in three classifications: Pass with Distinction, Pass with Credit, Pass. The names of candidates in each of the classifications shall be published in accordance with the provision of the relevant schedule made under the regulations. If the list of candidates who pass be published in two divisions, a pass in the higher division may be prescribed in the appropriate syllabuses as pre-requisite for admission to another subject. A candidate with a lower division pass who wishes to gain a higher division pass shall be allowed to repeat the course, subject to the provisions of regulation 7.

7. (a) A candidate who fails to pass in a subject (or unit) or who obtains a lower division pass and who desires to take the subject or unit again shall, unless exempted wholly or partially therefrom by the Head of Department concerned, do written or other work in that subject or unit to the satisfaction of the teaching staff concerned.

(b) A candidate who has twice failed to obtain a Division I pass or higher in the examination in any subject shall not enrol for the subject again except by permission of the Faculty and under such conditions as the Faculty may prescribe. For the purpose of this clause a candidate who fails to receive permission to sit for or absents himself from the examination in any subject after having attended substantially the full course of instruction in it, shall be deemed to have failed to pass the examination. A candidate who obtains a higher division pass only after being granted permission to enrol for the third time shall not take a subject for which that higher division pass is a pre-requisite, save in exceptional circumstances and with the permission of the Faculty.

8. (a) A candidate who has passed subjects in other faculties or universities or elsewhere, may on written application to the Academic Registrar be granted such exemption from these regulations and from schedules made under them as the Council on the recommendation of the Faculty may determine.

(b) A graduate in another faculty, who wishes to proceed to the degree of Bachelor of Science in the Faculty of Mathematical Sciences and to count towards that degree subjects which he has already presented for another degree may do so, subject to the following conditions:

(i) he shall present a range of subjects which fulfils the requirements of the relevant schedule made under regulation 3, and

(ii) he shall present two third-year subjects not presented for any other degree.

9. (a) A candidate desiring to enter for an honours subject must obtain the approval of the Head of the Department concerned. The final examination may not, except by special permission of the Faculty, be taken until four years of study have been completed after matriculation.

(b) The work of the Honours year must be completed in one year of full-time study, save that on the recommendation of the Head of the Department concerned, the Faculty may permit a candidate to spread the work over two years, but no more, under such conditions as it may determine.

(c) The names of the candidates who qualify for the Honours degree shall be published in alphabetical order within the following classes and divisions in each subject:

First Class
Second Class
Division A
Division B
Third Class.

(d) A candidate who is unable to complete the course for the Honours degree within the time allowed, or whose work is unsatisfactory at any stage of the course, or who withdraws from the course shall be reported to the Faculty, which may permit him to re-enrol for the Honours degree under such conditions (if any) as it may determine.

(e) A candidate may not enrol a second time for the Honours course in the same subject if he (i) has already qualified for Honours in that subject; or (ii) has presented himself for examination in that subject but has failed to obtain Honours; or (iii) withdraws from his course, unless the Faculty under paragraph (d) hereof permits him to re-enrol.

10. A graduate who has obtained the Honours degree of Bachelor of Arts may not proceed to the Honours degree of Bachelor of Science in the same subject.

11. A graduate who has obtained the Ordinary degree of Bachelor of Arts and has fulfilled the requirements of clause 9 for the Honours degree of Bachelor of Science in the Faculty of Mathematical Sciences shall be awarded the Honours degree of Bachelor of Arts.

12. Applications for approval under clauses 4(a), 4(b), 7(a), 7(b) or 8 shall be submitted in writing to the Academic Registrar.

Regulations allowed 21 December, 1972.

SCHEDULES

(Made by the Council under Regulation 3.)

NOTE: Syllabuses of subjects for the degree of B.Sc. in the Faculty of Mathematical Sciences are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I: SUBJECTS OF STUDY

1. (a) *First-year subjects*:

Mathematical Sciences:

Mathematics I

Arts:

Anthropology I
Classical Studies I
Drama I
Economic Geography I
English I
French I and IA
German I and IA
Greek I
History IA, IB and IC
Latin I
Music I and IA
Politics I
Psychology I
Social Economics I

Economics:

Elements of Accounting I

Engineering:

Engineering I

Science:
Biology I
Chemistry I
Geology I
Mathematics IM*
Physics I
Zoology I

(b) *First-year half-subjects*:

Mathematical Sciences:
Computing IH
Statistics IH

Arts:
Human Geography IH
Logic IH
Philosophy IH(A) and IH(B)
Physical Geography IH
Physics, Man and Society IH

Economics:
Macroeconomics IH
Microeconomics IH

Science:
Astronomy IH
General Biology IH
Geology IH
Genetics and Human Variation IH
Plant Biology IH

2. (a) *Second-year subjects*:

Mathematical Sciences:
Applied Mathematics IIA and IIB
Mathematical Statistics II
Pure Mathematics II

Arts:
American Literature II
Ancient History II
Australian Literary Studies II
Classical Studies II
English II
French II, IIA and IIB
German II, IIA and IIB
Greek II

* With permission of the Faculty, Mathematics IM may be counted as a Mathematical Sciences subject in place of Mathematics I for the purpose of Schedule II.

History II
Latin II
Linguistics II
Logic II
Music II
Old and Middle English II
Philosophy II
Politics IIA and IIB
Psychology II

Economics:

Economic History II
Management Accounting II

Science:

Biochemistry II
Botany II
Chemistry II
Genetics II
Geology II
Organic Chemistry II
Physical and Inorganic Chemistry II
Physics II
Physiology II
Zoology II

(b) *Second-year half-subjects*

Arts:

Anthropological Studies in Social Inequality and Change IIH
Biogeography and Climatology IIH
Communication, Interaction and Culture IIH
Ecology and Taxonomy IIH
Economic and Political Anthropology IIH
Economic Geography IIH
Ethnological Studies in Ritual and Religion IIH
Geomorphology IIH
Social Geography IIH

Economics:

Macroeconomics IIH
Microeconomics IIH

3. (a) *Third-year subjects*:

Mathematical Sciences:

Applied Mathematics III and IIIA
Computing Science III and IIIA
Mathematical Physics III
Mathematical Statistics III
Pure Mathematics III and IIIA

Arts:

Australian Literary Studies III
Classical Studies III
Comparative Philology III
English III
French III, IIIA and IIIB
Geography IIIA and IIIB
German III and IIIB
Greek III
History IIIA, IIIB and IIIC
Latin III
Linguistics III
Logic III
Music III
Old and Middle English III
Philosophy IIIA and IIIB
Politics IIIA and IIIB
Psychology III

Economics:

Any three of the following subjects or half-subjects which satisfy the grouping requirements given may be counted as one third-year subject for this degree:

International Economics and two from the following list, one of which must be either Macroeconomics IIIH or Microeconomics IIIH:

Agricultural Economics IIIH
Commercial Law II
Econometrics IIIH
Economic History IIIH
Economics of Labour IIIH
Economic Problems in Historical Perspective IIIH
Economic Theory
History of Economic Thought IIIH
Industrial Sociology III
Macroeconomics IIIH
Managerial Economics IIIH
Microeconomics IIIH
Public Finance IIIH

Any three of the following:

Accounting Theory IIIH
Business Finance IIIH
Commercial Law II
Industrial Sociology III
Marketing IIIH
Management Information Systems IIIH

Science:

Applied Mathematics IIIM
Biochemistry III and IIIM
Botany III and IIIM
Computing Science IIIM
Genetics III
Geochemistry III and IIIM
Economic Geology III
Geology III and IIIM
Geophysics III
Histology and Cell Biology III and IIIM
Microbiology III
Organic Chemistry III and IIIM
Physical and Inorganic Chemistry IIIB and IIIM
Physics III and IIIM
Physiology III, IIIA, IIIB and IIIM
Pure Mathematics IIIM
Zoology III and IIIM

(b) *Third-year half-subjects*:

Arts:

Geography IIIH
Philosophy IIIH
Political Sociology IIIH
Psychology IIIH(A) and IIIH(B)

Schedule II: The Ordinary Degree

1. *Subjects*:

Throughout this Schedule the word "subject" denotes a subject listed in Schedule I.

2. *Equivalence of first-year half-subjects to first-year subjects*:

(a) Two Mathematical Sciences first-year half-subjects are equivalent to one Mathematical Sciences first-year subject for the purpose of this Schedule.

(b) Any other combination of two first-year half-subjects is equivalent to a first-year subject, but cannot be counted as a Mathematical Sciences subject.

3. *General requirement*:

To qualify for the Ordinary degree a candidate shall present nine subjects or their equivalent, including at least two third-year subjects. At least five subjects shall be Mathematical Sciences subjects, including at least one third-year subject. With permission of the Faculty, Mathematics IM may be counted as a Mathematical Sciences subject in place of Mathematics I for the purpose of this Schedule.

4. *Distribution of subjects by years*:

The distribution of subjects by years shall be *either*

4 first-year, 3 second-year, and 2 third-year subjects or their equivalent; *or*

5 first-year, 2 second-year, and 2 third-year subjects or their equivalent.

Permission of the Faculty is required for any other combination.

5. *Approval of subjects*:

Courses of study must be approved by the Dean or an Assistant to the Dean at enrolment each year.

6. *Unacceptable combinations of subjects*:

(a) No third-year unit or half-subject may be presented in more than one subject for the degree.

(b) The following combinations of subjects may not be presented for the degree.

(i) Biology I and *any one of* Botany I, Zoology I, General Biology IH *or* Plant Biology IH;

(ii) Chemistry II and *either* Physical and Inorganic Chemistry II *or* Organic Chemistry II;

(iii) Ancient History and *either* Greek II *or* Latin II *or* Latin III;

(iv) Classical Studies I and *either* Greek II *or* Greek III;

(v) Social Economics I and *any one of* Economics I, Macroeconomics IH and Microeconomics IH;

(vi) Economic Geography I and *either* one or both of Human Geography IH, *or* Physical Geography IH *or* Geography I (before 1974);

(vii) Geography I and *either* Human Geography IH *or* Physical Geography IH;

(viii) Economics I and Microeconomics IH *or* Macroeconomics IH;

(ix) Logic II and Logic III;

(x) Philosophy I and *any* of Logic and Argument IH, Philosophy IH, Philosophy IH(A), Philosophy IH(B);

(xi) Psychology III and Psychology IIIH(A) *or* Psychology IIIH(B);

(xii) French I and French IA;

(xiii) French II and French IIA;

(xiv) German I and German IA;

(xv) German II and German IIA;

(xvi) Mathematics I and Mathematics IM;

(xvii) Applied Mathematics IIA and *either* Applied Mathematics IIB *or* Applied Mathematics II;

(xviii) Computing IH and Applied Mathematics IIB;

(xix) Economics II and *either* Macroeconomics IIH *or* Microeconomics IIH;

(xx) Geology I and *any one* of Geology IH, General Geology IH and Physical Geology IH;

(xxi) Geology IH and *either* General Geology IH *or* Physical Geology IH;

(xxii) Music I and Music IA;

(xxiii) Physics I and Physics, Man and Society IH.

7. *Examinations*:

(a) Final examinations in any subject or unit shall be held in the examination period defined by the Council after the completion of the course of instruction in that subject or unit.

(b) An examination which is to be taken into account for the purpose of regulation 5(c) may be held if the Faculty so approve. Such examination shall be held during the examination periods defined by the Council.

(c) Other examinations may be held at any time fixed by the examiners concerned, provided that such examinations are not held in the vacation and that attendance at such examinations is not compulsory.

8. When, in the opinion of the Faculty, special circumstances exist, the Council, on the recommendation of the Faculty in each case, may vary any of the provisions of clauses 1-7 above.

9. The names of the candidates who pass in any subject shall be published in an official list and be arranged in alphabetical order in the classifications: Pass with Distinction, Pass with Credit and Pass.

NOTE (not forming part of the schedules):

Work required to complete an Adelaide degree.

To qualify for the degree:

(i) students who have completed most of the requirements for the degree of Bachelor of Science at another institution will be required as a minimum to complete a full third-year's work in order to qualify for the Adelaide degree; and

(ii) with special permission of the Faculty, a student who has completed most of the subjects for the degree of Bachelor of Science in Adelaide including one third-year subject may be permitted to complete the requirements for the degree at another institution.

All applications must be made in writing to the Academic Registrar.

Schedule III: The Honours Degree

1. A candidate may, subject to approval by the Head of the Department concerned, proceed to the Honours degree in one of the following subjects:

Applied Mathematics;
Computing Science;
Mathematical Physics;
Pure Mathematics;
Statistics.

2. A candidate for the Honours degree in any subject shall not begin Honours work in that subject until he has qualified for the Ordinary degree of Bachelor of Arts or Bachelor of Science or such other degree as may be acceptable to the Faculty. A candidate who has been granted permission to spread the work of the Honours year over two years under regulation 9(b) must complete his qualifications for the Ordinary degree before beginning the work of the second year of his Honours course.

3. When, in the opinion of the Faculty, special circumstances exist, the Council, on the recommendation of the Faculty in each case, may vary the provisions of clauses 1 and 2 above.

OF THE DEGREE OF

BACHELOR OF SCIENCE
IN THE FACULTY OF MATHEMATICAL SCIENCES

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Mathematical Sciences: Q.

The second letter identifies the department teaching the subject, as follows:

Applied Mathematics - - -	N	Pure Mathematics - - - -	M
Computing Science - - - -	A	Statistics - - - - - - - -	T
Mathematical Physics - - -	F		

The first digit—

0–6: Indicates that the subject is in sequence with another subject.

7–9: Indicates that the subject is not in sequence with another subject.

8: Indicates a third-year subject taken in more than one department.

The second digit—

1, 2, 3: Indicates year of subject, e.g. first, second or third.

(5–6: Not used.)

8: Indicates subject taken by intending Honours student before the Honours year.

The letter H used in place of the second digit indicates a half-subject two of which count towards the degree as a whole subject.

NOTE: Some subjects for the degree of B.Sc. in the Faculty of Mathematical Sciences are taught by departments of other faculties. In the syllabus numbers of those subjects the two digits do not necessarily have the significance shown in the Faculty of Mathematical Sciences table above. For syllabuses of these subjects see the table of subjects at the end of the volume.

COMPUTING SCIENCE.

Course in Computer Programming.

The Department of Computing Science will conduct a credit course in Fortran programming for students of Architectural Design and Practice. The course will be conducted during first term and involve two hours a week at a time to be arranged. A similar arrangement may be made for another Department by consultation with the Chairman of Department.

QA7H Computing IH.

A first-year half-subject, consisting of two lectures and one tutorial a week throughout the year. A background in algebra, such as may be obtained from the Matriculation Mathematics IS syllabus, or equivalent, will be assumed. Practical programming exercises will be a requirement of the course.

The subject is designed to convey an understanding of the elements of Computing Science as well as to teach computer programming.

Syllabus: Algorithmic processes and languages (Fortran in 1975). Computer organisation and coding. Data structures and their manipulation.

Reference books:

Gruenberger, F., *Computing: an introduction* (Harcourt, Brace and World).

McCracken, D. D., *A guide to Fortran IV programming* (Wiley).

Walker, T. M., *Introduction to computer science* (Allyn and Bacon).

Walker, T. M., and Cotterman, W. W., *An introduction to computer science and algorithmic processes* (Allyn and Bacon).

SECOND-YEAR SUBJECTS IN COMPUTING SCIENCE FOR 1976.

The Department of Computing Science will be introducing second-year courses in 1976. Two alternative full second-year subjects will be offered; the first, Computing Science II, will be available to students who have previously passed QA7H Computing IH and the second, Computing Science IIC, will be available to students with no previous computing experience. The pre-requisites for these subjects are:

Computing Science II.

Division I pass or higher in QA7H Computing IH *and* Division II pass or higher in *either* QM01 Mathematics I *or* QM11 Mathematics IM.

Computing Science IIC.

Division I pass or higher in *either* QM01 Mathematics I *or* QM11 Mathematics IM.

In addition to Computing Science II and Computing Science IIC, two mixed subjects will be offered; one will be offered jointly with the Department of Pure Mathematics and one jointly with the Department of Applied Mathematics. These latter two subjects will require a background of either QA7H Computing IH or QN12 Applied Mathematics IIB and appropriate Mathematics (see below).

The mixed second-year subjects will lead to at least four third-year Computing Science units of general interest; the full second-year subjects will lead to all third-year units. Associated changes will be made to the Diploma and Computing Science III courses in 1977. Present undergraduates who, prior to this notice, had planned to take third-year Computing Science subjects in 1977 should consult the Chairman of the Department.

The first-year subjects leading to *full* second-year Computing Science subjects are:

Recommended { Mathematics I; Computing IH; Statistics IH }

Necessary { *either* Mathematics I *or* Mathematics IM }

The first-year subjects leading to *mixed* second-year Computing Science subjects are:

Recommended { Mathematics I; Computing IH; Statistics IH }

Necessary { *either* Mathematics I (for Computing/Applied Mathematics and Computing/Pure Mathematics) *or* Mathematics IM (for Computing/Applied Mathematics) *and* *either Computing* IH *or* Applied Mathematics IIB }

THIRD-YEAR SUBJECTS IN COMPUTING SCIENCE.

The Department offers the following third-year units, each of which consists of about 27 lectures, tutorials, written exercises and, in most units, practical programming exercises.

There will be one tutorial fortnightly for some units and practical work at times to be arranged. There is limited provision for after hours tutorials and practical work for part-time students.

The lecture times for the units are shown in parentheses.

A301 COMPUTER SYSTEMS (First term: Tues 4.15, Wed 4.15, Fri 4.15).

The major parts of a computer will be described in terms of their functions. Included in the course will be topics such as code structures, memory systems, addressing, arithmetic systems, input/output, logical design, interrupt systems, multiprogramming, sequential circuits, time-sharing computer systems, computer networks.

Reference books:

Foster, C. C., *Computer architecture* (Van Nostrand Reinhold).

Siegel, P., *Understanding digital computers* (Wiley).

Maley, G. A., and Earle, J., *The logic design of transistor digital computers* (Prentice-Hall).

Lewin, D., *Logical design of switching circuits* (Nelson).

Wilkes, M. V., *Time-sharing computer systems*, 2nd edition (MacDonald).

Martin, J., *Teleprocessing network organization* (Prentice-Hall).

A302 NUMERICAL ANALYSIS I (First term: Mon 4.15, Wed 2.15, Thurs 4.15).

Topics will include computer arithmetic, numerical solution of non-linear equations, numerical solution of systems of linear equations and the computation of eigenvalues and eigenvectors.

Reference books:

Isaacson, E., and Keller, H. B., *Analysis of numerical methods* (Wiley).

Ralston, A., *A first course in numerical analysis* (McGraw-Hill).

Wilkinson, J. H., *Rounding errors in algebraic processes* (Prentice-Hall).

Williams, P. W., *Numerical computation* (Nelson).

A303 ASSEMBLY LANGUAGES (Third term: Mon 4.15, Wed 2.15, Thurs 4.15).

An introduction to programming in an assembly language. Description of simple assemblers, loaders and interpreters. Students are required to complete some practical programming exercises.

Reference books:

Barron, D. W., *Assemblers and loaders* (Macdonald).

Grishman, R., *Assembly language programming for the Control Data* 6000 *series* (Algorithmics Press).

Appropriate assembly language reference manuals.

A304 PROGRAMMING LANGUAGES I (Second term: Mon 4.15, Wed 2.15, Thurs 4.15).

Structured Programming, Algol and other programming languages.

Reference books:

Dahl, O. J., and others, *Structured programming* (Academic Press).

Wirth, N., *Systematic programming* (Prentice-Hall).

Baumann, R., and others, *Introduction to Algol* (Prentice-Hall).

Sammet, J., *Programming languages: history and fundamentals* (Prentice-Hall).

Shepherd, R. F., *Algol* 60 *programming* (McGraw-Hill).

A305 PROGRAMMING LANGUAGES II (Third term: Tues 4.15, Wed 4.15, Fri 4.15).

Syntax analysis, string languages, strings, Snobol and other programming languages.

Reference books:

Gries, D., *Compiler construction for digital computers* (Wiley).

Griswold, R. E., Poage, J. F., and Polonsky, J. P., *The Snobol-4 programming language* (Prentice-Hall).

A306 DATA STRUCTURES (Second term: Tues 4.15, Wed 4.15, Fri 4.15).

Topics will include: Sorting of serial files, file updating, file structures, access methods, organisation and management of files on direct access devices, trees-digraphs-networks-list structures: applications and methods of representation, algebra of strings.

Reference books:

Knuth, D., *The art of computer programming*, Vol. 1 (Addison-Wesley).

Berztiss, A. T., *Data structures: theory and practice* (Academic Press).

Iverson, K. E., *A programming language* (Wiley).

Subject combinations and pre-requisites.

In 1975 a pass at division I level or higher in:

(a) QA7H Computing IH and one second-year Mathematical Sciences subject, *or*

(b) QN12 Applied Mathematics IIB, *or*

(c) QT02 Mathematical Statistics II, *or*

(d) QM22 Mathematics IIM taken in 1974

will be formal pre-requisites for QA03 Computing Science III, QA13 Computing Science IIIA, QA83 Computing Science IIIM and all units thereof.

For students wishing to major in Computing Science in 1976 the recommended course is:

First year: QA7H Computing IH, QT7H Statistics IH, QM01 Mathematics I, plus two subjects.

Second year: QN22 Applied Mathematics IIA, plus two subjects.

Third year: QA03 Computing Science III, plus one subject.

Students wishing to enrol for QA13 Computing Science IIIA *or* QA83 Computing Science IIIM *or* individual third-year units should ensure, from the descriptions of third-year units below, that they have the necessary pre-requisites for the units they choose.

The subjects offered are:

QA03 Computing Science III.

This subject comprises the six third-year units A301, A302, A303, A304, A305 and A306 offered by the Department of Computing Science.

QA13 Computing Science IIIA.

The course consists of six third-year units offered by Departments in the Faculty of Mathematical Sciences and selected with the approval of the Chairman of all Departments concerned. The units selected must satisfy the following requirements:

(i) at least four units must be selected from units offered by the Department of Computing Science;

(ii) at least one unit must be selected from units offered by other Departments in the Faculty of Mathematical Sciences.

QA83 Computing Science IIIM.

The course consists of six third-year units offered by Departments in the Faculty of Mathematical Sciences and the Faculty of Science and selected with the approval of the Heads/Chairmen of all Departments concerned. The units selected must satisfy the following requirements:

(i) at least four units must be selected from units offered by the Department of Computing Science;

(ii) at least one unit must be selected from units offered by Departments in the Faculty of Science.

(For the purpose of this subject, a double unit in the Faculty of Science is regarded as two single units.)

HONOURS DEGREE OF B.A. OR B.Sc.

QA99 Computing Science for the Honours degree of B.A. or B.Sc.

In general, only students who have reached a satisfactory standard in QA03 Computing Science III *or* QA13 Computing Science IIIA *or* QA83 Computing Science IIIM, and one other third-year subject offered by the Departments of Pure Mathematics, Applied Mathematics or Statistics will be permitted to proceed to the Honours course.

The course will be determined from year to year and will consist partly of lectures given in the Department of Computing Science, and partly of lectures given in other departments of the Faculty of Mathematical Sciences. It will normally include topics selected from the following: operating systems, advanced numerical analysis, information theory, operations research, advanced programming languages, theory of languages, computer architecture. A special course is available for students taking Honours Computing Science as a preparation for teaching computing in secondary schools or for students who may wish to take a higher degree in Computing Science as a qualification for teaching in a College of Advanced Education. A comprehensive course for any such student will be determined according to his undergraduate background.

Students will be required to undertake a major computing project.

Intending students should consult the Professor of Computing Science not later than the end of the preceding year, and be prepared to commence work on a suitable project in the first week of February.

MATHEMATICAL PHYSICS.

The pre-requisites for QF13 Mathematical Physics III and QF03 Theoretical Physics are passes at Division I or higher standard in two of SP02 Physics II and QM02 Pure Mathematics II *or* QN22 Applied Mathematics IIA *or* QN12 Applied Mathematics IIB.

The Department offers the following units, most of which consist of two or three lectures a week, and a tutorial, for one term:

F301 MATHEMATICAL METHODS: First term.

Vector and Tensor Analysis. Theory and applications of distributions.

F302 ADVANCED DYNAMICS: First term.

Newtonian mechanics. Lagrange's and Hamilton's equations of motion.

F303 QUANTUM MECHANICS I: Second term.

This unit is essential for students wishing to study molecular, atomic or nuclear physics at an advanced level. The subject is developed from first principles, with emphasis on the use of Hilbert space, and some elementary applications are included.

F304 THEORY OF RELATIVITY: Second term.

Lorentz, transformations. Minkowski space, kinematics and dynamics of point particles, electromagnetism, charged particle motions.

F305 QUANTUM MECHANICS II: Third term.

This unit is strongly recommended to students wishing to proceed to honours in Mathematical Physics. It includes more advanced applications, and is a continuation of F303, a knowledge of which is assumed.

F306 FLUID MECHANICS: Third term.

Macroscopic conservation laws, thermodynamics and irreversible processes. Magnetohydrodynamics.

F307 THEORETICAL ASTROPHYSICS: Third term.

Stellar models: hydrostatic and radiative equilibrium, polytropic gas spheres. Theoretical basis of the Herzprung-Russel diagram. White dwarfs, neutron stars. Cosmology.

The subjects offered are:

QF03 Theoretical Physics III.

This is a group C Science subject and may be taken only with SP03 Physics III *or* SP83 Physics IIIM *or* SC13 Physical and Inorganic Chemistry IIIB *or* SC83 Physical and Inorganic Chemistry IIIM. It consists of at least six units, which will normally include at least four of the units F301-3 and F305-7 and the unit M313 Complex Functions in QM03 Pure Mathematics III. (Unit F304 forms part of SP03 Physics III *or* SP83 Physics IIIM.) The remaining units should be chosen, with the approval of the Head/Chairman of the Department, from units offered by the Department of Mathematical Physics or one of the Mathematics Departments.

QF13 Mathematical Physics III.

This subject may be taken only with QM03 Pure Mathematics III, QN13 Applied Mathematics III *or* AL03 Philosophy IIIA. It consists of at least six units, which will normally include at least five of the units F301-7. The unit Analysis II in Pure Mathematics should be included by students not taking QM03 Pure Mathematics III.

HONOURS DEGREE.

QF99 Mathematical Physics for the Honours degree of B.Sc.

Students who have reached a satisfactory standard in at least four of the third-year units F301-7, and other third-year Science or Mathematical Sciences units, may be permitted to proceed to the Honours course.

The course will contain lectures on most of the following subjects: general theory of relativity, relativistic quantum mechanics, elementary field theory, statistical mechanics, quantal many body theory, electricity and magnetism, advanced plasma dynamics, theoretical nuclear physics, particle physics, irreversible statistical mechanics, together with a selection of lectures drawn from the honours programmes of the Departments of Physics and Mathematics. In addition students will be required to submit a thesis containing a review of, or original contributions to, some advanced topic in mathematical physics, to be approved in advance by the Chairman of the Department. A reading knowledge will be required of at least one foreign language.

MATHEMATICS.

INTRODUCTORY NOTES.

1. Attention is drawn to the pre-requisite subjects for admission to the various courses and units as prescribed in the syllabuses below.

2. The Departments of Pure and Applied Mathematics offer the following courses:

First Year: *QM01 Mathematics I, QM11 Mathematics IM, QM7H Mathematics IH (half-subject).

Second Year: *QM02 Pure Mathematics II, *QN22 Applied Mathematics IIA, *QN12 Applied Mathematics IIB, QM22 Mathematics IIM.

Third Year: *QM03 Pure Mathematics III, *QM13 Pure Mathematics IIIA, QM83 Pure Mathematics IIIM, *QN03 Applied Mathematics III, *QN13 Applied Mathematics IIIA, QN83 Applied Mathematics IIIM, Mathematics III (Engineering) (Part 9 of Engineering II and III).

Fourth Year: QM99 Honours Pure Mathematics, QN99 Honours Applied Mathematics.

Subjects marked * are Mathematical Sciences subjects and may count towards the requirements of Section 3 of Schedule II for the Ordinary degree of B.Sc. in the Faculty of Mathematical Sciences. The fourth-year courses are available only in the Faculty of Mathematical Sciences.

3. The old QN02 Applied Mathematics II course (given for the last time in 1973) has been replaced by two alternative courses, QN22 Applied Mathematics IIA and QN12 Applied Mathematics IIB. These courses cover the same topics except that QN12 Applied Mathematics IIB includes a unit in computer programming and the probability units are different. It will be assumed that students taking QN22 Applied Mathematics IIA will have taken QA7H Computing IH or be taking it concurrently or have otherwise obtained a sound working knowledge of programming. Students without such a knowledge, and all Engineering students, must do QN12 Applied Mathematics IIB.

Not more than one of the courses QN02 Applied Mathematics II (old course), QN22 Applied Mathematics IIA, QN12 Applied Mathematics IIB, QM22 Mathematics IIM may be presented for a degree; neither may the combination QN12 Applied Mathematics IIB and QA7H Computing IH or the combination QM22 Mathematics IIM and QA7H Computing IH.

A pass at Division I or higher standard in *either* QM01 Mathematics I *or* QM11 Mathematics IM is a pre-requisite for QN22 Applied Mathematics IIA or QN12 Applied Mathematics IIB, but QM01 Mathematics I provides the better background and preparation. The second-year course QM22 Mathematics IIM has been designed for students who have taken QM11 Mathematics IM.

A pass at Division I or higher standard in QN22 Applied Mathematics IIA *or* QN12 Applied Mathematics IIB is the pre-requisite for all third-year Applied Mathematics units but QN22 Applied Mathematics IIA is the better preparation for the third-year probability units. For some only of the third-year units, a pass at Division I or higher standard in QM22 Mathematics IIM is an alternative pre-requisite.

4. For students wishing to major in Applied Mathematics the recommended choice of subjects is:

First Year: QM01 Mathematics I, QA7H Computing IH, QT7H Statistics IH + 2 subjects;

Second Year: QN22 Applied Mathematics IIA, QM02 Pure Mathematics II + 1 subject;

Third Year: QN03 Applied Mathematics III + 1 subject.

The alternative five first-year, two second-year, two third-year allows QA7H Computing IH, for example, to be taken in second year if not taken in first year.

5. For students wishing to major in Pure Mathematics, the recommended choice of subjects is:

First Year:	QM01 Mathematics I, QA7H Computing IH, QT7H Statistics IH + 2 subjects;
Second Year:	QM02 Pure Mathematics II + 2 subjects, at least one of which should be a Mathematical Sciences subject;
Third Year:	QM03 Pure Mathematics III + a Mathematical Sciences subject.

6. For students with special interest in mathematical logic, philosophy courses (with the logic options) are particularly suitable for combining with pure mathematics.

7. A student who is likely to become a teacher of mathematics is strongly advised to study some computing science and statistics in addition to mathematics.

FIRST-YEAR SUBJECTS.

QM01 Mathematics I.

A knowledge of Matriculation Mathematics I and II will be assumed.

The course comprises four lectures and one two-hour tutorial class a week.

A pass in it at Division I or higher standard is sufficient for entrance to QM02 Pure Mathematics II, QN22 Applied Mathematics IIA, QN12 Applied Mathematics IIB.

The syllabus comprises: functions of one and two variables, differentiation and integration, Taylor series; differential equations; algebraic systems, linear algebra including topics from vector spaces, linear equations and transformations, matrices, eigenvalues, quadratic forms.

Text-book:

Kaplan, W., and Lewis, D. J., *Calculus and linear algebra*, combined edition (Wiley International).

Reference books:

Abrahamson, B., and Gray, M. C., *The art of algebra* (Rigby).

Anton, H., *Elementary linear algebra* (Wiley).

Archbold, J. W., *Algebra* (Pitman).

Barnes, E. S., and Robson, B. N., *Calculus—a first course* (including the supplement) (Rigby).

Lipschutz, S., *Linear algebra* (Schaum's Outline Series).

Purcell, E. J., *Calculus with analytic geometry* (Appleton-Century-Crofts).

Thomas, G. B., *Calculus and analytic geometry*, 2nd or 3rd edition (Addison-Wesley).

Tierney, J. A., *Calculus and analytic geometry* (Allyn and Bacon).

QM11 Mathematics IM.

This course is intended for students who have studied Matriculation Mathematics IS, and a knowledge of this subject will be assumed. (Matriculation Mathematics I and II, or Matriculation Mathematics I if taken before 1971, would also provide a suitable background.)

A pass in it, at Division I level or higher, is a pre-requisite for QM22 Mathematics IIM, and also for QN22 Applied Mathematics IIA *or* QN12 Applied Mathematics IIB although for the latter two courses QM01 Mathematics I provides the better background and preparation. Exceptionally a student obtaining a pass at Distinction level in QM11 Mathematics IM may, with the permission of the Chairman of the Department of Pure Mathematics, proceed to QM02 Pure Mathematics. II.

The course comprises four lectures and one two-hour tutorial class a week.

The syllabus comprises differential and integral calculus of functions of one or two real variables; differential equations; vectors and 2 and 3 dimensional coordinate geometry; linear equations, matrices and determinants; systems of linear inequalities; algebraic systems.

Reference books:

Abrahamson, B., and Gray, M. C., *The art of algebra* (Rigby).

Allendoerfer, C. B., and Oakley, C. O., *Principles of mathematics* (McGraw-Hill).

Ayres, F., *Matrices* (Schaum's Outline Series).

Barnes, E. S., and Robson, B. N., *Calculus—a first course,* (including the supplement) (Rigby).

Hilton, P. J., *Partial derivatives* (Routledge and Kegan Paul).

Munkres, J. R., *Elementary linear algebra* (Addison-Wesley).

Purcell, E. J., *Calculus with analytic geometry* (Appleton-Century-Crofts).

Thomas, G. B., *Calculus and analytic geometry,* 2nd or 3rd edition (Addison-Wesley).

QM7H Mathematics IH.

This course is intended for students who do not wish to proceed to further courses in mathematics. It will assume a knowledge of Matriculation Mathematics IS. (Matriculation Mathematics I and II, or Matriculation Mathematics I if taken before 1971, would also provide a suitable background.) The course comprises two lectures and a one-hour tutorial class a week.

The syllabus comprises differential and integral calculus, differential equations, vectors and 2 and 3 dimensional coordinate geometry, linear equations, matrices and determinants.

Reference books:

Abrahamson, B., and Gray, M. C., *The art of algebra* (Rigby).

Allendoerfer, C. B., and Oakley, C. O., *Principles of mathematics* (McGraw-Hill).

Ayres, F., *Matrices* (Schaum's Outline Series).

Barnes, E. S., and Robson, B. N., *Calculus—a first course,* including the supplement (Rigby).

Hille, E., and Salas, S., *First year calculus* (Ginn/Blaisdell).

Munkres, J. R., *Elementary linear algebra* (Addison-Wesley).

Purcell, E. J., *Calculus with analytic geometry* (Appleton-Century-Crofts).

Thomas, G. B., *Calculus and analytic geometry,* 2nd or 3rd edition (Addison-Wesley).

SECOND-YEAR SUBJECTS.

QM02 Pure Mathematics II.

Pre-requisite subject: QM01 Mathematics I at Division I or higher standard.

Exceptionally, a student, who obtains a pass at Distinction level in QM11 Mathematics IM, may, with the permission of the Chairman of the Department of Pure Mathematics, enrol in QM02 Pure Mathematics II.

The course comprises four lectures and one tutorial class a week.

The syllabus comprises elementary theory of real and complex functions; convergence of real and complex sequences, power series; linear algebra, matrices and determinants; elementary modern algebra; calculus of functions of several variables.

Text-books:

McCoy, N. H., *Introduction to modern algebra* (Allyn and Bacon); *or*
McCoy, N. H., *Fundamentals of abstract algebra* (Allyn and Bacon).
Phillips, E. G., *Functions of a complex variable* (Oliver and Boyd).
Spivak, M., *Calculus* (Benjamin).

For students intending to proceed to a third-year Pure Mathematics subject *Fundamentals of abstract algebra* is recommended.

Reference books:

Apostol, T. M., *Calculus*, vol. 1 (Blaisdell).
Bartle, R. G., and Ionescu Tulcea, C., *Honours calculus* (Scott, Foreman).
Beaumont, R. A., *Linear algebra* (Harcourt, Brace and World).
Burkill, J. C., *A first course in mathematical analysis* (C.U.P.).
Courant, R., *Differential and integral calculus*, vol. I (Blackie).
Courant, R., and John, F., *Introduction to calculus and analysis*, vol. 1 (Interscience).
Hyslop, J. M., *Infinite series* (Oliver and Boyd).
Lipschutz, S., *Linear algebra* (Schaum Outline).

Recommended general reading:

Adler, I., *The new mathematics* (Mentor, New American Library; John Day).
Sawyer, W. W., *A concrete approach to abstract algebra* (Freeman).
Sawyer, W. W., *Prelude to mathematics* (Pelican).
Waismann, F., *Introduction to mathematical thinking* (Harper torchbook; Hafner).

QN22 Applied Mathematics IIA.

Pre-requisite subject: QM01 Mathematics I *or* QM11 Mathematics IM at Division I or higher standard. Mathematics I provides a better background and preparation than Mathematics IM.

It will be assumed that students taking this course will have taken QA7H Computing IH or be taking it concurrently or have otherwise obtained a sound working knowledge of programming. Students without such a knowledge must do QN12 Applied Mathematics IIB.

The course comprises four lectures (M12, Tu12, W12, Th12) and one tutorial class a week.

The syllabus comprises a selection of topics from: ordinary differential equations, partial differential equations, vectors, linear programming, applied probability, mechanics, numerical analysis.

Text-books:

Kreyszig, E., *Advanced engineering mathematics*, 3rd edition (Wiley).
Spiegel, M. R., *Theoretical mechanics* (Schaum).
Trustrum, K., *Linear programming* (Routledge and Kegan Paul).

Reference books:

Feller, W., *Introduction to probability theory and its applications*, vol. I (Wiley).
Glauert, M. B., *Principle of dynamics* (Routledge).
Hildebrand, F. B., *Advanced calculus for applications* (Prentice-Hall).
McCracken, D. D., *A guide to fortran IV programming* (Wiley).
Rabenstein, A. L., *Introduction to ordinary differential equations* (Academic Press).
Spiegel, M. R., *Vector analysis* (Schaum).

The reference books by Feller, Rabenstein and Spiegel will be particularly useful to students who intend to proceed to QN03 Applied Mathematics III.

QN12 Applied Mathematics IIB.

Pre-requisite subject: QM01 Mathematics I *or* QM11 Mathematics IM at Division I or higher standard. QM01 Mathematics I provides a better background and preparation than QM11 Mathematics IM.

NOTE: The combination QA7H Computing IH and QN12 Applied Mathematics IIB cannot be presented for a degree.

The course comprises four lectures (M9, Tu9, W9, Th9) and one tutorial class a week.

The course covers the same topics as QN22 Applied Mathematics IIA except that a course on computer programming is included and the probability units are different.

Text-books and Reference books:

As for QN22 Applied Mathematics IIA.

QM22 Mathematics IIM.

Pre-requisite subject: QM01 Mathematics I at Division I or higher standard *or* QM11 Mathematics IM at Division I or higher standard.

The course comprises four lectures and one tutorial class a week.

The syllabus comprises sequences and series, elementary calculus of one and more variables, power series, linear algebra, elementary modern algebra, differential equations, computing and linear programming.

Text-books:

Burkill, J. C., *A first course in mathematical analysis* (C.U.P.).
Kreyszig, E., *Advanced engineering mathematics* (Wiley).

Reference books:

Apostol, T. M., *Calculus*, vol. I (Blaisdell).
Beaumont, R. A., *Linear algebra* (Harcourt, Brace and World).
Courant, R., *Differential and integral calculus*, vol. I (Blackie).
Curtis, C. W., *Linear algebra* (Allyn and Bacon).
McCoy, N. H., *Introduction to modern algebra* (Allyn and Bacon).
Munkres, J. R., *Elementary linear algebra* (Addison-Wesley).
Rabenstein, A. L., *Introduction to ordinary differential equations* (Academic Press).
Sawyer, W. W., *A concrete approach to abstract algebra* (Freeman).
Spivak, M., *Calculus* (Benjamin).
Trustrum, K., *Linear programming* (Routledge and Kegan Paul).
Weiss, M. J., and Dubisch, R., *Higher algebra for the undergraduate* (Wiley).

SPECIAL NOTE: No third-year subject in Pure or Applied Mathematics is available to students who have taken QM22 Mathematics IIM. However, the third-year units: Geometry (M307), Complex functions (M313) and some third-year units in Applied Mathematics will be available to students who have passed QM22 Mathematics IIM at Division I or higher standard. Subject to the approval of the Heads/Chairmen of all departments concerned, any two of these units can be combined with units from a department in the Faculty of Science to make up a third-year Science subject.

At the time of going to press, discussions are being held concerning the discontinuation of QM22 Mathematics IIM after 1975. Students considering enrolling in the subject are urged to consult an assistant to the Dean.

THIRD-YEAR SUBJECTS IN PURE MATHEMATICS.

The Department of Pure Mathematics offers the following units, each of which consists of two or three lectures a week and one tutorial a fortnight for one term. The pre-requisite for Geometry (M307) and Complex Functions (M313) is a pass, at Division I level or higher, in QM02 Pure Mathematics II *or* QM22 Mathematics IIM; however students who have not satisfied this requirement but have gained a pass, at Division I level or higher, in QN02 Applied Mathematics II may take Complex Functions (M313) provided they have done some prescribed preliminary reading. The pre-requisite for the other units below is a pass, at Division I level or higher, in QM02 Pure Mathematics II. In addition, as specified below, some units pre-suppose a knowledge of units offered in preceding terms.

Units M301 (Sets and Numbers), M307 (Geometry), and M313 (Complex Functions) are particularly recommended for suitably qualified secondary mathematics teachers who wish to enrol as visiting students.

M301 SETS AND NUMBERS (First term: T12, Th12).

Sets, relations and mappings; the axiom of choice and related topics; cardinal and ordinal numbers; the construction of the real number system.

Text-books:

Halmos, P. R., *Naive set theory* (Van Nostrand).
Sigler, L. E., *Exercises in set theory* (Van Nostrand).

Reference books:

Abian, A., *The theory of sets and transfinite arithmetic* (Saunders).
Bick, T. A., *Introduction to abstract mathematics* (Academic Press).
Gleason, A. M., *Fundamentals of abstract analysis* (Addison-Wesley).
Rotman, B., and Kneebone, G. T., *Theories of sets and transfinite numbers* (Oldbourne).
Swierczkowski, S., *Sets and numbers* (Routledge and Kegan Paul).
Vilenkin, N. Ia., *Stories about sets* (Academic Press).

M302 ANALYSIS I (First term: M10, T10, Th10).

An introduction to topology and analysis in n-dimensional Euclidean space.

Text-book:

Apostol, T., *Mathematical analysis*, 2nd edition (Addison-Wesley).

Reference books:

Boas, R. P., *A primer of real functions* (Wiley).
Newman, M. H. A., *Elements of the topology of plane sets* (C.U.P.).
Rudin, W., *Principles of mathematical analysis*, 2nd edition (McGraw-Hill).
Fleming, W. H., *Functions of several variables* (Addison-Wesley).

M303 ANALYSIS II (Second term: M10, T10, Th10).

This unit assumes a knowledge of Analysis I (M302). It provides a suitable foundation for further study of the theory and applications of complex analysis at honours level. It is a pre-requisite for QM99 Honours Pure Mathematics IV.

The basic theory of holomorphic functions including conformal mapping, Cauchy's integral theorem and the residue theorem, together with applications.

Text-book:

Ahlfors, L. V., *Complex analysis* (McGraw-Hill).

Reference books:

Carrier, G. F., and others, *Functions of a complex variable* (McGraw-Hill).
Levinson, N., and Redheffer, R. M., *Complex variables* (Holden-Day).
Nevanlinna, R., and Paatero, V., *Introduction to complex analysis* (Addison-Wesley).
Rudin, W., *Real and complex analysis* (McGraw-Hill). (This is particularly recommended to potential Honours Pure Mathematics IV students.)

M313 COMPLEX FUNCTIONS (Second term: M10, T10, Th10).

This unit provides a more informal treatment of the most basic material in Analysis II (M303 above), with more emphasis on techniques. It does not assume a knowledge of Analysis I (M302).

Complex functions, including contour integration and conformal mapping, together with applications.

Text-book:

Churchill, R. V., and others, *Complex variables and applications*, 3rd edition (McGraw-Hill).

Reference book:

Marsden, J. E., *Basic complex analysis* (Freeman).

M304 ANALYSIS III (Third term: M10, T10, Th10).

Continuation of the topics of Analysis I (M302), a knowledge of which will be assumed; the Lebesgue integral and its applications. A small amount of material from Sets and Numbers (M301) will also be assumed.

Text-books and reference books: As for Analysis I (M302).

M305 ALGEBRA I (Second term: M12, T12, Th12).

A basic course on groups, rings and ideals, integral domains, fields. A knowledge of Sets and Numbers (M301) will be assumed.

Reference books:

*Birkhoff, G., and MacLane, S., *A survey of modern algebra*, 3rd edition (Macmillan).
*McCoy, N. H., *Fundamentals of abstract algebra* (Allyn and Bacon).
Herstein, I. N., *Topics in algebra* (Blaidsdell).
Dean, R. A., *Elements of abstract algebra* (Wiley).
Fraleigh, J. B., *A first course in abstract algebra* (Addison-Wesley).

*A student who wishes to buy a book is recommended to buy one of these.

M306 ALGEBRA II (Third term: W12, F12).

Further topics in algebra, including Sylow theory and modules over a principal ideal domain. A knowledge of Algebra I (M305) and Sets and Numbers (M301) will be assumed.

Students intending to enrol in QM99 Honours Pure Mathematics IV are strongly advised to attend this unit, a knowledge of which will be assumed in all honours courses in algebra.

Text-book:

Hartley, B., and Hawkes, T. O., *Rings, modules and linear algebra* (Chapman and Hall).

Reference books:

Ames, D. B., *An introduction to abstract algebra* (International Textbook Co.).
McCoy, N. H., *Fundamentals of abstract algebra* (Allyn and Bacon).

M307 GEOMETRY (Third term: T12, Th12).

Selected topics from: properties and interrelations of the various geometries; the axiomatic and transformation approaches; projective, affine, Euclidean and hyperbolic geometries.

Reference books.

*Eves, H., *A survey of geometry* (Allyn and Bacon).
*Coxeter, H. S. M., *An introduction to geometry* (Wiley).
Horadam, A. F., *Undergraduate projective geometry* (Pergamon).
Ogilvy, C. S., *Excursions in geometry* (Oxford).
Pedoe, D., *A course in geometry for schools and universities* (Cambridge U.P.).
Tuller, A., *A modern introduction to geometries* (Van Nostrand).

* A student who wishes to buy a book is recommended to buy one of these.

M309 Topology (Second term: W12, F12).

(Students intending to enrol in QM99 Honours Pure Mathematics IV are strongly advised to attend this unit, a knowledge of which will be assumed in some Honours courses in Analysis.)

Topological spaces and metric spaces; continuous functions and mappings; function spaces. Applications of topological results. A knowledge of Analysis I (M302) and of elementary set theory, as presented in Sets and Numbers (M301), will be assumed.

Reference books:

Simmons, G. F., *Introduction to topology and modern analysis* (McGraw-Hill).
Hocking, J. G., and Young, G. S., *Topology* (Addison-Wesley).
Newman, M. H. A., *Elements of the topology of plane sets* (C.U.P.).

The subjects offered are:

QM03 Pure Mathematics III.

Pre-requisite: a pass in QM02 Pure Mathematics II at Division I or higher standard.

The subject is designed to provide a balanced introduction to the main aspects of modern pure mathematics; the course consists of units M301 (Sets and Numbers), M302 (Analysis I), M304 (Analysis III), M305 (Algebra I), M307 (Geometry) and *either* M303 (Analysis II) *or* M313 (Complex Functions). However, at the discretion of the Chairman of the Department, a student may in exceptional circumstances be permitted to substitute another unit given in the Department for one of the units normally required for Pure Mathematics III. Intending Honours students should consult with the Chairman of the Department about their third-year programme, and should note the normal pre-requisites listed in the calendar entry for QM99 Honours Pure Mathematics IV. They are in any case required to offer M303 (Analysis II) for examination and advised to attend M306 (Algebra II) and M309 (Topology); a knowledge of M306 and M309 will be assumed in some compulsory courses in Algebra and Analysis in QM99 Honours Pure Mathematics IV.

QM13 Pure Mathematics IIIA.

Pre-requisite: a pass in QM02 Pure Mathematics II at Division I or higher standard.

The course consists of six third-year units offered by Departments in the Faculty of Mathematical Sciences and selected with the approval of the Chairmen of all Departments concerned. The units selected must satisfy the following requirements:

(i) at least four units must be selected from units offered by the Department of Pure Mathematics;
(ii) at least one unit must be selected from units offered by other Departments in the Faculty of Mathematical Sciences;
(iii) the units M301 (Sets and Numbers), M302 (Analysis I), and M305 (Algebra I) must all be included if not already presented in another subject.

QM83 Pure Mathematics IIIM.

Pre-requisite: a pass in QM02 Pure Mathematics II at Division I or higher standard.

The course consists of six third-year units offered by Departments in the Faculty of Mathematical Sciences and the Faculty of Science and selected with the approval of the Chairmen of all Departments concerned. The units selected must satisfy the following requirements:

(i) at least four units must be selected from units offered by the Department of Pure Mathematics;
(ii) at least one unit must be selected from units offered by Departments in the Faculty of Science;
(iii) the units M301 (Sets and Numbers), M302 (Analysis I), and M305 (Algebra I) must all be included if not already presented in another subject.

(For the purpose of this subject, a double unit in the Faculty of Science is regarded as two single units.)

THIRD-YEAR SUBJECTS IN APPLIED MATHEMATICS.

The Department of Applied Mathematics offers the following units, each of which consists of three lectures a week and one tutorial a fortnight for one term. A pass at Division I or higher standard in QN22 Applied Mathematics IIA or QN12 Applied Mathematics IIB is the pre-requisite for all third-year Applied Mathematics units, but QN22 Applied Mathematics IIA is the better preparation for the third-year probability units N302 and N309. For most of the third-year units, a pass at Division I or higher standard in QN02 Applied Mathematics II (old course) is an alternative pre-requisite. Also, for some only of the third-year units, a pass at Division I or higher standard in QM22 Mathematics IIM is an alternative pre-requisite. Students in these last two categories must consult with the Chairman of the Department concerning pre-requisites for particular units.

In addition, as specified below, some units pre-suppose a knowledge of units offered in preceding terms.

N301 ELASTICITY (First term: M9, W9, F9).

An introduction to the theory of elasticity, fundamental boundary value problems in elasticity. Cartesian tensor methods will be used; these will be taught as part of the unit as required.

Reference books:

Sokolnikoff, I. S., *Mathematical theory of elasticity* (McGraw-Hill).

Mase, G. E., *Continuum mechanics* (Schaum).

Spiegel, M. R., *Vector analysis and an introduction to tensor analysis* (Schaum).

N302 APPLIED PROBABILITY (First term: M2, W10, F2).

A knowledge will be assumed of applied probability as given in the Applied Probability Units in either QN22 Applied Mathematics IIA or QN12 Applied Mathematics IIB. However QN22 Applied Mathematics IIA is the better preparation for this unit.

Processes defined on a probability space; Markov chains, Kolmogorov differential and difference equations. Generating function methods. Application of the theory will be made to a subset of: queueing theory, branching processes, genetics, epidemics and Markov chains with rewards.

Reference books:

Karlin, S., *A first course in stochastic processes* (Academic Press).

Feller, W., *An introduction to probability theory and its applications*, vol. 1 (Wiley).

N303 CALCULUS OF VARIATIONS (Third term: Tu9, Th9, F10).

A knowledge of mechanics as given in the Vectors and Mechanics Unit in QN22 Applied Mathematics IIA or QN12 Applied Mathematics IIB in 1974 will be assumed.

Euler equation, Lagrange multipliers. Constrained and unconstrained optimisation problems. Application to higher mechanics.

Reference book:

Hildebrand, F. B., *Methods of applied mathematics* (Prentice-Hall).

N304 HYDRODYNAMICS (Second term: Tu9, Th9, F10).

A knowledge of mechanics as given in the Vectors and Mechanics Unit in QN22 Applied Mathematics IIA or QN12 Applied Mathematics IIB in 1974 will be assumed.

Classical hydrodynamics of an inviscid fluid. Bernoulli theorem. Irrotational flows. Vector (but not tensor) methods will be used. Some use may be made of complex variable analysis, which will be taught as part of the unit as required.

Reference books:

Rutherford, D. E., *Fluid dynamics* (Oliver and Boyd).

Chorlton, F., *Textbook of fluid dynamics* (Van Nostrand).

Batchelor, G. K., *An introduction to fluid dynamics* (C.U.P.).

N305 Mathematical Programming (Second term: M9, W9, F9).

A knowledge of linear programming such as given in the Linear Programming Unit in QN22 Applied Mathematics IIA or QN12 Applied Mathematics IIB in 1974 will be assumed.

A selection of topics from: extensions of linear programming, Kuhn-Tucker theory, quadratic programming, integer programming and convex programming. Applications of linear and non-linear programming.

Reference books:

Dantzig, G. B., *Linear programming and extensions* (Princeton U.P.).
Varaiya, P. P., *Notes on optimization* (Van Nostrand Reinhold).
Zukhovitskiy, S. I., and Avdeyeva, L. I., *Linear and convex programming* (Saunders).

N306 Differential Equations (First term: Tu9, Th9, F10).

A selection of topics from: Existence and uniqueness. Critical points and stability theory. Analysis of linear systems. Sturm-Liouville theory. Eigenfunction expansions. Integral equations. Partial differential equations. Asymptotic expansions.

Reference books:

Rabenstein, A., *Introduction to ordinary differential equations* (Academic Press).
Burkhill, J. C., *The theory of ordinary differential equations* (Oliver and Boyd).
Hildebrand, F. B., *Methods of applied mathematics* (Prentice-Hall).
Sanchez, D. A., *Ordinary differential equations and stability theory* (Freeman).
Stephenson, G., *An introduction to partial differential equations for science students* (Longmans).

N307 Continuum Mechanics (Third term: M9, W9, F9).

A knowledge of elementary elasticity and hydrodynamics such as could be gained by attending units N301, N304 will be assumed.

General continuum mechanics, with applications to the elastic and viscoelastic deformation of solids, and to the mechanics of viscous fluids.

Reference books:

Fung, Y. C., *A first course in continuum mechanics* (Prentice-Hall).
Mase, G. E., *Continuum mechanics* (Schaum).
Batchelor, G. K., *An introduction to fluid dynamics* (C.U.P.).
Hunt, J. N., *Incompressible fluid dynamics* (Longmans).

N308 Network Theory (Third term: M2, W10, F2).

A knowledge of linear programming such as given in the Linear Programming Unit in QN22 Applied Mathematics IIA or QN12 Applied Mathematics IIB in 1974 will be assumed.

A selection of topics from: graph theory, network flows, labelling and cheapest route algorithms, system and user optimisation, applications in communications and transportation networks, game theory.

Reference books:

Potts, R. B., and Oliver, R. M., *Flows in transportation networks* (Academic Press).
Trustrum, K., *Linear programming* (Routledge and Kegan Paul).

N309 Queues (Second term: M2, W10, F2).

A knowledge of applied probability such as given in Unit N302, is assumed.

Definition and example of queues. Techniques used in solving queueing problems, imbedded chains, Kolmogorov differential equations. Transient and ergodic behaviour of simple queues.

Reference books:

Takács, L., *Introduction to the theory of queues* (O.U.P.).
Cohen, J. W., *The single server queue* (North Holland).
Cox, D. R., and Smith, W. L., *Queues* (Methuen).
Cooper, R. B., *Introduction to queueing theory* (Macmillan).

The subjects offered are:

QN03 Applied Mathematics III.

The course consists of:

two of the three units N301, N302, N306;
two of the three units N304, N305, N309; and
two of the three units N303, N307, N308.

Students who may wish to proceed to QN99 Honours Applied Mathematics IV will be encouraged to take additional units and are advised to see the Chairman of the Department before enrolling.

Pre-requisites: see under entries for individual units.

QN13 Applied Mathematics IIIA.

The course consists of six third-year units offered by Departments in the Faculty of Mathematical Sciences and selected with the approval of the Chairmen of all Departments concerned. The units selected must satisfy the following requirements:

(i) at least four units must be selected from units offered by the Department of Applied Mathematics;

(ii) at least one unit must be selected from units offered by other Departments in the Faculty of Mathematical Sciences;

(iii) not more than two Applied Mathematics units may be selected in any one term.

Pre-requisites: See under entries for individual units.

QN83 Applied Mathematics IIIM.

The course consists of six third-year units offered by Departments in the Faculty of Mathematical Sciences and the Faculty of Science and selected with the approval of the Heads/Chairmen of all Departments concerned. The units selected must satisfy the following requirements:

(i) at least four units must be selected from units offered by the Department of Applied Mathematics;

(ii) at least one unit must be selected from units offered by Departments in the Faculty of Science;

(iii) not more than two Applied Mathematics units may be selected in any one term.

(For the purpose of this subject, a double unit in the Faculty of Science is regarded as two single units.)

Pre-requisites: See under entries for individual units.

MATHEMATICS FOR THE HONOURS DEGREE OF B.A. OR B.SC.

N.B. Students who are considering taking course QM99 or QN99 are advised to consult with the Chairmen of the Departments as early as possible.

QM99 Pure Mathematics for the Honours degree of B.A. or B.Sc. (Honours Pure Mathematics IV.)

Students are required to consult with the Chairman of the Department of Pure Mathematics, preferably no later than the end of the year preceding their enrolment, in order to ensure that they have obtained the necessary pre-requisite knowledge at a satisfactory standard, to plan their course of study and discuss their choice of project. All students are required to obtain the approval of the Chairman of the Department of Pure Mathematics before enrolling for Honours Pure Mathematics IV.

The normal pre-requisites are:

(i) QM03 Pure Mathematics III, at a satisfactory standard and including Unit M303 (Analysis II);

(ii) a knowledge of the material of Units M306 (Algebra II) and M309 (Topology); and

(iii) a third-year subject offered by another Department in the Faculty of Mathematical Sciences.

Students with a different background of third-year courses may be accepted at the discretion of the Chairman of the Department of Pure Mathematics. Students who are accepted without the normal pre-requisites may be required to take certain prescribed work to broaden their mathematical background during their fourth year.

Students are strongly advised to acquire a reading knowledge of a modern foreign language, preferably German, Russian or French.

The lecture course will be determined from year to year. Students will be required to make a selection from units offered by the Departments of Pure Mathematics, by other departments of the Faculty of Mathematical Sciences, and by the School of Mathematical Sciences at The Flinders University of S.A., including some compulsory units in Algebra and Analysis; units offered by other Departments will also be available.

Each student will be assigned a supervisor who will advise him on his choice of lecture programme and guide him in the writing of a project on some topic in mathematics. Work on this project should begin in the Department in the first week of February and should be completed by the end of the third term's lecture programme.

Recommended Programme for Prospective Teachers.

With the co-operation of the Departments of Applied Mathematics, Statistics and Computing Science, the Department of Pure Mathematics offers an optional Recommended Programme for Prospective Teachers within QM99 Honours Pure Mathematics IV. This Programme consists of a recommended selection of units, some of which have been specially designed for the purposes of the Programme. Students taking the whole of this Programme may be permitted to replace the project normally required by two minor projects on topics appropriate to the Programme. The Programme is particularly recommended to potential secondary mathematics teachers and to students who wish to take a higher degree in Pure Mathematics as a preparation for teaching in a College of Advanced Education.

Some units within the Recommended Programme for Prospective Teachers will be available to suitably qualified secondary mathematics teachers who wish to attend as Visiting Students.

QN99 Applied Mathematics for the Honours degree of B.A. or B.Sc. (Honours Applied Mathematics IV.)

Students who are considering taking this subject are advised to see the Chairman of the Department as soon as possible, preferably before enrolling for their third-year courses.

All students are required to obtain the approval of the Chairman of the Department of Applied Mathematics before enrolling for Honours Applied Mathematics IV.

The normal pre-requisites are passes at a standard satisfactory to the Chairman of the Department in the following:

(i) QN03 Applied Mathematics III *or* QN13 Applied Mathematics IIIA *or* QN83 Applied Mathematics IIIM;

(ii) a third-year subject offered by the Department of Pure Mathematics, Statistics, Computing Science or Mathematical Physics;

(iii) and such additional third-year units as may be required.

Students with a different background of third-year courses may be accepted at the discretion of the Chairman of the Department of Applied Mathematics.

Students are strongly advised to acquire a reading knowledge of a modern foreign language, preferably German, Russian or French.

The lecture course will be determined from year to year. Students will be required to make a selection from units offered by the Departments of Applied Mathematics, Pure Mathematics, Statistics, Computing Science, Mathematical Physics and by the Schools of Mathematical and Earth Sciences at The Flinders University of S.A. Students may normally take any third-year Applied Mathematics units which have not already been taken.

Each student will be assigned a supervisor who will advise him on and approve his choice of lecture programme and guide him in the writing of a project on some topic in Applied Mathematics. Possible topics should be discussed with the staff before the end of the preceding year. Work on the chosen project should begin in the Department in the first week of February and should be completed by the end of the third term's lecture programme.

Special Course for Prospective Teachers.

Special units are available for students taking QN99 Honours Applied Mathematics IV as a preparation for teaching mathematics in a secondary school or who may wish to take a higher degree in Applied Mathematics as a qualification for teaching in a College of Advanced Education. A comprehensive course for any such student will be determined according to his background of second- and third-year subjects, and the normal honours project may be replaced by two minor projects relevant to mathematics teaching.

STATISTICS.

Students who intend to take advanced courses in Statistics are advised to include the following first- and second-year subjects in their course. *First Year*: QM01 Mathematics I, QT7H Statistics IH. *Second Year*: QM02 Pure Mathematics II and QT02 Mathematical Statistics II.

Before enrolling in third-year unit courses, all students *must* discuss their programmes with the Head of the Department of Statistics.

A student who wishes, or who thinks he may wish, to proceed to Honours Statistics is advised to discuss his course programme with the Head of the Department of Statistics as early as possible.

QT7H Statistics IH.

No formal pre-requisites, but a knowledge of *either* Matriculation Mathematics IS *or* Matriculation Mathematics I and II.

This first-year half-subject comprises two lectures and one hour tutorial a week. The emphasis in this introductory course is on logical aspects of statistics. Topics covered include description of data, relative frequency and probability, probalility calculus, distributions, random sampling, estimation, hypothesis testing, confidence intervals, t-tests, simple linear regression, analysis of variance, Chi-square tests of fit and independence, non-parametric methods.

Text-book:

Huntsberger, D. V., and Billingsley, P., *Elements of statistical inference*, 3rd edition (Allyn and Bacon).

Reference books:

Acton, F. S., *Analysis of straight line data* (Wiley).

Cramer, H., *The elements of probability theory* (Wiley).

Snedecor, G. W., and Cochran, W. G., *Statistical methods*, 6th edition (Iowa State College Press).

QT02 Mathematical Statistics II.

Pre-requisite subject: QM01 Mathematics I at Division I or higher standard (exceptionally, on approval of Head of Department of Statistics, QM11 Mathematics IM at Distinction level). QT7H Statistics IH is strongly recommended for students contemplating taking QT02 Mathematical Statistics II.

The course comprises four lectures and two one-hour tutorials a week. Students who have not taken QT7H Statistics IH should read through Huntsberger, D. V., and Billingsley, P., *Elements of statistical inference*, 3rd edition (Allyn and Bacon) before lectures begin; for these students one additional hour a week will be set aside in first term for studying this book.

Programming of statistical calculations forms an important part of QT02 Mathematical Statistics II. Students enrolled for this subject must take the preliminary course in Fortran programming on the CDC 6400 computer, given by the Staff of the Statistics Department throughout orientation week, i.e. the week prior to the start of the first term lectures. Exemptions may be given to students who have demonstrated beforehand a proficiency in Fortran programming on this computer to the satisfaction of the Head of Department.

Students intending to proceed to Mathematical Statistics III are advised to obtain a copy of the following book, which is the text-book for part of Mathematical Statistics III.

Mood, A. M., and others, *Introduction to the theory of statistics*, 3rd edition (McGraw-Hill).

Syllabus: Probability and probability distributions as mathematical models of statistical data, applications of the normal, binomial, Poisson, Chi-square, t and F distributions, simple and multiple regression, analysis of variance, experimental design, quality control, introduction to some aspects of statistical inference, programming of statistical computations.

Text-books:

Students should have their own copies of:

Lindley, D. V., and Miller, J. C. P., *The Cambridge elementary statistical tables* (C.U.P.).

Control Data Corporation, *FORTRAN reference manual*, Models 72, 73, 74, version 2.3, etc. (publication number 60174900, revision F or later).

Reference books:

Cramer, H., *The elements of probability theory* (Wiley).

Fisher, R. A., *Design of experiments*, 8th edition (Oliver and Boyd).

Snedecor, G. W., and Cochran, W. G., *Statistical methods*, 6th edition (Iowa State College Press).

Fisher, R. A., and Yates, F., *Statistical tables for biological, agricultural and medical research*, 6th edition, revised and enlarged (Oliver and Boyd).

Acton, F. S., *Analysis of straight line data* (Dover).

Bulmer, M. G., *Principles of statistics* (Oliver and Boyd).

QT03 Mathematical Statistics III.

Pre-requisite subjects for *any* units: QT02 Mathematical Statistics II at Division I or higher standard, QM02 Pure Mathematics II at Division II or higher standard.

The course comprises five lectures and two tutorial classes a week. Each unit will have two or three lectures and one tutorial a week for a term.

Units:

First Term: T301 Distribution Theory I. T304 Linear Models I.

Second Term: T302 Statistical Inference. T305 Linear Models II.

Third Term: T303 Applied Probability. T306 Special Topics.

Any unit in the second and third terms can only be taken after *all* units in *previous* terms.

Prior to enrolling, all third-year students taking unit courses should discuss their course with the Head of the Department.

T301 Distribution Theory.

Frequency and distribution functions. Exact sampling distributions and distributions associated with the Normal distribution.

T302 Statistical Inference.

Interval estimation, parametric and non-parametric, sufficient statistics, methods of estimation. Likelihood ratio tests and chi-square tests.

T303 Applied Probability.

Deterministic population growth models. Classification of stochastic processes, introduction to Markov chains, branching processes, the Poisson process, birth and death processes.

T304 Linear Models I.

Least squares regression, orthogonal projections, orthogonal experimental designs, Gauss Markov theorem, normal theory and maximum likelihood.

T305 Linear Models II.

Reduced normal equations, non-linear regression, redundant specification, double classification with non-proportional class frequencies. Analysis of covariance, elementary multivariate analysis, discriminate functions.

T306 SPECIAL TOPICS.

Bayesian estimation, non-parametric methods, theory of sampling and surveys. Experimental design and contingency tables.

Text-books:

Lindley, D. V., and Miller, J. C. P., *The Cambridge elementary statistical tables* (C.U.P.).

Hogg, R. V., and Craig, A. T., *Introduction to mathematical statistics* (Macmillan).

Mood, A. M., and others, *Introduction to the theory of statistics* (McGraw-Hill).

Reference books:

Fisher, R. A., *Statistical methods and scientific inference* (Oliver and Boyd).

Kendall, M. G., and Stuart, A., *The advanced theory of statistics*, vols. I, II and III (Griffin).

Cramer, H., *Mathematical methods of statistics* (Princeton University Press).

Fisher, R. A., *The design of experiments* (Oliver and Boyd).

Rao, C. R., *Linear, statistical inference and its applications* (Wiley).

Williams, E. J., *Regression analysis* (Wiley).

Wilks, S. S., *Mathematical statistics* (Wiley).

Bliss, C. I., *Statistics in biology*, vols. I and II (McGraw-Hill).

Fisher, R. A., *Statistical methods for research workers* (Oliver and Boyd).

Draper, N. R., and Smith, H., *Applied regression analysis* (Wiley).

Anderson, T. W., *Introduction to multivariate statistical analysis* (Wiley).

Lindgren, B. W., *Statistical theory*, 2nd edition (Macmillan).

Searle, S. R., *Linear models* (Wiley).

HONOURS DEGREE.

QT99 Statistics for the Honours degree of B.A. or B.Sc. (Honours Statistics IV.)

Pre-requisite subjects: QM03 Pure Mathematics III, QT03 Mathematical Statistics III and other prescribed courses at a standard satisfactory to the Head of the Department. QM83 Pure Mathematics IIIM may be substituted for QM03 Pure Mathematics III with the approval of the Head of the Department of Statistics.

Students are strongly advised to acquire a reading knowledge of a modern foreign language, preferably French, German or Russian.

The course will be determined from year to year, and will comprise topics selected from the following: statistical inference, estimation theory, tests of goodness of fit, regression, analysis of variance, experimental design, non parametric methods, time series, multivariate analysis, measure theory, probability and stochastic processes, statistical programming, linear algebra, numerical analysis, plus a selection of other topics from Honours Mathematics IV and other subjects.

Students are required to write a detailed report on an assigned topic in Statistics under the supervision of a member of the Department; the topic should be discussed with the Head of the Department towards the end of the preceding year. Work on this project begins in the Department in the first week of February and must be completed by the end of lectures.

OF THE

DIPLOMA IN COMPUTING SCIENCE

REGULATIONS

1. There shall be a postgraduate Diploma in Computing Science.

†2. Except as provided for in regulation 3 a candidate for admission to the course for the diploma shall have qualified for admission to a degree of the University or to a degree of another university accepted for the purpose by the University.

**3. Subject to the approval of the Council the Faculty may, in special cases and subject to such conditions (if any) as it may see fit to impose in each case, accept as a candidate for the diploma a person who does not hold a degree of a university but has given evidence satisfactory to the Faculty of his fitness to undertake work for the diploma.

4. To qualify for the diploma a candidate shall satisfactorily complete a course of full-time study extending over at least one year or of part-time study extending over at least two years.

5. The course of study to be undertaken, the examinations to be passed and the fees to be paid by candidates shall be prescribed in schedules approved by the Council. Such schedules shall take effect as from the date of approval by the Council or such other date as the Council shall determine and shall be published in the next University Calendar which is issued after that approval has been given.

*6. A candidate who desires that the examinations which he has passed in the University or elsewhere should be counted for the Diploma in Computing Science, may on written application be granted such exemption from the requirements of these regulations as the Council shall determine.

*7. There shall be three classifications of pass at an annual examination in any subject for the diploma: Pass with Distinction, Pass with Credit, and Pass. The names of the candidates in each classification shall be arranged in alphabetical order.

* Amended 21 December, 1972. ** Amended 28 February, 1974.
† Amended 28 February, 1974 and further amendment awaiting allowance at time of printing.

8. (a) A candidate who fails to pass in a subject and desires to take the subject again shall again attend lectures and satisfactorily do such written and practical work as the professor or lecturer concerned may prescribe, unless specifically exempted therefrom after written application to the Academic Registrar for such exemption.

(b) A candidate who has twice failed to pass the examination in any subject or division of a subject may not enrol for that subject again except by special permission to be obtained in writing from the Academic Registrar and then only under such conditions as may be prescribed.

(c) For the purpose of this regulation a candidate who is refused permission to sit for examination, or who fails, without a reason accepted by the Professor of Computing Science as adequate, to attend all or part of an annual examination (or supplementary examination if granted) after having enrolled for at least two terms in that year, shall be deemed to have failed to pass the examination.

9. A candidate who complies with the foregoing conditions and satisfies the examiners shall be awarded the Diploma in Computing Science.

Regulations allowed 28 January, 1965.

SCHEDULES

(Made by the Council under Regulation 5.)

NOTE: Syllabuses of subjects for the Diploma in Computing Science are published below, immediately after the regulations and schedules of the diploma. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I: COURSES OF STUDY.

1. A candidate for the diploma shall regularly attend lectures and tutorials, do such written work as may be prescribed, and pass examinations in the following subjects: Numerical Analysis, Computer Systems and Programming, Data Structure and Data Management.

2. A candidate shall also satisfactorily undertake and complete a course of practical work.

OF THE

DIPLOMA IN COMPUTING SCIENCE

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter indicates the Faculty of Mathematical Sciences: Q.

The second letter identifies the department teaching the subject: Computing Science: A.

The first digit—

0–3: Identifies each of the subjects for the diploma.

The second digit—

4: Indicates that it is a subject for the Diploma in Computing Science.

DIPLOMA IN COMPUTING SCIENCE.

The Department offers a postgraduate Diploma in Computing Science which may be taken in one year of full-time study or two years of part-time study. The aim of the course is to assist graduates from other disciplines to gain a sound knowledge of Computing Science. The course is not designed to cater for graduates in Computing Science but, in special circumstances, graduates of sufficient merit may be admitted at the discretion of the Chairman of the Department. The Diploma comprises four subjects, each (except the project) consisting of three units.

Graduates wishing to enrol must consult the Chairman of the Department of Computing Science, preferably in December of the year before they enrol, for details of the units they will be required to take and they must be ready to start work on a suitable project in the first week of March. The units will be selected from third- and fourth-year units offered by the Department of Computing Science and certain other departments and will be chosen according to the background and interests of the particular student.

Pre-requisites: (i) *Fortran Programming*: Graduates will be required to have a sound knowledge of Fortran programming, for example programming experience such as may be obtained in QA7H Computing IH, a second-year Applied Mathematics subject *or* QT02 Mathematical Statistics II. Those without considerable programming experience are advised to take the Diploma over two years and to enrol for QA7H Computing IH in their first year.

(ii) *Mathematics*: Students will be required to have a pass, at the Division I level or higher, in at least one second-year mathematics or statistics subject and in addition, some of the Diploma units offered require a pass in a third-year mathematics unit. However, graduates with a lesser mathematics background are invited to apply to the Department and *may* be able to enrol for the Diploma.

QA04 Numerical Analysis and Data Structures.

This subject deals with the analysis of numerical methods used in the solution of scientific problems and caters for computer solution of problems in other fields.

QA14 Computer Systems and Programming.

This subject is concerned with design of computer systems and advanced programming.

QA24 Data Management.

This subject involves the study of various computing techniques concerned with data management.

QA34 Project.

Each student will be required to carry out a major practical project in Computing Science which will involve extensive programming work.

OF THE DEGREE OF

MASTER OF SCIENCE

IN THE FACULTY OF MATHEMATICAL SCIENCES

REGULATIONS

1. The following persons may become candidates for the degree of Master of Science in the Faculty of Mathematical Sciences: (a) Bachelors of Arts, (b) Bachelors of Science, (c) other graduates whose academic qualifications are accepted by the Faculty of Mathematical Sciences as sufficient.

Provided that, subject to the approval of the Council, the Faculty may, in special cases and subject to such conditions (if any) as it may see fit to impose in each case, accept as a candidate for the degree a person who does not hold a degree of a university, but has given evidence satisfactory to the Faculty of his fitness to undertake work for the degree.

Unless the candidate has obtained the Honours degree of Bachelor of Science in the Faculty of Mathematical Sciences he shall, before submitting his thesis as provided for in regulation 4, pass such qualifying examination as the Faculty may in the circumstances deem proper.

2. Subject to conditions to be determined in each case a graduate of a university recognised by the University of Adelaide, whose degree is accepted by the Faculty of Mathematical Sciences as equivalent to one of the qualifications required in regulation 1, may be allowed by the Council to proceed to the degree in compliance with these regulations. Every such candidate must spend at least three consecutive academic terms or twelve calendar months at the University of Adelaide or at an institution approved for the purpose by the University of Adelaide.

*3. A candidate who holds the Honours degree or its equivalent in a university recognised by the University of Adelaide may proceed to the degree of Master of Science in the Faculty of Mathematical Sciences at the expiration of one year from the date of his admission to the Honours degree of Bachelor; no other candidate shall proceed to the degree before the expiration of two years from the beginning of his candidature.

* Amended 28 February, 1974.

4. To qualify for the degree a candidate shall submit a thesis upon an approved subject and shall adduce sufficient evidence that the thesis is his own work. The thesis shall give the results of original research or of an investigation on which the candidate has been engaged. A candidate may also submit other contributions to mathematical sciences in support of his candidature.

5. Every candidate shall give at least three terms' notice of his intended candidature, and shall indicate therewith in general terms the subject of the research work or investigation on which he proposes to submit a thesis. The Faculty of Mathematical Sciences, if it approve the subject of his research, may appoint a supervisor to guide the candidate in his work. The candidate shall submit his thesis not earlier than three terms and, except by special permission of the Faculty, not later than nine terms after approval by the Faculty of the subject of his research.

†6. A candidate's progress shall be reviewed annually by the Faculty. If, in the opinion of the Faculty of Mathematical Sciences, a candidate is not making satisfactory progress the Faculty may, with the consent of the Council, withdraw its approval of his candidature and the candidate shall cease to be enrolled for the degree.

7. The Faculty shall appoint a Board of Examiners to report upon the thesis and any supporting papers that the candidate may submit. The Board of Examiners may require any candidate to pass an examination in the branch of science to which his original research or investigation is cognate.

8. A candidate for the degree of Doctor of Philosophy whose work is considered by the Faculty, after report by the examiners appointed to adjudicate upon it, not to be of sufficient merit to qualify for the degree of Doctor but of sufficient merit for the degree of Master may be admitted to the degree of Master provided that he is qualified to become a candidate for the degree.

9. On completion of his work a candidate shall lodge with the Academic Registrar three copies of his thesis prepared in accordance with directions given to candidates from time to time.*

10. A candidate who complies with the foregoing conditions and satisfies the Board of Examiners shall on the recommendation of the Faculty of Mathematical Sciences be admitted to the degree of Master of Science in the Faculty of Mathematical Sciences.

11. The fees to be paid by the candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 21 December, 1972.

† Awaiting allowance at time of printing.

* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

OF THE DEGREE OF

DOCTOR OF SCIENCE

IN THE FACULTY OF MATHEMATICAL SCIENCES

REGULATIONS

1. (a) Subject to these regulations a person who has been admitted in the University of Adelaide to an Honours degree of Bachelor of Science or a degree of Master of Science, Arts or Economics, or to the degree of Doctor of Philosophy in a field of study approved by the Faculty of Mathematical Sciences, may proceed to the degree of Doctor of Science, in the Faculty of Mathematical Sciences.

(b) On the recommendation of the Faculty of Mathematical Sciences the Council may accept as a candidate for the degree a person who has been admitted to a degree in the University of Adelaide other than one named in section (a) of this regulation, or who is a graduate of another university or institution of higher education recognised by the University of Adelaide and has a substantial association with the University; provided that in each case the graduate concerned has, in the opinion of the Faculty of Mathematical Sciences, had an adequate training in the mathematical sciences.

(c) No person shall be accepted as a candidate for the degree of Doctor of Science in the Faculty of Mathematical Sciences before the expiration of five years from the date of his original graduation.

2. (a) A person who desires to become a candidate for the degree shall give notice of his intended candidature in writing to the Academic Registrar and with such notice shall furnish particulars of his achievements in the mathematical sciences and of the work which he proposes to submit for the degree.

(b) The Faculty of Mathematical Sciences shall appoint a committee to examine the information submitted and to advise the Faculty on whether the Faculty should—(i) allow the applicant to proceed, and approve the subject or subjects of the work to be submitted; or (ii) advise the applicant not to submit his work: and the Faculty's decision shall be conveyed to the applicant.

(c) If it accepts the candidature and approves the subject or subjects of the work to be submitted the Faculty shall nominate examiners of whom one at least shall be an external examiner.

3. (a) To qualify for the degree the candidate shall furnish satisfactory evidence that he has made an original contribution of distinguished merit adding to the knowledge or understanding of any subject with which the Faculty is directly concerned.

(b) The degree shall be awarded primarily on a consideration of such of his published works as the candidate may submit for examination.

(c) The candidate in submitting his published works shall state generally in a preface and specifically in notes the main sources from which his information is derived and the extent to which he has availed himself of the work of others, especially where joint publications are concerned. He may also signify in general terms the portions of his work which he claims as original.

(d) The candidate is required to indicate what part, if any, of the work he has submitted for a degree in this or any other university.

4. The candidate shall lodge with the Academic Registrar three copies of the work prepared in accordance with the directions given in sub-paragraph (b) of clause 2B of Chapter XXV of the Statutes. If the work is accepted for the degree the Academic Registrar will transmit two of the copies to the University Library.

5. A candidate who complies with the foregoing conditions and satisfies the examiners may, on the recommendation of the Faculty of Mathematical Sciences, be admitted to the degree of Doctor of Science in the Faculty of Mathematical Sciences.

6. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 28 February, 1974.

FACULTY OF MEDICINE

REGULATIONS, SCHEDULES AND SYLLABUSES OF DEGREES AND DIPLOMA

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Doctor of Medicine (M.D.)
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OF THE DEGREES OF

BACHELOR OF MEDICINE AND BACHELOR OF SURGERY

REGULATIONS

I. Length of Course

1. The course of study for the degrees of Bachelor of Medicine and Bachelor of Surgery shall extend over six years.

II. Curriculum

†2. To qualify for the degrees a candidate must attend regularly such tutorials and seminar work, satisfactorily perform such laboratory, practical, clinical and written work, and pass such examinations as the Council may from time to time prescribe.°

3. Schedules defining the courses of study and practice to be undertaken, the examinations to be passed and the fees to be paid by candidates, shall be submitted by the Faculty of Medicine to the Council and on approval by the Council shall be effective from the date of such approval or from such other date as the Council shall determine; and they shall be published in the next edition of the University Calendar issued after the Council has approved them.

III. Examinations

4. Subject to the provisions of regulation 9(d) hereof, a candidate shall pass in the whole of one examination before entering upon the courses of study and practice leading to the next examination.

5. A candidate shall enter for each examination on the form and by the date prescribed by the Council, but shall not present himself for the examinations unless he has completed to the satisfaction of the professors and lecturers concerned, prior to the beginning of the examination, the courses of study and practice prescribed for it.

6. The examiners in any subject may take into consideration written or practical work required of candidates during the course of study and practice and the results of terminal or other examinations in the subject.

°*Note*: The Faculty of Medicine regards lectures as a valuable teaching method. Consequently candidates are advised to attend regularly such courses of lectures as may be provided.

† Amendment allowed 24 December, 1969.

7. A candidate who fails to pass in an examination shall, before presenting himself for the examination again, attend again such part or parts of the course of study and practice leading to that examination as the Faculty may direct.

*8. (a) Except in the case of the Fourth-Year and the Final (Sixth-Year) Examination, the names of candidates who pass in the whole of an examination prescribed in the Schedules shall be arranged in alphabetical order.

(b) The names of candidates who, having passed the whole of the Second-Year, Third-Year or Fifth-Year Examinations, or the whole or part of the First-Year Examination, are adjudged by the Board of Examiners as having reached the standard of Distinction or Credit in any of the component subjects for that examination shall in each of these subjects be arranged in order of merit within the relative classification.

(c) Except in the case of the First-Year Examination, a candidate who passes in an examination in any subject from part of which he has been granted exemption shall not be classified at that examination.

(d) At the Fourth-Year Examination and the Final (Sixth-Year) Examination, there shall be three classifications of pass as follows: Pass with Distinction, Pass with Credit, Pass. The names of candidates who pass with Distinction or Credit shall be arranged in order of merit within the classification and the names of other candidates shall be arranged in alphabetical order.

(e) A candidate whose results in the Third-Year, Fourth-Year, Fifth-Year and Final (Sixth-Year) Examinations in the medical course have been adjudged by the Faculty of Medicine to have been of distinguished merit may, by the decision of the Faculty on the recommendation of the Board of Examiners in the final year of the course, be awarded the degrees of Bachelor of Medicine and Bachelor of Surgery (with Honours).

IV. Supplementary Examinations

9. (a) The Board of Examiners may grant a candidate who has been prevented by illness or other sufficient cause from sitting for the whole or part of an examination permission to sit for a special or supplementary examination; the extent of such special or supplementary examination to be determined by the Board in each case.

(b) The Board of Examiners may grant a candidate who has failed in part only of an examination permission to sit for a supplementary examination in the subject or subjects in which he has failed.

* Amended 17 December, 1970, 21 December, 1972 and further amendment awaiting allowance at time of printing.

**(c) On passing in a special or supplementary examination granted under this regulation a candidate shall be deemed to have completed the whole of the examination; but if he fails in such special or supplementary examination he shall take again, and pass in, the whole of the examination before proceeding with the courses of study and practice leading to the next examination; provided that for the First-Year Examination the Board of Examiners may require a candidate to repeat only those subjects in which he has failed.

(d) A candidate granted permission to sit for a supplementary or special examination may enter provisionally upon the courses of study and practice leading to the next examination pending publication of the result of his supplementary examination.

V. Status for Work Done Elsewhere

*10. A candidate who has passed subjects in other faculties or universities or elsewhere, may on written application to the Academic Registrar be granted such exemption from these regulations and from schedules made under them as the Council on the recommendation of the Faculty may determine.

VI. Status under Earlier Regulations

11. All regulations hitherto in force concerning the degrees of Bachelor of Medicine and Bachelor of Surgery are hereby repealed: provided that this repeal shall not affect

(a) anything done or suffered under any regulation hereby repealed; or

(b) any right or status acquired, duty imposed, or liability incurred by or under any regulation hereby repealed.

Note: Before being admitted to the course of study a candidate shall have matriculated in the University and have been accepted by the Council as a student to be so admitted.

Regulations allowed 28 January, 1965.

* Amended 16 December, 1971.

** Amended 16 December, 1971 and further amendment awaiting allowance at time of printing.

SCHEDULES

(Made by the Council under Regulation 3.)

NOTES: 1. The Hospital Clinical Year begins on the fifth Monday in the year. 2. Candidates should obtain the descriptive leaflet on the Medical Course, which gives details of the scientific equipment required by each student before commencement of the various years of the course. 3. Syllabuses of subjects for the degrees of M.B., B.S. are published below, immediately after the regulations and schedules of the degrees. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

I. SCHEDULE OF COURSES OF STUDY.

A. Lectures, Practical Work, etc.

During the first year the student shall attend courses of lectures and practical work in (a) Biology, (b) Chemistry, (c) Behavioural Science, (d) Physics, and (e) Genetics.

During the second year the student shall

(a) attend a course of instruction in Anatomy (including Gross Anatomy, Histology and Embryology), and dissect during the whole academic year;

(b) attend a course of instruction in Biochemistry;

(c) attend a course of instruction in Human Physiology;

(d) attend a course of instruction in Medicine in the Community.

During the first two terms of the third year the student shall attend courses of instruction, including clinical demonstrations where required, in:

(a) Anatomy including Neuroanatomy;

(b) Physiology, and Pharmacology;

(c) Pathology;

(d) Microbiology;

(e) Medicine in the Community.

During the third term of the third year and during the fourth year the student shall attend courses of topic instruction in Medicine, Surgery, Psychiatry, Microbiology, Pathology, Human Physiology, Pharmacology, Clinical Biochemistry, Applied Anatomy, Community Medicine and Public Health, as directed.

During the fifth year the student shall

(a) attend a course of instruction in Obstetrics and Gynaecology;

(b) attend a course of instruction in Medicine and Surgery;

(c) attend a course of instruction in Psychiatry;

(d) attend a course of instruction in Medical Paediatrics;

(e) attend a course of instruction in Surgical Paediatrics;

(f) continue to attend demonstrations in Clinical Pathology;

(g) attend Class Examinations as directed by the Faculty of Medicine.

During the sixth year a candidate shall attend as directed for instruction in:

(a) Medicine;

(b) Surgery;

(c) Medical specialities;

(d) Surgical specialities;

(e) Obstetrics and Gynaecology;

(f) Paediatrics

(g) Community Medicine; and

undertake either a period of elective study approved by the Faculty of Medicine or if so directed by the Board of Examiners for the Fifth-Year Examination, undertake a revision course in one or more of Obstetrics and Gynaecology, Paediatrics, Medicine and Surgery.

B. Clinical Instruction.

Clinical instruction will begin in the third term of the third year and extend to the end of the sixth year.

During this period the student shall

(a) attend the medical and surgical practice of the Royal Adelaide Hospital and/or the Queen Elizabeth Hospital for such period as may be directed, in the wards and in the outpatients department; and receive tutorial instruction in medicine and surgery as directed;

(b) during the fifth year attend for 12 weeks, or such period as may be directed, the obstetrical and gynaecological practice of the Royal Adelaide Hospital or the Queen Elizabeth Hospital or the Queen Victoria Hospital in the wards and in the outpatients department; and reside for 6 weeks or such period as may be directed in the Queen Victoria Maternity Hospital or the Queen Elizabeth Hospital (maternity section) for clinical work in obstetrics;

(c) hold for a total of at least 12 weeks during the fifth year, the office of medical clerk or surgical dresser at the Adelaide Children's Hospital; and during the sixth year attend the paediatric practice of that hospital for a further period of 4 weeks;

(d) reside during the sixth year for at least 8 weeks in the Royal Adelaide Hospital and/or the Queen Elizabeth Hospital for clinical instruction in medicine and surgery;

(e) reside during the sixth year for a period of 4 weeks in such hospital as may be directed for clinical instruction in obstetrics and gynaecology;

(f) receive instruction during the sixth year in community medicine as directed, and attend, for such period as may be directed, the medical practices of general practitioners located in urban and regional areas;

(g) attend a course of clinical instruction in psychiatry during the fifth year;

(h) receive tutorial instruction as directed.

C. Approval of Enrolment.

Students who have been granted, or are seeking exemption from the requirements of these schedules under regulation 10, must have their course of study approved by the Dean (or his nominee) at the time of enrolment in the year concerned.

II. Schedule of Examinations.

The subjects and half-subjects of the examinations prescribed in regulation 3 shall be as follows and a candidate shall satisfy the examiners in each subject and half-subject:

(a) *The First-Year Examination* (to be held in or about November of the first year).

1. SZ71 Biology I.
2. SC71 Chemistry IM (at Division I standard or higher).
3. MH71 Behavioural Science.
4. SP7H Physics IM.
5. SJ8H Genetics IM.

A candidate who fails at the First-Year Examination will be required to repeat the course of instruction and present himself for re-examination only in the subjects or half-subjects in which he failed to satisfy the examiners.

The supplementary examinations (for candidates permitted under regulation 9 to present themselves therefor) will be held in or about the following February.

(b) *The Second-Year Examination* (to be held in or about November of the second year).

1. Anatomy.
2. Biochemistry.
3. Human Physiology.

(c) *The Third-Year Examination* (to be held in or about August of the third year).

1. Anatomy.
2. Human Physiology.
3. Biology of Disease.

The supplementary examinations (for candidates permitted under regulation 9 to present themselves therefor) will be held in or about the following November.

(d) *The Fourth-Year Examination* (to be held in or about November of the fourth year).

1. A multi-disciplinary examination on the courses of topic instruction.
2. An examination of clinical ability. (The standard of clinical ability sought will be appropriate to the stage of teaching.)
3. A practical examination in Special Pathology.

As the work for the Fourth-Year Examination does not provide for the division into specified subjects, supplementary or special examinations may be granted only under regulation 9(a).

(e) *The Fifth-Year Examination* (to be held in or about November of the fifth year).

1. Obstetrics and Gynaecology.
2. Paediatrics.

A candidate's performance in Medicine, Surgery and Psychiatry will be taken into account in determining the results of the examinations.

A candidate who is granted a supplementary examination will normally be required to undertake a prescribed course of revision in lieu of undertaking a sixth-year elective. The supplementary examination will be taken immediately following that course.

(f) *The Final (Sixth-Year) Examination.*

1. Assessments of performance in the required clinical work.
2. A multi-disciplinary examination in Medicine, Surgery, Obstetrics and Gynaecology, Psychiatry, Community Medicine and Paediatrics (to be held in or about October and November of the sixth year).
3. *Viva voce* examinations as required (to be held in or about October and November of the sixth year).

Supplementary examinations shall be taken in or about the following May.

Candidates granted supplementary examinations in any part of the Final (Sixth-Year) Examination will carry out such additional work as the Head/Chairman of the Department may require.

NOTE (not forming part of the schedules): Details of hospital residence charges may be found under "Fees and Charges": *see* Table of Contents.

RULES FOR THE ADMISSION OF MEDICAL STUDENTS TO THE PRACTICE OF THE TEACHING HOSPITALS AND THE INSTITUTE OF MEDICAL AND VETERINARY SCIENCE

1. Medical students admitted to the practice of a Teaching Hospital shall be under the control of the Medical Superintendent° in relation to matters of common discipline; the University will otherwise be responsible for matters related to education.

2. No student shall publish the report of any case without the permission of the Hospital Board and the Senior Medical Officer under whose care the patient is or has been.

3. Except in the performance of his clinical duties, no student may disclose any information whatsoever concerning a patient without the permission of both the patient and the Senior Medical Officer in charge.

4. No student may communicate directly or indirectly to the Press, radio or television any matter concerning the clinical practice of the Institution to which he is attached.

5. No student may introduce visitors into any hospital to the practice of which he has been admitted, without the permission of the Medical Superintendent° or his deputy.

6. Students shall pay such fees as are laid down from time to time by the University in conjunction with the Teaching Hospitals. Fees are payable directly to the University: no student will be admitted to a Teaching Hospital until such fees are paid.

7. Students shall discharge the duties assigned to them, and pay for or replace any article damaged or lost or destroyed by them through negligence or misconduct.

8. During any period of residence the student will comply with the directions of the Medical Superintendent° of the hospital in respect of discipline and general conduct.

9. Subject to Rule 10 any student infringing any of these rules or the rules of the hospital, or otherwise misconducting himself may be suspended or dismissed by the Board of the hospital from the practice of the hospital. If he is so dismissed he shall forfeit all payments which may have been made and all rights accruing therefrom.

10. In all instances where a student has been either suspended or dismissed from the practice of the hospital his case shall be investigated by an Investigation Committee on which there shall be a representative appointed by the Hospital Board, a Senior Consultant Clinical Teacher nominated by the Chairman (or his deputy) of the appropriate Staff Committee of the hospital concerned, a representative appointed by the University, and the Dean of the Faculty of Medicine (or his deputy). The Committee should also normally include a representative of the Adelaide Medical Students' Society (e.g. a student member of the Faculty of Medicine). The Investigating Committee shall make its recommendation to the Board of the Hospital concerned and to the Council of the University for confirmation or otherwise.

11. These rules apply equally to medical students who use the facilities of the I.M.V.S. where the Director of the Institute has the authority given in these Rules to the Medical Superintendent of a Teaching Hospital, and where the Council of the Institute replaces the Board of the hospital.

° The Medical Director of the Queen Victoria Hospital.

OF THE DEGREES OF

BACHELOR OF MEDICINE AND BACHELOR OF SURGERY

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the faculties responsible for the various subjects, as follows:

Faculty of Medicine - - - M Faculty of Science - - - - S

The second letter: if it follows

S, is explained under Faculty of Science; *or*

M, identifies the medical department teaching the subject as set out below except for the courses for the Fourth-Year Examination and the Final (Sixth-Year) Examination, which are designated MX74 and MX76 respectively:

Anatomy and Histology - - A	Obstetrics and Gynaecology - O
Paediatrics - - - - - - - C	Pathology - - - - - - - P
Medicine - - - - - - - - M	Surgery - - - - - - - - S
Psychiatry - - - - - - - H	

The first digit—

0–6: Indicates that the subject forms part of a sequence.

7–9: Indicates that the subject does not form part of a sequence.

The second digit—

1–6: Indicates year of subject, e.g. first, second, etc.

H: Indicates a first-year half-subject.

FIRST-YEAR EXAMINATION.

SC71 Chemistry IM.

This first-year chemistry course is designed to meet the specific needs of students enrolled in the Faculties of Medicine and Dentistry. Principles are illustrated with biological and medical examples.

A. Structure and Bonding.

1. Crystals and the solid state; the principle of X-ray crystallography, crystal systems; crystal chemistry.
2. Chemical bonding concepts: developed to a level for understanding of structures and reactions elsewhere in the course.
3. Qualitative discussion of spectrophotometry and spectral techniques used to establish molecular structure.
4. Molecular architecture: the structure of biological molecules, metal chelates and haem-type complexes.

B. Energetics and Chemical Equilibria.

1. Equilibria in aqueous solutions: concepts of free energy, enthalpy and entropy; buffers; metal-complex formation.
2. Electrochemical phenomena: electrode potentials; glass electrode; specific ion electrodes.
3. Interfacial phenomena: interfaces and adsorption; monolayers; electrical double-layers; membranes; osmotic phenomena; Donnan equilibrium; hydrophilic colloids.

C. Rate Processes.

The concepts of reaction rates, rate laws, mechanisms; effect of temperature on reaction rates; diffusion as a rate-determining process.

D. Organic Chemistry.

The lecture course in Organic Chemistry will be devoted to a discussion of the occurrence, preparation and properties, both physical and chemical, of the major families of organic compounds, *viz.*

paraffins	acids
olefins	aromatic hydrocarbons
acetylenes	phenols
alcohols	amines
alkyl halides	heterocyclic compounds
aldehydes	amino acids and proteins
ketones	carbohydrates

Representative examples will be included of compounds of medicinal and biological importance, e.g., anaesthetics, analgesics, anti-inflammatory drugs, antiseptics, bacteriostats, antibiotics, vitamins, nucleotides, steroids, etc.

At appropriate places in the course the following topics will be presented:

1. Isomerism: geometrical, optical, recognition and separation of isomers.
2. Spectroscopic methods: applications of ultra-violet, infra-red, n.m.r., and mass spectrometry in the identification of organic compounds.
3. Fluorescence: examples of fluorescent compounds, fluorescence spectroscopy.
4. Carcinogenesis: separation and identification of carcinogenic hydrocarbons.
5. Polymers: preparation and properties of synthetic organic polymers, proteins, cellulose, starch.

6. Chromatography: some examples of applications of gas, thin film, column chromatography.
7. Biological processes: simple examples of transformations, *in vivo*, of organic molecules, transport mechanisms.
8. Fats and waxes, lipids.

Text-books:

Campbell, J. A., *Chemical systems* (Freeman, 1970).

Richards, J. H., and others, *Elements of organic chemistry* (McGraw-Hill).

MH71 Behavioural Science.

The course deals with scientific approaches to the understanding of human behaviour in health and disease. Biological, psychological, sociological, anthropological, and developmental aspects will be considered.

The course consists of three lectures, one tutorial, and one three-hour practical class, a week.

Text-books:

Mussen, P. H., and others, *Child development and personality*, 4th edition (Harper).

Munn, N. L., Fernald, L. D., and Fernald, P. S., *Basic Psychology*, 3rd edition (Houghton Mifflin).

Mann, L., *Social psychology* (Wiley).

Firth, R. W., *Human types. An introduction to social anthropology* (Mentor).

Reference books:

Engel, G., *Psychological development in health and disease* (Saunders).

Maxwell, A. E., *Basic statistics in behavioural research* (Penguin).

Butcher, H. J., *Human intelligence* (Methuen).

Contemporary psychology: readings from *Scientific American* (Freeman).

Coopersmith, S., Frontiers of psychological research: readings from *Scientific American* (Freeman).

Proshansky, H. M., and Seidenberg, B. (eds.), *Basic studies in social psychology* (Holt, Rinehart and Winston).

Broom, L., and Selznick, P., *Sociology*, 5th edition (Harper).

Erikson, E. H., *Identity and the life cycle* (I.U.P.).

SP7H Physics IM.

The course consists of 39 one-hour lectures (two a week), 20 one-hour tutorials, and one three-hour laboratory session a fortnight.

The lecture topics include:

Hydrostatics.

Fluid flow.

Changes of state.

Heat conduction, convection and vapour pressure.

Sound.

Waves aspects of light. Photons.

Atomic spectra.

Nuclear structure and radiations.

Electric circuits.

Wherever possible the basic principles will be illustrated by appropriate examples of biological applications.

Text-book:

To be advised.

SJ8H Genetics IM.

There will be one lecture a week and one three-hour practical session fortnightly throughout the year. Part of the practical sessions will be devoted to tutorial discussions of selected topics.

This course outlines the principles of human genetics as an introduction to individual variation which is part of the background to the practice of medicine and dentistry. Practical sessions and exercises will give students the opportunity to analyse data of normal and pathological human variation so as to encourage a critical approach to genetical and medical problems.

Scientific method. Mendelian genetics in human families. Application of statistical tests to genetic data. Cytogenetics. Biochemical and population genetics. Genetics of quantitative variables. Genetic counselling.

Text-book:

Thompson, J. S., and Thompson, M. W., *Genetics in medicine*, 2nd edition (Saunders).

Reference books:

McKusick, V. A., *Human genetics*, 2nd edition (Prentice-Hall).

Maxwell, A. E., *Basic statistics in behavioural research* (Penguin).

Stone, G. K., *Evidence in science. A simple account of the principles of science for students of medicine and biology* (Wright).

SZ71 Biology I.

A course consisting of two lectures, one tutorial and approximately four hours of practical work each week throughout the year. Both day and evening classes will be held.

The course includes: an introduction to the structure, physiology and functional evolution of plants and animals; elementary biochemistry, cell physiology and genetics; the mechanisms of evolution, and the principles of ecology.

Text-books:

Villee, C. A., and others, *General zoology*, 4th edition (Saunders).

Raven, P. H., and Curtis, H., *Biology of plants* (Worth).

Reference books:

Browning, T. O., *Animal populations* (Hutchinson).

Holdren, J. P., and Ehrlich, P. R. (ed.), *Global ecology* (Harcourt Brace Jovanovich).

Galston, A. W., *The life of the green plant*, 2nd edition (Prentice-Hall).

Hardin, G., *Biology, its principles and implications*, 2nd edition (Freeman).

Johnson, W. H., and others, *Biology*, 3rd edition (Holt, Rinehart and Winston).

SECOND- AND THIRD-YEAR EXAMINATIONS.

(1) In the second-year a co-ordinated course in human biology comprises MA02 Anatomy, SY72 Biochemistry and SS12 Human Physiology. Students are required to enrol for each of these three subjects at the beginning of second-year.

(2) In the third-year a co-ordinated course in advanced human biology comprises MA03 Anatomy and SS13 Human Physiology. Also included in the third-year course is MP03 Biology of Disease comprising Microbiology and General Pathology. Students are required to enrol for all these subjects at the beginning of third-year.

(3) During the second and third years, an introductory course in medicine and the community provides instruction in the sociology of medicine including processes of care in the community.

MA02 Anatomy.

This integrated course on anatomical science is closely co-ordinated with other courses in human biology, particularly SS12 Human Physiology. It includes the following:

INTRODUCTORY ANATOMY:

Lectures in the first term.

GROSS ANATOMY:

Lectures, tutorial-demonstrations and practical work on the limbs and trunk, extend over three terms. Functional aspects of anatomy are emphasised. Students dissect part of the body—prosected specimens are provided for other regions.

HISTOLOGY AND CELL BIOLOGY:

Lectures, demonstrations and practical classes on general cytology, and the microscopic structure of the tissues, organs and systems of the body: the course relates structural features to function. Students are required to submit their practical notebooks as evidence of satisfactory performance at practical classes.

EMBRYOLOGY:

Lectures cover both pre- and post-natal stages of normal human growth and development and extend into related topics such as: control of development, experimental embryology, congenital anomalies and teratogenesis.

At the beginning of the Anatomy course students must have: dissecting instruments and laboratory coat or gown; a human half-skeleton; an approved microscope and the following books (latest editions).

Bloom, W., and Fawcett, D. W., *A textbook of histology* (Saunders).

Cunningham, D. J., *Manual of practical anatomy*, vol. 2 (O.U.P.).

Gardner, E., and others, *Anatomy* (Saunders).

Langman, J., *Medical embryology: human development, normal and abnormal* (Williams and Wilkins).

Rawling, L. B., *Landmarks and surface markings of the human body*, 9th edition, ed. by J. O. Robinson (Lewis).

Sinclair, D. C., *Human growth after birth* (Oxf. Med. Pub.).

Atlas (optional):

Reith, E. J., and Ross, M. H., *Atlas of descriptive histology* (Harper).

Books recommended for further reading are:

Appleton, A. B., and others, *Surface and radiological anatomy* (Heffer).

Arey, L. B., *Developmental anatomy* (Saunders).

Clark, W. E. Le Gros, *The tissues of the body* (O.U.P.).

Greep, R. O., and Weiss, L., *Histology* (McGraw-Hill).

Hamilton, W. J., and others, *Human embryology* (Heffer).

Jamieson, E. B., *Illustrations of regional anatomy* (Livingstone).

Moore, K. L., *The developing human* (Saunders).

Sinclair, D. C., *An introduction to functional anatomy* (Blackwell).
Toner, P. G., and Carr, K. E., *Cell structure. An introduction to biological electron microscopy* (Livingstone).
Tuchmann-Duplessis, H., and others, *Illustrated human embryology*, vols. 1 and 2 (Chapman and Hall).
Young, J. Z., *An introduction to the study of man* (Clarendon).

MA03 Anatomy.

GROSS ANATOMY:

Lectures, tutorial-demonstrations and practical work on the head and neck extend over the first two terms. Lectures and demonstrations on special topics are given in the second term. Students dissect part of the region—prosected specimens and models are provided for some structures.

NEUROBIOLOGY:

This course is closely co-ordinated with the course in neurophysiology given in the first term. Lectures, demonstrations and practical work (including brain dissection and study of prepared sections) relate structure to function in the nervous system. (Clinical demonstrations are included.)

Additional books required for MA03 are:
Cunningham, D. J., *Manual of practical anatomy*, vol. 3 (O.U.P.).
Noback, C. R., *The human nervous system: basic elements of structure and function* (McGraw-Hill, International student edition).

Books recommended for further reading are:
Maguire, F. A., *Anatomy of the female pelvis* (Angus and Robertson).
Peele, T. L., *The neuroanatomical basis for clinical neurology* (McGraw-Hill).
Smout, C. F. V., and Jacoby, F., *Gynaecological and obstetrical anatomy* (Lewis).

SY72 Biochemistry.

A course of lectures and laboratory work in biochemistry including both fundamental and applied aspects.

Work in Biochemistry will be completed in the second year of the medical course.

The course will include aspects of: protein structure and function; biochemistry of enzymes; nucleic acids and protein synthesis; biochemistry of gene action; molecular action of antibiotics; metabolism of carbohydrates, amino acids and lipids; molecular functions of vitamins; biochemistry of muscle contraction, vision, bone mineralisation, blood proteins and red blood cells; biochemical control mechanisms; nature of viral diseases, biochemistry of cancer, metabolic disorders; use of biochemistry in diagnosis; molecular approach to disease. The course will include lectures on the more clinical aspects of biochemical disorders.

Text-books:
Harper, H. A., *Review of physiological chemistry*, 14th edition (Lange).
White, A., and others, *Principles of biochemistry*, 4th edition (McGraw-Hill).

Reference books:
Bartley, W., and others, *Biochemistry of the tissues* (Wiley).
Searcy, R. L., *Diagnostic biochemistry* (McGraw-Hill).
Stanbury, J. B., and others, *Metabolic basis of inherited disease*, 3rd edition (McGraw-Hill).
Larner, J., *Intermediary metabolism and its regulation* (Prentice-Hall).

SS12 and SS13 Human Physiology.

The course of lectures and experimental work in Human Physiology and Pharmacology extends over the three terms of the second year and the first and second terms of the third year of the medical study. In the second year students enrol for SS12 and in the third year for SS13.

Text-books:

Best, C. H., and Taylor, N. B., *Physiologcial basis of medical practice*, 9th edition, by J. R. Brobeck (Williams and Wilkins). (Joint text-book with Biochemistry.)

Rand, M. J., and others, *An introduction to the physiology and pharmacology of the autonomic nervous system* (The Australasian Pharmaceutic Publishing Co.). (For SS12 and SS13.)

Thompson, R., *Foundations of physiological psychology* (Harper and Row). (For SS13.)

Melzack, R., *The puzzle of pain* (Penguin). (For SS13.)

Meyers, F. H., and others, *Review of medical pharmacology* (Lange); *or*

Lewis, J. J., *Pharmacology*, 4th edition, by J. Crossland (Livingstone). (For SS13.)

Reference books:

Mountcastle, V. B. (ed.), *Medical physiology*, 13th edition, vols. 1 and 2 (Mosby). (For SS12 and SS13.)

Passmore, R., *A companion to medical studies*, vol. 2: *Pharmacology, etc.* (Blackwell). (For SS13).

Goth, A., *Medical pharmacology* (Mosby). (For SS13.)

Preliminary and parallel reading for second-year students:

Horrobin, D. F., *An introduction to human physiology* (M.T.P.).

MP03 Biology of Disease.

An introductory course in Microbiology and General Pathology. Details are given below under Fourth-Year Examination.

FOURTH-YEAR EXAMINATION.

MX74 Fourth-Year Examination.

Applied Physiology and Pharmacology.

The course extends through four consecutive terms beginning with the third term in the third year of medical studies, and is integrated with topic teaching. The subject-matter will be the application of important principles of physiology and pharmacology to medicine and surgery.

Text-books:

Best, C. H., and Taylor, N. B., *Physiological basis of medical practice*, 9th edition, by J. R. Brobeck (Williams and Wilkins).

Laurence, D. R., *Clinical pharmacology*, 4th edition (Churchill); *or*

Melmon, K. L., and Morelli, H. F., *Clinical pharmacology. Basic principles in therapeutics* (Macmillan).

Campbell, E. J. M., and others, *Clinical physiology*, 4th edition (Blackwell).

Reference book:

Goodman, L. S., and Gilman, A., *The pharmacological basis of therapeutics*, 4th edition (Macmillan).

Clinical Anatomy.

The course is integrated with topic teaching. The subject matter is the application of important principles of anatomy to medicine, surgery and radiology.

Medicine and Surgery.

A course of tutorials, lectures and clinical instruction on the medical and surgical aspects of diseases. The course is part of the topic teaching programme which provides integrated multidisciplinary teaching in community medicine, public health, history taking, diseases of the alimentary tract, cardiovascular system, respiratory system, infection, endocrine disorders, metabolic abnormalities, urinary tract diseases, diseases of bones and joints, diseases of the blood, neurological disorders, diseases of the eyes, skin, ears, nose and throat, and anaesthesia and resuscitation. The psychological aspects of disease will be discussed where relevant.

The course, commencing in the third term of Medicine III and continuing throughout Medicine IV, is designed to give students a balanced introduction to clinical science and to integrate the medical sciences with clinical medicine. For text-books and equipment see under MX76 Final (Sixth-Year) Examination.

Community Medicine.

Preventive and epidemiological aspects of disease are presented and discussed where appropriate throughout the year.

Microbiology.

Bacteria of medical importance: their isolation, morphology, physiology and classification. The principles of sterilisation and disinfection, the use of antibiotics and chemotherapeutic agents. The role of micro-organisms in human disease, considered as a study of host-parasite relationships; epidemiology and its relation to hospital cross-infections. An outline of human virus infections. The collection of specimens for bacteriological and viral diagnosis.

The principles of immunology as applied to the diagnosis, prophylaxis and therapy of bacterial and virus diseases, transplantation, diseases due to allergy or hypersensitivity and autoimmune disease.

In the first and second terms of the third year, introductory lectures and a practical course using basic laboratory techniques are given. In the following four terms there are seminars on selected clinical topics related to Topic Teaching concerning infectious diseases and immunological problems, including visits to the Children's Hospital and the Northfield Wards of the Royal Adelaide Hospital. Students are expected to take an active part in these clinical presentations.

At all stages the course is related, whenever possible, to clinical material.

Text-books:

Cruickshank, R. (ed.), *Medical microbiology* (Livingstone).

Humphrey, J. H., and White, R. G., *Immunology for students of medicine*, 3rd edition (Blackwell).

Garrod, L. P., and O'Grady, F. (ed.), *Antibiotic and chemotherapy*, 3rd edition (Livingstone).

Pathology.

The course in Pathology extends over the third and fourth years. In the first and second terms of the third year of the medical course the general principles of pathology are presented as part of the course in MP03 Biology of Disease. The nature and causes of disease are first considered, and then follows a full consideration of the inflammatory reaction, including tissue regeneration and repair. Other topics are coagulation and its disorders, thrombosis, embolism and infarction, retrograde cellular changes and degenerations, the biological effects of radiant energy, the fundamentals of the neoplastic process, malformations, chromosomal abnormalities, haemorrhage, shock and oedema.

Commencing in the third term of the third year of the medical course applied (systematic) pathology is studied, as part of an integrated multi-disciplinary programme of instruction on selected topics: The naked-eye and microscopic changes in diseased organs and tissues are considered, and the morbid physiology of disease is also discussed. The course comprises lectures, weekly tutorials, mortuary demonstrations of selected material, clinico-pathological demonstrations, and attendance at necropsies in the mortuary of the Royal Adelaide Hospital.

Necropsies are held daily when material is available, and students are required to attend as many as possible.

Text-book:

For general and special pathology:

Robbins, S. L., *Pathologic basis of disease* (Saunders).

Reference books:

La Via, M. F., and Hill, R. B., *Principles of pathobiology* (Oxford).

Walter, J. B., and Israel, M. S., *General pathology*, 4th edition (Churchill).

For the integrated topical programme:

A companion to medical studies (editors R. Passmore and J. S. Robson), volume 2: Pharmacology, Microbiology, General Pathology (Blackwell).

FIFTH-YEAR EXAMINATION.

MO75 Obstetrics and Gynaecology.

FIFTH YEAR.

A course of lectures in obstetrics and gynaecology is given during the fifth year. Students are rostered to the Queen Elizabeth Hospital or the Queen Victoria Hospital and the Royal Adelaide Hospital for one clinical term. During this time both obstetrics and gynaecological clinical attachments are performed and students are resident for six weeks.

Tutorials in practical obstetrics, endocrinology and gynaecological pathology are given during term.

Seminars are conducted in which social, psychological and psychosomatic aspects of human reproduction and sexuality are discussed.

Text-books:

Jeffcoate, T. N. A., *Principles of gynaecology*, 3rd edition (Butterworth).

Green, T. H., *Gynaecology*, 2nd edition (Little-Brown).

Llewellyn-Jones, D., *Fundamentals of obstetrics and gynaecology*, Vol. I: Obstetrics, Vol. 2: Gynaecology (Faber and Faber).

Townsend, L., *Obstetrics for students*, 2nd edition, 1969 (Melbourne U.P.).

Townsend, L., *Obstetrics for students*, 2nd edition (Melbourne U.P.).

Danforth, D. N., *Textbook of obstetrics and gynaecology*, 2nd edition, 1971 (Harper and Row).

Garrey, M. M., and others, *Obstetrics illustrated* (Livingstone).

Peel, J., and Potts, M., *Textbook of contraceptive practice* (Cambridge U.P.).

Rhodes, P., *Reproductive physiology for medical students* (Churchill).

Reid, D. E., and others, *Principles of management of human reproduction* (Saunders).

Advanced reading:

Hytten, F. E., and Leitch, I., *The physiology of human pregnancy* (Blackwell).

Kerr, J. M. M., *Operative obstetrics*, 8th edition, by J. C. Moir (Balliere, Tindall and Cox).

Shaw, W., *Textbook of operative gynaecology*, rev. by J. Howkins, 3rd edition (Livingstone).

Haines, R. M., and Taylor, C. W., *Gynaecological pathology* (Churchill).

Williams, J. W., *Obstetrics*, 14th edition, by L. M. Hellman and J. A. Pritchard (Appleton-Century-Crofts).

De Lee, J. B., *Obstetrics*, 13th edition by J. P. Greenhill (Saunders).

Kistner, R. W., *Gynaecology: principles and practice*, 2nd edition, 1971 (Year Book Medical Publishers).

SIXTH YEAR

Each student will reside in an obstetric hospital for four weeks for a student internship. During this time he will be attached to the practice of a visiting obstetrician and gynaecologist.

MC75 Paediatrics.

FIFTH YEAR.

MEDICAL DISEASES OF CHILDREN:

Lectures, tutorials, and clinical instruction in the general problems of paediatrics, including the newborn.

Reference book:

Nelson, W. E., *Text-book of paediatrics*, latest edition (Saunders).

SURGICAL DISEASES OF CHILDREN:

Lecture-demonstrations on surgical diseases of children given at the Adelaide Children's Hospital.

Reference books:

White, M., *Surgery in infancy and childhood*, 2nd edition, ed. by W. M. Dennison (Livingstone).

Royal Children's Hospital Melb., *Clinical paediatric surgery*, ed. by P. G. Jones (Ure Smith).

SIXTH YEAR

During the sixth year each student will be attached to the practice of a paediatric unit and may be required to reside in a hospital for a period of four weeks as a student intern.

FINAL (SIXTH-YEAR) EXAMINATION.

MX76 Final (Sixth-Year) Examination.

Medicine.

Fifth-year students spend six weeks in the University Departments of Medicine and Surgery at either the Royal Adelaide Hospital or the Queen Elizabeth Hospital. The course is designed to analyse the whole diagnostic and clinical approach to the patient. Students are concerned with the problems of individual patients under the direct supervision of a preceptor from the Department.

The sixth year of the course is provided to allow for the study and care of patients under the supervision of the University Department of Medicine and the Clinical Teachers of the University at both hospitals. Students will spend four weeks in General Medicine in the capacity of Student Interns at the teaching hospitals. Normally a student will be required to be in residence at the hospital to enable himself to maintain continuity of patient care. There will also be a period of four weeks devoted to Medical Specialties. There will be a minimum of formal teaching. In addition the new curriculum provides an eight week elective period in a variety of activities within and outside the teaching hospitals. A course in Community Medicine is provided for four weeks.

The following books are recommended throughout the three years' instruction in Medicine. Before a purchase of books, other than those indicated as text-books, advice should be sought from Department staff.

MEDICINE:

Text-books:

Davidson, L. S. P., and others, *Principles and practice of medicine* (Livingstone); *or*

Houston, J. C., and others, *A short text-book of medicine* (English Universities Press) *and*

General reference books:

Harrison, T. R., and others, *Principles of internal medicine* (McGraw-Hill); *or*

Beeson, P. B., and McDermott, W., *Text-book of medicine* (Saunders).

Special reference books:

Zilva, J., and Pannall, P. R., *Clinical chemistry in diagnosis and treatment* (Lloyd-Luke).

Crofton, J. W., and Douglas, A. C.,*Respiratory diseases* (Blackwell).

Brain, R., *Clinical neurology* (O.U.P.).

Julian, D. G., *Cardiology* (Baillière).

Sneddon, I. B., and Church, R. E., *Practical dermatology* (Arnold).

Ashurst, P. J., *A manual of clinical dermatology* (Aust. and N.Z. Book Co.).

De Wardener, H. E., *Kidney* (Churchill).

Sherlock, S. P. V., *Liver disease* (Churchill).

De Gruchy, G. C., *Clinical haematology in medical practice* (Blackwell).

Rapaport, S. I., *Introduction to haematology* (Harper and Row).

Truelove, S. C., and Reynell, P. C., *Diseases of the digestive system* (Blackwell).

Sleisenger, M., and Fordtran, J., *Gastrointestinal diseases* (Saunders).

Catt, K., *ABC of endocrinology* (Little, Brown).

Sutton, D., *Radiology for general practitioners and medical students* (Churchill Livingstone); *or*

Simon, G., *X-ray diagnosis for clinical students and practitioners* (Butterworth).

CLINICAL INTERVIEW AND PHYSICAL SIGNS:

Text-books:

Morgan, W. L., and Engel, G. L., *The clinical approach to the patient* (Saunders).

Davis, A., and Bolin, T., *Physical diagnosis in medicine* (Pergamon).

Judge, R. D., and Zuidema, G. D., *Physical diagnosis, a physiologic approach* (Little, Brown).

THERAPEUTICS:

Text-books:

Chatton, M. J., and others, *Handbook of medical treatment* (Lange); *or*

Smith, J. W., *Manual of medical therapeutics*, 20th edition, by M. G. Rosenfeld (Little, Brown).

Psychiatry.

The course is designed to help the student to acquire the knowledge and skills necessary for the evaluation of psychological and sociological factors and the integration of these with biological factors in all forms of illness.

In the first year the course in Behavioural Science deals with neurophysiological, ethological, psychological, sociological, anthropological and psychiatric contributions to the understanding of normal and abnormal behaviour.

Certain applications of these data are developed in the second-year Community Medicine course.

In the fourth-year topic teaching programme the principles of the clinical interview are taught and psychosocial aspects of disease are presented and discussed where appropriate throughout the year.

In the fifth year students are assigned to psychiatric units in general hospitals for clinical clerking, the detailed study of the patient and his family and an over-view of the field of general psychiatry.

Text-books:

Solomon, P., and Patch, V. D., *Handbook of psychiatry*, 3rd edition (Lange).

Engel, G., *Psychological development in health and disease* (Saunders).

Reference books:

Cameron, N., *Personality development and psychopathology* (Houghton Mifflin).

Morgan, W., and Engel, G., *The clinical approach to the patient* (Saunders).

Gregory, I., *Fundamentals of psychiatry* (Saunders).

Kolb, L., *Modern clinical psychiatry* (Saunders).

Pilowsky, I., and Maddison, D. C., *Psychiatry and the community* (Sydney U.P.).

Erikson, E. H., *Identity and the life cycle* (I.U.P.).

Shepherd, M., and others, *Clinical psychopharmacology* (English U.P.).

The following paperbacks are valuable:

Brown, J. A. C., *Freud and the post freudians* (Penguin).

Crowcroft, A., *The psychotic* (Penguin).

Késsel, W. I. N., and Walton, H. J., *Alcoholism* (Penguin).

Lowe, G. R., *Personal relationships in psychological disorders* (Penguin).

Stengel, E., *Suicide and attempted suicide* (Penguin).

Storr, A., *Sexual deviation* (Penguin).

Enelow, A. J., *Interviewing and patient care* (O.U.P.).

Surgery.

Fifth-year students spend six weeks in the University Departments of Surgery and Medicine at either the Royal Adelaide Hospital or the Queen Elizabeth Hospital in a course designed to analyse the whole diagnostic process, including special diagnostic procedures. Each student has individual patients to care for under the direct supervision of a preceptor from these Departments.

In the sixth year each student is attached for four weeks to a general surgical clinic. During this period he is given duties which will involve him directly in patient-care, as the most junior member of the surgical team. Normally, he will be required to be in residence at the hospital to enable him to maintain continuity of patient-contact. There will be a minimum of formal teaching.

For a further period of four weeks each student will attend for instruction in a surgical specialty.

Text-books and equipment:

The Department of Surgery issues to all fourth, fifth and sixth-year students towards the end of each year a booklet describing the course in more detail, and giving detailed advice to students about the choice of text and reference books, and of equipment.

Community Medicine.

The course in community medicine is designed to provide students with practical learning in illness behaviour, epidemiology of disease and the organisation and evaluation of medical care in the community. The core content of the course consists of:

1. Principles of epidemiology.
2. Primary and preventive health care.
3. Health care organisation.

During the second and third years, an introductory course in medicine and the community provides instruction in the sociology of medicine including processes of care in the community. In the fourth year topic teaching programme, preventive and epidemiological aspects of disease are presented and discussed where appropriate throughout the year. In sixth year, a four-week externship programme includes field placements in metropolitan and country general practice, visits to community care resources and evaluation of these learning experiences in tutorials and seminar settings. A short in-service training course in public health is also provided. Student evaluation includes both group and individual study assignments and a running assessment of the clinical clerkship in general practice.

Text-books:

Abramson, J. H., *Survey methods in community medicine* (Churchill Livingstone).

Barker, D. J. P., *Practical epidemiology* (Churchill Livingstone).

Browne, K., and Freeling, P., *The doctor-patient relationship* (Livingstone, Edinburgh and London).

Hodgkin, K., *Towards earlier diagnosis, a guide to general practice* (Churchill Livingstone).

Maclean, U., *Social and community medicine for students* (Heinemann).

Parry, W. H., *Communicable diseases: an epidemiological approach* (English U.P.).

Reference books:

Burt, A. G., and Miller, B. F., *Personal health in todays society* (Saunders).

Dubos, R., *Man adapting* (Yale U.P., New Haven and London).

Freeman, E. F., Levine, S., and Reeder, L. G., *Handbook of medical sociology* (Prentice-Hall).

Gordon, D., *The health of man in Australian society* (University of Queensland).

Jaco, E. G., *Patients, physicians, illness* (Macmillan).

Paul, J. R., *Clinical epidemiology* (University of Chicago Press).

The following paperbacks are worth reading:

Argyle, M., *The psychology of interpersonal behaviour* (Penguin).
Balint, M., *The doctor, his patient and illness* (Pitman).
Bothwell, P., *A new look at preventive medicine* (Pelican).
Brockington, C. P., *World health* (Pelican).
Hetzel, B. S., *Health and Australian society* (Pelican).
Morrell, D. C., *The art of general practice* (Pitman).
Sax, S., *Medical care in the melting pot* (Angus and Robertson).

Medical Ethics.

A short course of lectures on the ethics of the profession.

The relationship of practitioners to one another, to patients, nurses, chemists, friendly societies, the public, advertising, hospitals, the law courts, and the State.

ADDITIONAL SUBJECTS TAUGHT BY DEPARTMENTS OF THE FACULTY OF MEDICINE

MA13 Histology and Cell Biology III for the degree of B.Sc.

SS02 Physiology II (Histology and Cell Biology section) for the degree of B.Sc.

MA79 Anatomy and Histology for the Honours degree of B.Sc.

MA72 General Anatomy for the degree of B.D.S.

MA82 General and Dental Histology for the degree of B.D.S.

MM04 General Medicine for the degree of B.D.S.

MS04 General Surgery for the degree of B.D.S.

MP73 General Pathology for the degree of B.D.S.

MA89 Anatomy and Histology for the Honours degree of B.Sc. in Dentistry.

DB99 Oral Biology—Anatomy and Histology for the Honours degree of B.Sc. in Dentistry.

MP89 Pathology for the Honours degree of B.Sc. in Dentistry.

MA61 and MA51; MA62 and MA52.

These subjects are provided for students enrolled at the South Australian Institute of Technology in the course for the Diplomas in Technology in Physiotherapy and Occupational Therapy.

MA61 Anatomy I (P) and MA51 Anatomy I (O.T.).

Separate courses are given but generally comprise the following as included in MA02:

Introductory anatomy lectures given in the first term.

Courses of lectures on the gross anatomy of the extremities and trunk, given throughout the year. Functional aspects of anatomy are emphasised.

A course of lectures on embryology (including the development of the nervous system) given in the second and third terms.

Practical work includes dissections of the extremities and trunk. Tutorial-demonstrations are held in conjunction with dissections. Prosected specimens of some regions are used as demonstration material.

Preliminary reading:

Barnett, C. H., and others, *The human body* (English Univ. Press).

Text-books:

Cunningham, D. J., *Manual of practical anatomy*, vols. 1-3 (O.U.P.). (For Physiotherapy students only.)

Gardner, E., and others, *Anatomy* (Saunders).

Langman, J., *Medical embryology: human development, normal and abnormal* (Williams and Wilkins).

Rawlings, L. B., *Landmarks and surface markings of the human body*, 9th edition, by J. O. Robinson (Lewis).

Sinclair, D. C., *Human growth after birth* (Oxford Med. Pub.).

Reference books:

Jamieson, E. B., *Illustrations of regional anatomy* (Livingstone).

Moore, K. L., *The developing human* (Saunders).

Physiotherapy students must equip themselves with dissecting instruments and coat, and half a human skeleton.

Occupational therapy students need a laboratory coat, and will find a half-skeleton, particularly the limbs, an advantage.

MA62 Anatomy II (P) and MA52 Anatomy II (O.T.).

Separate courses are given but generally comprise the following as included in MA03:

Lectures and demonstrations on the gross anatomy of the head and neck, the vertebral column, and on special topics, given in the first two terms. Functional aspects of anatomy are emphasised.

Lectures on neurology given in the second and third terms.

Practical work in the form of dissections of the head and neck, the vertebral column and the central nervous system. Tutorial-demonstrations are held in conjunction with dissections. Prosected specimens of some regions are used as demonstration material.

Text-books:

Cunningham, D. J., *Manual of practical anatomy*, vol. 3 (O.U.P.) (For Physiotherapy students only.)

Gardner, E., and others, *Anatomy* (Saunders).

Matzke, and Fotz, *Synopsis of neuroanatomy*, 2nd edition, 1972 (O.U.P., New York).

The following are recommended for additional reading:

Draper, I. T., *Lecture notes on neurology*, 3rd edition (Blackwell).

Noback, C. R., *The human nervous system: basic elements of structure and function*, 1967 (International students edition) (McGraw-Hill).

OF THE HONOURS DEGREE OF

BACHELOR OF MEDICAL SCIENCE

REGULATIONS

*1. There shall be an Honours degree of Bachelor of Medical Science. Subject to these regulations a candidate may proceed to the degree in one of the following subjects:

(a) Anatomy and Histology;
(b) Biochemistry;
(c) Physiology;
(d) Pathology;
(e) Microbiology;
(f) Pharmacology;
(g) Genetics;
(h) Psychology;
(i) Clinical Science (within one of the Departments of Medicine, Surgery, Obstetrics and Gynaecology, Paediatrics, and Psychiatry).

2. Before entering upon the course of study in one of the subjects for the degree a candidate must,

(i) have completed the pre-requisite work for that subject, and
(ii) be deemed by the Head of the Department concerned to be a suitable candidate for advanced work.

3. To qualify for the degree a candidate shall interrupt his medical course, undertake a course of advanced study extending over at least one year in one of the subjects listed in regulation 1, and satisfy the examiners therein.

†4. The names of the candidates who qualify for the degree shall be published in alphabetical order within the following classes and divisions in each subject:

First Class
Second Class
Divison A
Division B
Third Class.

* Amended 22 December, 1966 and further amendment awaiting allowance at time of printing.
† Amended 21 December, 1972.

5. A candidate shall enter for examination on the form and by the date prescribed by the Council, but shall not be eligible to present himself for examination unless he has regularly attended the prescribed lectures and has done written and laboratory or other practical work, where required, to the satisfaction of the professors and lecturers concerned.

6. Schedules defining the pre-requisite work, the course of study, including lectures, laboratory and other practical work to be undertaken, the examinations to be passed and the fees to be paid by candidates shall be drawn up by the Faculty of Medicine, and submitted to the Council. Such schedules shall become effective from the date of approval by the Council or such other date as the Council may determine, and shall be published as soon as practicable after that approval has been given.

7. A student who has passed examinations *in pari materia* and at equivalent standard in another faculty or otherwise, and desires that such examinations shall be counted *pro tanto* for the Honours degree of Bachelor of Medical Science, may on written application be granted such exemption from the requirements of these regulations as the Council shall determine; but no exemption shall be granted from the year's course of advanced study for the degree.

Regulations allowed 12 December, 1963.

SCHEDULES

(Made by the Council under Regulation 6.)

SCHEDULE I: PRE-REQUISITE WORK.

The pre-requisite work for the various subjects is:

Anatomy, Biochemistry, Physiology: a pass in the Third-Year Examination in the course for the degrees of Bachelor of Medicine and Bachelor of Surgery.

Pathology, Microbiology, Pharmacology: a pass in the Fourth-Year Examination in the course for the degrees of Bachelor of Medicine and Bachelor of Surgery.

Genetics: a pass in the Third-Year Examination in the course for the degrees of Bachelor of Medicine and Bachelor of Surgery, and in the annual examination in Genetics II as prescribed for the degree of Bachelor of Science.

Psychology: a pass in the Third-Year Examination in the course for degrees of Bachelor of Medicine and Bachelor of Surgery, and in the annual examination in Psychology II as prescribed for the degree of Bachelor of Science.

Clinical Science: a pass in the Fifth-Year Examination in the course for the degrees of Bachelor of Medicine and Bachelor of Surgery.

Schedule II: Course of Study.

The course comprises three equally important aspects undertaken concurrently:

1. *Course of Reading* in selected fields, and the submission of a series of essays associated therewith.
2. *Experimental work,* covering a wide range of techniques.
3. *The undertaking of a research project* which will be assigned early in the course and on which a thesis must be submitted.

Schedule III: Examination.

The examination for the degree will consist of a written paper or papers, the essays submitted during the year, the thesis on the research project, an oral examination, and a practical examination if required by the examiners.

OF THE HONOURS DEGREE OF

BACHELOR OF MEDICAL SCIENCE

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the faculties responsible for the various subjects, as follows:

Faculty of Arts - - - - - A	Faculty of Science - - - - S
Faculty of Medicine - - - M	

The second letter, if it follows

A, is explained under Faculty of Arts;

S, is explained under Faculty of Science; *or*

M, identifies the medical department teaching the subject as set out below:

Anatomy and Histology - - A	Obstetrics and Gynaecology - O
Paediatrics - - - - - - - C	Pathology - - - - - - - P
Medicine - - - - - - - - M	Surgery - - - - - - - - S
Psychiatry - - - - - - - H	

The first digit—

7–9: Indicates that the subject does not form part of a sequence.

The second digit—

9: Indicates that it is a subject available only to candidates for the Honours degree of B.Med.Sc.

THE HONOURS DEGREE OF BACHELOR OF MEDICAL SCIENCE.

MA99 Anatomy and Histology for the Honours degree of B.Med.Sc.

SY89 Biochemistry for the Honours degree of B.Med.Sc.

MM99 Clinical Science (Medicine).

MO99 Clinical Science (Obstetrics and Gynaecology).

MC99 Clinical Science (Paediatrics).

MH99 Clinical Science (Psychiatry).

MS99 Clinical Science (Surgery).

SJ89 Genetics for the Honours degree of B.Med.Sc.

SK89 Microbiology for the Honours degree of B.Med.Sc.

MP99 Pathology for the Honours degree of B.Med.Sc.

SS79 Pharmacology for the Honours degree of B.Med.Sc.

SS69 Physiology for the Honours degree of B.Med.Sc.

AY79 Psychology for the Honours degree of B.Med.Sc.

Students requiring further information concerning syllabuses and work required for the Honours degree of Bachelor of Medical Science are advised to consult the Chairman/Head of the appropriate department as early as possible.

OF THE

DIPLOMA IN CLINICAL SCIENCE

NOTE: This course will not be available in 1975; the Faculty of Medicine hopes to introduce it in 1976.

REGULATIONS

1. There shall be a postgraduate Diploma in Clinical Science.

*2. A candidate for admission to the course for the diploma shall have qualified for admission to the degrees of Bachelor of Medicine and Bachelor of Surgery of the University or to a corresponding degree or degrees of another university accepted for the purpose by the University.

3. To qualify for the diploma a candidate shall:

(a) satisfactorily complete a course of part-time study extending over at least one year; and

(b) submit evidence that subsequently to qualifying for the award of the degree or degrees referred to in regulation 2 hereof he has undergone in a hospital, practical clinical training deemed satisfactory by the Faculty, for a period of not less than two years.

4. The course of study shall be prescribed in schedules which shall be drawn up from time to time by the Faculty of Medicine and approved by the Council. Such schedules shall take effect as from the date of approval by the Council or such other date as the Council shall determine and shall be published in the next University Calendar which is issued after that approval has been given.

5. A candidate who has twice failed to pass the examination may not enrol for the diploma again except by special permission of the Faculty and then only under such conditions as the Faculty may prescribe.

6. For the purpose of this regulation a candidate who is refused permission to sit for examination, or who fails, without a reason accepted by the Dean as adequate, to attend all or part of an annual examination (or supplementary examination if granted) after having enrolled for at least two terms in that year, shall be deemed to have failed to pass the examination.

* Amendment awaiting allowance at time of printing.

7. A candidate who complies with the foregoing conditions and satisfies the examiners shall be awarded the Diploma in Clinical Science.

Regulations allowed 28 Feburary, 1974.

SCHEDULES

(Prescribed by the Council under Regulation 4)

I. Course of Study

A candidate shall, unless exempted therefrom by the Faculty, attend lectures, complete such written, practical and tutorial work as may be prescribed, and pass examinations in:

Basic Clinical Science; and

One of the following Applied Clinical Science subjects:

Anaesthesia
Dermatology
General Practice
Medicine
Obstetrics and Gynaecology
Paediatrics
Radiology
Surgery.

OF THE DEGREE OF

MASTER OF SURGERY

REGULATIONS

§1. The following persons may be accepted as candidates for the degree of Master of Surgery:

(a) Bachelors of Surgery of the University of Adelaide;

(b) Graduates in surgery of another university who hold a degree which is accepted by the Council on the recommendation of the Faculty of Medicine as equivalent to the degree of Bachelor of Surgery of the University of Adelaide.

No person may be awarded the degree of Master of Surgery until three years have elapsed since he became qualified to receive the degree by virtue of which he qualified for acceptance as a candidate for the degree of Master of Surgery.

†2. Except by special permission of the Faculty of Medicine, every candidate shall give at least three terms' notice of his intended candidature, and shall indicate in general terms the subject of the research work or investigation on which he proposes to submit his thesis. The Faculty of Medicine may, if it considers it desirable, nominate a department under whose aegis the candidate will be required to undertake his work and appoint a supervisor or supervisors to whom the candidate will be responsible for the preparation and presentation of his thesis.

†3. A candidate for the degree shall submit: (a) evidence satisfactory to the Faculty of Medicine of his having had special training in surgery including at least two years' such training in a teaching hospital recognised by the Faculty for the purpose; (b) a thesis embodying the results of original work relevant to the science or art of surgery or both; and (c) such other published papers in support of his candidature as he may wish.

†4. To qualify for award of the degree the thesis must make a contribution to surgical knowledge.

† Allowed 4 November, 1965.

§ Allowed 21 December, 1967.

*5. A candidate's thesis must include: (a) a declaration by the candidate indicating clearly the extent (if any) to which the candidate is indebted for any portion of the work to any other person, and stating that the thesis does not contain any material which has been accepted for the award of any other degree in any university; (b) a statement of the nature of the problem investigated; (c) a review of the relevant scientific and historical background; (d) a detailed account of the methods of investigation employed, the results obtained, and their interpretation.

‡6. On completion of his work the candidate shall lodge with the Registrar three copies of his thesis prepared in accordance with directions given to candidates from time to time.††

The Faculty of Medicine, if it approve the subject of the work submitted, shall nominate examiners, of whom at least one shall be an external examiner.

A candidate may be required to undergo an oral examination in the subject-matter of the thesis and in any other subject-matter cognate thereto.

7. After hearing the reports of the examiners the Faculty shall determine whether or not an oral examination is necessary, and may then recommend (a) that the degree be awarded, or (b) that the degree be awarded on satisfactory completion of an oral examination, or (c) that the thesis be returned to the candidate for revision, or (d) that the degree be not awarded.

**8. Repealed.

9. The fees to be paid by the candidates shall be prescribed from time to time by the Council; and a schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 17 December, 1959.

* Amended 16 March, 1961. ‡ Allowed 16 March, 1961.

** Repealed 16 March, 1961.

†† Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

OF THE DEGREE OF

DOCTOR OF MEDICINE

REGULATIONS

1. The following persons may be accepted as candidates for the degree of Doctor of Medicine:

(a) Bachelors of Medicine of the University of Adelaide;

(b) Graduates in medicine of another university who hold a degree which is accepted by the Council on the recommendation of the Faculty of Medicine as equivalent to the degree of Bachelor of Medicine of the University of Adelaide.

2. No person may be awarded the degree of Doctor of Medicine until three years have elapsed since he became qualified to receive the degree specified in regulation 1 of these regulations. He may proceed to the degree either by completing a period of research and presenting a satisfactory thesis thereon, or by the submission of previously published work.

3. No thesis or other work presented for the degree may include material which has been accepted for any other degree or qualification of any university or institution. The degree shall not be awarded unless the thesis or work submitted contain an account of original work by the candidate for the degree amounting to a substantial contribution to knowledge.

4. When he submits his thesis or other work, a candidate shall:

(a) submit therewith a declaration that the thesis or work is his own composition;

(b) indicate wherein he considers the thesis or work to advance medical knowledge or practice;

(c) furnish a history of the progress of medical knowledge in the subjects of the thesis or work;

(d) indicate clearly and fully, by appropriate references, the extent to which he is indebted for any portion of his work to any other person.

5. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations governing admission to the degree by thesis

6. A person who wishes to proceed to the degree of Doctor of Medicine by thesis shall make written application to the Academic Registrar for enrolment as a candidate. The applicant shall include a brief statement of the topic upon which he proposes, upon the completion of a period of research, to submit a thesis.

7. A person accepted as a candidate shall conduct or continue research in the field of study approved by the Faculty. The Faculty may, if it thinks it desirable, appoint a supervisor or supervisors of his research and may nominate a department or departments under whose aegis the candidate may be required to pursue his research. Unless the Faculty shall otherwise determine, a candidate shall not present his thesis for examination until after the expiry of six terms from the approval of his candidature.

8. The Faculty may permit a candidate to pursue his research at such place or places outside the University as it thinks fit.

9. A candidate shall give the Academic Registrar one month's notice in writing of his intention to submit his thesis and shall give particulars of any other work which he desires to submit in support of his thesis. The Faculty may permit the submission of such work if in its opinion it may conveniently be examined along with the thesis.

10. The candidate shall lodge with the Academic Registrar three copies of the work prepared in accordance with the directions given in sub-paragraph (b) of clause 2B of Chapter XXV of the Statutes. If the work is accepted for the degree the Academic Registrar shall transmit two of the copies to the University Library.°

11. The Faculty shall nominate examiners of the thesis of whom at least one shall be an external examiner. The Faculty may require the candidate to submit himself for examination upon the subject of his thesis and matters related thereto.

12. After the examiners' reports have been considered the Faculty may recommend that the candidate:

(a) be awarded the degree; or

(b) be awarded the degree on the satisfactory completion of an examination on the subject of his thesis and matters related thereto; or

(c) be not awarded the degree, but be allowed to revise and re-submit his thesis (within such period as the Faculty may allow); or

(d) be not awarded the degree and be not allowed to re-submit his thesis.

Regulations concerning admission to the degree by previously published work

13. Any person who satisfies the requirements of regulation 1 hereof may seek the permission of the Faculty to submit, as evidence that he is a fit and proper person to receive the degree, work or papers previously published by him.

14. Any person who seeks the permission of the Faculty under regulation 13 hereof shall apply in writing to the Academic Registrar giving particulars of the work which he proposes to submit together with a *curriculum vitae*. The Faculty shall refer the matter to a committee which shall enquire into it and make recommendations to the Faculty. The Faculty may refuse to grant the permission sought or it may, if it entertains serious doubts about the suitability of the work which the applicant proposes to submit, advise him of its doubts and request him to reconsider his application.

15. The candidate shall lodge with the Academic Registrar three copies of the work prepared in accordance with the directions given in clause 2B of Chapter XXV of the Statutes. If the work is accepted for the degree the Academic Registrar shall transmit two of the copies to the University Library.*

16. The Faculty shall nominate examiners of the work of whom at least one shall be an external examiner. The Faculty may require the candidate to submit himself for examination upon the subject of his work and matters related thereto.

17. After the examiners' reports have been considered the Faculty may recommend that the candidate:

(a) be awarded the degree; or

(b) be awarded the degree on the satisfactory completion of an examination on the subject of his work and matters related thereto; or

(c) be not awarded the degree.

Regulations allowed 21 December, 1967.

* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

FACULTY OF MUSIC

REGULATIONS, SCHEDULES AND SYLLABUSES OF DEGREES

Bachelor of Music (B.Mus.)
Regulations and Schedules - - - - - - - 970
Syllabuses - - - - - - - - - - 975

Master of Music (M.Mus.)
Regulations and Schedules - - - - - - - 983

Doctor of Philosophy (Ph.D.)
Regulations and Schedules: under "Board of Research Studies"—*see* Table of Contents.

Doctor of Music (D.Mus.)
Regulations - - - - - - - - - - 987

OF THE DEGREE OF

BACHELOR OF MUSIC

REGULATIONS

1. There shall be an Ordinary degree and an Honours degree of Bachelor of Music. A candidate may obtain either degree or both.

2. The course of study for the Ordinary degree shall extend over three academic years and that for the Honours degree over four academic years.

†3. To qualify for the Ordinary degree a candidate shall complete three years of academic study and pass the examinations prescribed under Schedule I.

†4. (a) To qualify for the Honours degree a candidate shall attend lectures and do such other work as may be properly required by the Professors and Lecturers concerned, and pass examinations in accordance with the provisions of Schedule II.

(b) The names of candidates who qualify for the Honours degree shall be published in alphabetical order within the following classes and divisions in each school:

First Class
Second Class
Division A
Division B
Third Class.

(c) A candidate who, after examination, has failed to obtain Honours shall be reported to the Faculty which may recommend that he be awarded the Ordinary degree, provided that he has, in all other respects, completed the work for the Honours degree.

(d) A candidate may not enrol a second time for the final Honours course if he (i) has already qualified for Honours, or (ii) has presented himself for examination, but has failed to obtain Honours, or (iii) withdraws from the Honours course, unless the Faculty on such conditions as it may determine permits him to re-enrol.

† Amended 16 December, 1971.

5. Schedules defining the courses of study (including lectures, practical work, and examinations) to be undertaken and the fees to be paid by candidates, shall be drawn up by the Faculty of Music and submitted to the Council for approval. Such schedules shall become effective from the date of approval by the Council or such other date as the Council may determine, and shall be published as soon as practicable after that approval has been given.

6. Except by permission of the Faculty of Music, a candidate shall not be admitted to the class in any subject for which he has not completed the pre-requisite work prescribed in the syllabus for that subject.

†7. The separate subjects which together comprise an academic year of study need not all be taken in one and the same year, nor need the examination in all the subjects of the academic year to study be passed at the same time; but except by special permission of the Faculty of Music a candidate shall not proceed to any part of the work of the second or a subsequent year unless he has satisfied the pre-requisite work prescribed in the syllabus of the subject concerned.

*8. (a) The annual examination shall be held towards the end of each academic year. A candidate shall enter for examination on the form and by the date prescribed by the Council, but unless granted exemption by the Faculty of Music, he shall not be eligible to present himself for examination unless he has regularly attended the prescribed lectures and has done the written and practical work required to the satisfaction of the professors and lecturers concerned.

(b) The examination in a subject shall take the form prescribed in the syllabus. Written or practical work done by the candidates by direction of the professor or lecturer concerned, and the results of terminal or other examinations held during the year, may be taken into consideration at the final examination in any subject.

(c) There shall be three classifications of pass at each annual examination for the Ordinary degree as follows: Pass with Distinction, Pass with Credit, Pass. The names of candidates who pass with Distinction or with Credit shall be arranged in order of merit within the classification; and the names of other candidates who pass shall be arranged in alphabetical order.

*9. (a) A candidate who fails to pass in any subject shall, before presenting himself again for examination, again attend lectures and do written or practical work in that subject to the satisfaction of the professor or lecturer concerned unless granted exemption from doing so by the Faculty of Music.

(b) A candidate who has twice failed to pass the annual examination in any subject or division of a subject may not present himself again for instruction or examination therein unless his plan of study is approved by the Dean. If he fails a third time he may not proceed with the subject again except by special permission of the Faculty of Music and under such conditions as the Faculty may prescribe.

* Amended 16 December, 1971.

† Amended 16 December, 1971.

(c) For the purpose of sections (a) and (b) of this regulation a candidate who is refused permission to sit for examination, or who fails either to enter for or to attend an annual examination after having enrolled for at least two terms in that year, shall be deemed to have failed to pass the examination.

10. (a) A candidate who, on account of illness or other sufficient cause allowed by the Faculty, is prevented from attending the whole or part of any annual examination may be permitted by the Faculty of Music to present himself for a supplementary examination.

*(b) A candidate who presents himself at an annual examination but fails to pass, may, on the recommendation of the Board of Examiners, be permitted by the Faculty of Music to present himself for a supplementary examination.

(c) A candidate shall not be re-examined at a supplementary examination in any subject in which he passed at the preceding annual examination.

11. A candidate who has passed equivalent examinations in the University or elsewhere and desires that such examinations be counted *pro tanto* for the degree of Bachelor of Music may, on written application, be granted such exemption from the requirements of these regulations as the Council may determine.

12. (a) A candidate who by 31 March, 1970, had matriculated and completed at least one academic year of study for the degree of Bachelor of Music under the regulations in force in 1969 may complete his course under those regulations provided that he does so by 31 December, 1974.

*(b) A candidate who, by 31 March, 1972, had matriculated and completed at least one year of academic study for the degree of Bachelor of Music under the regulations in force in 1970, may complete the Honours degree under those regulations provided that he does so by 31 December, 1975.

†(c) A candidate who by 31 March, 1973 had matriculated and completed at least one year of academic study for the degree of Bachelor of Music under the regulations in force in 1972, may complete his course under those regulations provided he completes the course for the Ordinary degree by March, 1975 or the course for the Honours degree by March, 1976.

(d) A candidate may at any time apply for status under these regulations and shall be granted such status thereunder as the Faculty of Music may in each case determine.

Regulations allowed 28 January, 1965. * Amended 16 December, 1971.
† Amended 21 December, 1972.

SCHEDULES

(Made by the Council under Regulation 5.)

NOTE: Syllabuses of subjects for the degree of B.Mus. are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

SCHEDULE I — THE ORDINARY DEGREE.

1. Before admission to the course of study for the degree of Bachelor of Music, a candidate shall show sufficient musical aptitude and may be required to pass a special entrance examination appropriate to the course of study he wishes to pursue.

2. Courses of study must be approved by the Head of the Department (or his nominee) at enrolment each year.

3. A candidate for the degree will, throughout the period of his enrolment, be under the direction of a course supervisor. He will normally be required to attend and satisfactorily participate, for up to two hours a week, in tutorials and practical lessons, as determined by the supervisor in consultation with the Head of the Department of Music and the candidate's practical teacher. In addition he will be required to take part satisfactorily in general practical work in the Department of Music (e.g. choir, orchestra and chamber music).

4. To qualify for the Ordinary degree a candidate shall satisfy the examiners in each of the following subjects or projects:

(a) Theoretical and Historical Studies I,

(b) Practical Studies I,

(c) Tutorials and Practical Work I,

(d) Project I,

(e) Project IIA, IIB and IIC,

(f) Tutorials and Practical Work II,

(g) Project IIIA and IIIB,

(h) Tutorials and Practical Work III,

(i) Elective Work.

NOTE (not forming part of the schedules):

Work required to complete an Adelaide degree.

To qualify for the degree of Bachelor of Music a student granted status under regulation 11 must, except in special cases approved by the Faculty, complete all the work of the final year of the degree course while attending the Department of Music.

Schedule II – The Honours Degree.

1. (a) Before entering an Honours course a candidate must obtain the approval of the Head of the Department of Music, who will take into account his academic record up to the time of his application. Normally such approval should be sought at the end of the second year of the course for the Ordinary degree.

(b) The work of the final Honours year must be completed in one year of full-time study, provided that the Faculty may permit a candidate to spread the work over two years, but not more, on such conditions as it may determine.

2. To qualify for the Honours degree a candidate shall complete:

(a) the work prescribed in Schedule I: The Ordinary degree, provided that a topic of his elective work shall be in the subjects in which he subsequently takes Honours;

(b) one of the following Honours subjects:
Honours Performance
Honours Composition
Honours Musicology
Honours Ethnomusicology
Honours Music in Education;

(c) one Honours project.

OF THE DEGREE OF

BACHELOR OF MUSIC

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Music: U.

The second letter identifies the Department of Music: M.

The first digit—

Differentiates subjects in the same year.

The second digit—

1–3: Indicates year of subject, e.g. first, second or third year.

(4–8: Not used.)

9: Indicates a final honours subject.

MUSIC.

All students are required to take part satisfactorily in group practical work in the Department of Music.

FIRST-YEAR SUBJECTS.

UM21 Practical Studies I.

CLASSES: Individual tuition throughout the year.

SYLLABUS: Studies in one of the following groups: voice and one instrument; two instruments; composition and either voice or one instrument; voice alone; one instrument alone; or composition alone.

UM31 Theoretical and Historical Studies I.

CLASSES: Four lectures/tutorials during the first and second terms.

SYLLABUS:

(i) Introduction to acoustics and instruments.

(ii) Study of the following works:
Bach, *Two-part Inventions* (Dover).
Mozart, *Symphony in G minor, K550* (Norton Critical Scores).
Stravinsky, *The Rite of Spring* (Boosey and Hawkes).
Meale, *Clouds now and then* (Universal).
Berio, *Trombone Sequenza* (Universal).

(iv) Assignments in selected fields of music theory and history, including tonal harmony.

Text-books:
Baines, A., *Musical instruments through the ages* (Pelican).
Benade, A. H., *Horns, strings, and harmony* (Anchor books).

Reference books:
Andrews, H. K., *The Oxford harmony*, vol. II (O.U.P.).
Apel, W., *The Harvard dictionary of music* (Heinemann).
Briggs, G. A., *Musical instruments and audio* (Wharfdale Wireless Works).
Bukofzer, M. F., *Music in the baroque era* (Dent).
Crocker, R. L., *A history of musical styles* (McGraw-Hill).
Donington, R., *The instruments of music* (University paperbacks).
Donington, R., *The interpretation of early music* (Faber).
Goldman, R. F., *Harmony in Western music* (Norton).
Harman, R. A., and Mellers, W., *Man and his music* (Barrie and Rockliff).
Harrison, F. L., *Musicology* (Prentice-Hall).
Hood, M., *The Ethnomusicologist* (McGraw-Hill).
Lang, P. H., *Music in Western civilisation* (Dent).
La Rue, J., *Guidelines for style analysis* (Norton).
Salzer, F., *Structural hearing* (Dover).
Salzer, F., and Schachter, C., *Counterpoint in composition* (McGraw-Hill).
Schoenberg, A., *Preliminary exercises in counterpoint* (Faber paperback).
Spink, I., *An historical approach to musical form* (Bell).
Westrup, J. A., *An introduction to musical history* (Hutchinson).
Wood, A., *The physics of music* (Methuen University paperbacks).

UM41 Tutorials and Practical Work I (Schedule I clause 3).

As directed by the course supervisor in consultation with the Chairman of the Department and the student's practical teacher, including participation in general practical music of the Department.

UM51 Project I.

A selected project normally taken in third term, first year, and examined at first-year level.

SECOND-YEAR SUBJECTS.

UM42 Tutorials and Practical Work II (Schedule I clause 3).

Pre-requisite subjects: UM41 Tutorials and Practical Work I; UM21 Practical Studies I.

As directed by the course supervisor in consultation with the Chairman of the Department and the student's practical teacher, including participation in general practical music of the Department.

UM52 Project IIA.

Pre-requisite or concurrent subjects: UM31 Theoretical and Historical Studies I, UM21 Practical Studies I and UM51 Project I.

A project chosen from the project programme below, normally taken in first term second year, and examined at second-year level.

UM62 Project IIB.

Pre-requisite or concurrent subjects: UM31 Theoretical and Historical Studies I, UM21 Practical Studies I and UM51 Project I.

A project chosen from the project programme below, normally taken in second term second year, and examined at second-year level.

UM72 Project IIC.

Pre-requisite subjects: UM31 Theoretical and Historical Studies I, UM21 Practical Studies I and UM51 Project I.

A project chosen from the project programme below, normally taken in third term second year, and examined at second-year level.

THIRD-YEAR SUBJECTS.

UM43 Tutorials and Practical Work III (Schedule I clause 3).

Pre-requisite subject: UM42 Tutorials and Practical Work II.

As directed by the course supervisor in consultation with the Chairman of the Department and the student's practical teacher, including participation in general practical music of the Department.

UM53 Project IIIA.

Pre-requisite or concurrent subjects: UM52 Project IIA, UM62 Project IIB and UM72 Project IIC.

A project chosen from the project programme below, normally taken in first term third year, and examined at third-year level.

UM63 Project IIIB.

Pre-requisite or concurrent subjects: UM52 Project IIA, UM62 Project IIB and UM72 Project IIC.

A project chosen from the project programme below, normally taken in second term third year, and examined at third-year level.

UM73 Elective Work.

Pre-requisite subjects: UM52 Project IIA, UM62 Project IIB and UM72 Project IIC.

Pre-requisite or concurrent subjects: UM53 Project IIIA and UM63 Project IIIB.

Normally two topics which may include recitals, compositions, individual or group research projects, chosen in consultation with the Chairman of the Department and course supervisor, and practical teacher.

HONOURS DEGREE OF BACHELOR OF MUSIC.

FINAL HONOURS SUBJECTS.

UM99 Composition.

A course of seminars and individual tuition in composition and analysis of music.

Candidates will be required to submit a major work, or group of works, the general nature of which has been approved in advance by the Faculty of Music, and which must be lodged with the Dean by 1 November of the year in which the candidate intends to take the examination. Assignments in advanced analysis must be completed during the year.

UM89 Musicology.

A reading knowledge of a language or languages necessary for the course of study will be assumed.

Candidates will be required to complete individual research assignments as directed.

1. HISTORICAL MUSICOLOGY.

A course of seminars and individual tuition in: paleography; selected theoretical writings; editorial practice; musicological method (analytical bibliography, source evaluation, periodisation of musical terminology).

OR

2. SYSTEMATIC MUSICOLOGY.

A course of seminars and individual tuition in: advanced acoustics; psychoacoustics; music physiology; advanced music aesthetics; music philosophy; information theory.

UM79 Performance.

A course of individual tuition in performance.

Candidates will be required to perform two recital programmes, approved in advance by the Faculty of Music, for public performance, and will be required to show a knowledge of history and repertoire of music relevant to their instrument or voice.

UM69 Music in Education.

A course of workshops in creative music and improvisation; and a comprehensive study of more advanced teaching methods, including associated work in electronics. Part of this work will involve students taking projects into primary and secondary schools.

UM59 Ethnomusicology (if available).

A course of seminars and individual tuition in the theoretical background to ethnomusicology, including field techniques, transcription, analytical procedures, performance techniques.

UM09 Honours Project.

A project chosen from the project programme below and examined at Honours level.

ADDITIONAL SUBJECTS.

UA11 Drama I for the degree of B.A.
UA51 Music I for the degree of B.A.
UA61 Music IA for the degree of B.A.
UA52 Music II for the degree of B.A.
UA53 Music III for the degree of B.A.
UA68 Music IIIS for the degree of B.A. (Preliminary Honours).
UA69 Music for the Honours degree of B.A.

PROJECT PROGRAMME 1975.

Projects are studied from a broad perspective which covers, as well as specific considerations of music theory and music history, the related musicological implications of aesthetics, philosophy and sociology. In addition to the written assignments within each project (e.g. style studies through analysis and applied techniques of harmony and counterpoint; essays, etc.) students are encouraged, where appropriate, to present short programmes within the context of performance practice.

FIRST TERM.

1. 16TH CENTURY MASS AND MOTET.

The greatest representative of the English, Flemish, Italian and Spanish schools of Church Music.

2. ORATORIO IN THE AGE OF VIENNESE CLASSICISM 1750-1830.

Impact of Jomellian, Traettan and Gluckian Operatic Reforms; newly recovered French sources; Italian scenic experiments and sacred opera; Parodia and Pasticcio in Oratorio (Mozart's C minor Mass and Davidde Penitente); the late Italian Passion Oratorio; Haydn, Beethoven and Simone Mayr.

3. ROMANTIC PIANO MUSIC.

Piano literature of the 19th century, based on its development of pianistic techniques, the harmonic and formal attributes of the music, and the style of performance.

4. MUSIC IN ADELAIDE, 1875.

A reconstruction of the role of music in society.

5. ELECTRONIC MUSIC.

A study of the fundamentals of electronic music, and its application in present-day society.

6. ETHNOMUSICOLOGY (if available).

In general, the project offered in Term I will expect the student to carry out a field study of his own choice on a music functioning within the community (e.g. music from a particular migrant group, music used therapeutically). In Term II the topic will be prescribed (e.g. Aboriginal music or Indian music). The work will be done within the project. Special permission will be required to take an individual study in Term II which is more relevant to the Term I format.

SECOND TERM.

1. THE MUSIC OF THE GERMAN RENAISSANCE AND ORLANDO DI LASSO.

Music at the Habsburg, Wittelsbach, and Fugger residences; the free Reichsstädte; emergence of German music publishing and the diffusion of music in 16th century Germany; the new theology; the Netherland-Italo-South German Synthesis-Tenor Lied, Chanson, Madrigal, Motet, South German precursors of polychoralism; new trends in Lasso research.

2. 19TH CENTURY ORCHESTRAL MUSIC.

Representative composers from 1800-1900, with particular attention to form, style, harmonic development and orchestration.

3. CONTEMPORARY TECHNIQUES.

Study of modern compositional methods.

4. COMPOSITION.

Studies in contemporary composition, conducted at all levels of the degree course.

5. ETHNOMUSICOLOGY.

See First term (6).

6. Music in Education.

(All students taking one of the Music in Education projects must have attended the appropriate workshop.)

Topics will be determined in relation to aspects of work covered in Music Education Workshops (e.g. graphic notation, live electronics, group composition). Projects include a balanced proportion of written and creative work and teaching practice.

THIRD TERM.

1. Baroque Techniques.

The study of performance practice (1600-1750) with particular reference to theoretical works of the period. Techniques of performance as applied to individual instruments, ensemble playing and singing. Editing skills and notational studies. Musical forms and styles.

2. 19th Century Lied.

The tradition of the German Lied from Gluck and Mozart to Hugo Wolf.

3. Contemporary Music.

A practical approach to the techniques of new music for performers and composer/performers, including improvisation, live electronic music and music-theatre. Project activity will take the form of creative workshops and rehearsals culminating in a series of new music concerts at the end of the term.

4. Composition.

See Second term (4). (May also be taken by beginners as an Introduction to Composition.)

5. Music in Education.

See Second term.

PROJECT PROGRAMME 1976 (PROVISIONAL).

FIRST TERM.

1. Gregorian Chant.
2. 18th Century French Classical Tradition.
3. Post Expressionism.
4. Composition.
5. Ethnomusicology.

SECOND TERM.

1. Medieval Techniques.
2. Baroque Techniques.
3. Contemporary Techniques.
4. Ethnomusicology.
5. Music in Education.

THIRD TERM.

1. Music in Italy.
2. Beethoven and Goethe.
3. Contemporary Music.
4. Composition.
5. Introduction to Ethnomusicology.
6. Music in Education.

OF THE DEGREE OF

MASTER OF MUSIC

REGULATIONS

1. The Faculty of Music may accept as a candidate for the degree of Master of Music a person who: (i) has qualified in the University of Adelaide for the degree of Bachelor of Music; or (ii) has obtained, in another university or institution recognised for the purpose, a qualification which is accepted by the Faculty of Music as equivalent to the degree of Bachelor of Music in the University of Adelaide.

2. In special cases the Council, on the recommendation of the Faculty and subject to such conditions (if any) as it may impose in each case, may accept as a candidate for the degree a person who does not hold a degree of any university but has given evidence satisfactory to the Faculty of his fitness to undertake studies for the degree of Master of Music.

3. The course of study for the degree shall comprise two parts as follows:

Part A: Such preliminary study and examinations as may be prescribed in the schedules of the degree;

Part B: A course of advanced study and/or research extending over not less than one calendar year nor more than two calendar years of full-time study together with such examinations as may be prescribed in the Schedules of the degree. The Faculty may, in special cases, permit a candidate to complete Part B over not less than two calendar years nor more than four calendar years of part-time study. A candidate shall not be permitted to proceed to Part B until he has fulfilled the requirements of Part A.

4. A candidate may be exempted from the whole or such part of Part A as the Faculty may decide if he has:

(a) qualified for the Honours degree of Bachelor of Music; or

(b) qualified for the Ordinary degree of Bachelor of Music and has passed in (i) all the Ordinary degree subjects that are compulsory for the Honours degree in the field to which his subject of study relates; and (ii) an examination of Honours standard approved by the Faculty; or

(c) obtained a qualification which is accepted by the Faculty as equivalent to the Honours degree of Bachelor of Music in the University of Adelaide.

A candidate who has obtained qualifications which fully or partly satisfy the requirements specified in (a), (b) or (c) above may be exempted from the whole or such part of Part A as the Faculty may decide, and shall thereafter fulfil the requirements of Part B, as prescribed in the schedules.

5. A candidate who is required to undertake any work in Part A shall be registered as a candidate in that Part for at least three terms before presenting himself for the examination prescribed in that Part.

6. A candidate in Part B shall satisfy the examiners in Composition, or in Musicology, or in Performance, as prescribed in the schedules and shall not present himself for examination until the expiry of three terms from his acceptance as a candidate in that Part.

7. If in the opinion of the Faculty of Music a candidate is not making satisfactory progress the Faculty may, with the consent of the Council, withdraw its approval of his candidature and the candidate shall cease to be enrolled for the degree.

8. A candidate shall as early as possible and in any event not later than the last day of the first term in his final year, submit for approval by the Faculty:

(i) an adequate statement of the nature of the composition or compositions; or

(ii) the subject of a thesis; or

(iii) two recital programmes and the subject of a dissertation which he proposes to submit for examination.

9. A candidate shall, not later than the end of his final term, lodge with the Academic Registrar three copies of his composition or compositions, or dissertation, or thesis, as the case may be, prepared in accordance with directions given to candidates from time to time.*

10. (a) Not less than two examiners, at least one of whom shall be an external examiner, shall be appointed by, and shall report to, the Faculty of Music.

(b) The examiners may require a candidate to undergo further examination in the field of study immediately relevant to his subject.

(c) The examiners of a thesis or of a dissertation or of a composition or compositions may recommend that the work under examination:

(i) be accepted (subject, if they so recommend, to minor amendments being made); or

(ii) be not accepted but returned to the candidate for revision and re-submission; or

(iii) be rejected.

* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

11. The fees to be paid by candidates shall be prescribed from time to time by the Council and the schedule of fees so prescribed shall be published in the University Calendar.

12. A candidate who fulfils the requirements of these regulations and satisfies the examiners in the field to which his subject relates shall on the recommendation of the Faculty of Music be admitted to the degree.

Regulations allowed 21 December, 1967.

SCHEDULES

(Made by the Council under Regulations 3, 4, 6 and 11.)

SCHEDULE I: PRELIMINARY STUDY AND EXAMINATIONS

Part A: Preliminary study and examinations: as prescribed in the schedules for the Honours degree of Bachelor of Music.

SCHEDULE II: FINAL EXAMINATION

Part B: Final Examination

(a) *Composition*

(i) A composition or compositions, the nature of which has been approved by the Faculty under regulation 8.

(ii) Structural and harmonic analysis of an approved work.

(iii) Special papers: History of Music Theory (two three-hour papers).

(iv) *Viva voce* examination.

(b) *Musicology*

(i) A thesis on a subject approved by the Faculty under regulation 8.

(ii) Editing or transcription of a work or works, published or unpublished.

(iii) Special papers relating to the candidate's field of study prescribed by the Faculty of Music (two three-hour papers).

(iv) *Viva voce* examination.

(c) *Performance*

(i) A dissertation on a subject approved by the Faculty under regulation 8.

(ii) Special papers: History either of vocal or of instrumental music relating to the candidate's field of study (two three-hour papers).

(iii) Two public recitals to be given at an interval of not more than one week, the programmes approved by the Faculty under regulation 8.

(iv) *Viva voce* examination.

OF THE DEGREE OF

DOCTOR OF MUSIC

REGULATIONS

1. (a) The Faculty of Music may accept as a candidate for the degree of Doctor of Music a person who:

(i) has qualified in the University of Adelaide for the degree of Bachelor of Music or the degree of Master of Music; or

(ii) has obtained another degree in the University of Adelaide and has satisfied the Faculty of his fitness to undertake studies for the degree of Doctor of Music.

(b) On the recommendation of the Faculty of Music, the Council may accept as a candidate for the degree a person who (i) has obtained in another university or institution of higher education recognised by the University of Adelaide a qualification accepted by the Faculty as equivalent to one of the qualifications specified in (a) above and (ii) has, or has had, a substantial association with the University.

(c) No person may be admitted to the degree of Doctor of Music before the expiration of five years from the date on which he obtained the qualification prescribed in (a) or (b)(i) above.

2. (a) A person who desires to become a candidate for the degree shall give notice of his intended candidature in writing to the Academic Registrar and with such notice shall furnish particulars of his musical achievements and of the work which he proposes to submit for the degree.

(b) The Faculty of Music shall appoint a committee to examine the information submitted and to advise the Faculty whether the Faculty should:

(i) allow the applicant to proceed, and approve the subject or subjects of the work to be submitted; or

(ii) advise the applicant not to submit his work; and the Faculty's decision shall be conveyed to the applicant.

(c) If it accept the candidature and approve the subject or subjects of the work to be submitted, the Faculty shall nominate examiners of whom two at least shall be external examiners.

3. (a) To qualify for the degree the candidate shall furnish satisfactory evidence that he has made an original and substantial contribution of distinguished merit to some branch of music.

(b) The degree shall be awarded primarily on a consideration of such of his published compositions or other scholarly works as a candidate may submit for examination, but the examiners may take into account any unpublished original composition or other work that he may submit in support of his candidature.

(c) The candidate in submitting his published works other than compositions shall, where applicable, state generally in a preface and specifically in notes the main sources from which his information is derived and the extent to which he has availed himself of the work of others, especially where joint publications are concerned. He may also signify in general terms the portions of his work which he claims as original.

(d) The candidate shall indicate what part, if any, of the compositions or other work he has submitted for a degree in this or any other University.

4. The candidate shall lodge with the Academic Registrar three copies of the work prepared in accordance with the directions given in sub-paragraph (b) of clause 2B of Chapter XXV of the Statutes. If the work is accepted for the degree the Academic Registrar will transmit two of the copies to the University Library.

5. A candidate who complies with the foregoing conditions and satisfies the examiners may, on the recommendation of the Faculty of Music, be admitted to the degree of Doctor of Music.

6. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 17 December, 1970.

FACULTY OF SCIENCE

REGULATIONS, SCHEDULES AND SYLLABUSES OF DEGREES

Bachelor of Science in the Faculty of Science (B.Sc.)

Regulations and Schedules - - - - - - - - 990
Syllabuses - - - - - - - - - - 999
Anatomy and Histology (for B.Sc.) - - - - - 1000
Biochemistry - - - - - - - - - - 1002
Botany - - - - - - - - - - 1005
Chemistry:
Physical and Inorganic - - - - - - 1009
Organic - - - - - - - - - - 1015
Genetics - - - - - - - - - - 1017
Geological Sciences - - - - - - - - 1020
Microbiology - - - - - - - - - 1028
Physics - - - - - - - - - - 1030
Physiology and Pharmacology - - - - - 1037
Psychology (for B.Sc.) - - - - - - - 1040
Social Biology - - - - - - - - - 1041
Zoology - - - - - - - - - - 1042

Master of Science in the Faculty of Science (M.Sc.)

Regulations - - - - - - - - - - 1048

Doctor of Philosophy (Ph.D.)

Regulations and Schedules: under "Board of Research Studies"—*see* Table of Contents.

Doctor of Science in the Faculty of Science (D.Sc.)

Regulations - - - - - - - - - - 1050

OF THE DEGREE OF

BACHELOR OF SCIENCE

IN THE FACULTY OF SCIENCE

REGULATIONS

1. There shall be an Ordinary and an Honours degree of Bachelor of Science. A candidate may obtain either degree or both.

2. The course of study for the Ordinary degree shall extend over three academic years and that for the Honours degree over four academic years.

3. (a) In these regulations and in schedules made under them by the Council the following definitions shall apply:

"Subject" means a course of study at the University normally completed in one academic year.

"Unit" means a course of study at the University on a prescribed topic normally completed in one academic term.

*(b) The Council, after receipt of advice from the Faculty of Science, shall from time to time prescribe schedules defining (i) the subjects and units of study for the degree (ii) the range of subjects and units (including lecture courses, laboratory courses and other practical work) to be satisfactorily completed and the examinations to be passed by candidates (iii) the method of publishing the examination results, and (iv) the fees to be paid by candidates.

(c) Such schedules shall become effective from the date of prescription by the Council or such other date as the Council may fix.

(d) The syllabuses of subjects and units shall be specified by the Head of the Department concerned and submitted to the Faculty and Council for approval.

(e) Schedules made and syllabuses approved by the Council shall be published in the next edition of the University Calendar.

4. (a) Except by permission of the Faculty, a candidate shall not be admitted to the class in any subject or unit, for which he has not satisfactorily completed the pre-requisite studies as prescribed in the syllabus for that subject or unit.

(b) Exemption from any part of the course on the first occasion on which a candidate takes a subject or unit will be granted only in special cases and on grounds approved by the Faculty.

* Amended 21 December, 1972.

5. (a) Examinations in any subject or unit shall be held in accordance with the provision of the relevant schedule made under these regulations.

(b) A candidate shall enter for examination in a subject on a form and by a date prescribed by the Council, but shall not be eligible to present himself for examination unless he has done written and laboratory or other practical work, where required, to the satisfaction of the teaching staff concerned.

(c) In determining a candidate's final results in a subject (or unit) the examiners may take into account the candidate's written or practical work and his results at any examinations in it.

(d) A candidate will be permitted to take a supplementary examination only in circumstances approved by the Faculty, and then only if the candidate's previous work in the subject or unit has been such as to indicate that he has a reasonable chance of passing the supplementary examination.

*6. There shall be three classifications of pass in any subject for the Ordinary degree, as follows: Pass with Distinction, Pass with Credit, Pass. The names of the candidates in each of the classifications shall be published in accordance with the provision of the relevant schedule made under the regulations. If the list of candidates who pass be published in two divisions, a pass in the higher division may be prescribed in the appropriate syllabuses as pre-requisite for admission to another subject. A candidate with a lower division pass who wishes to gain a higher division pass shall be allowed to repeat the course, subject to the provisions of regulation 7.

7. (a) A candidate who fails to pass in a subject (or unit) or who obtains a lower division pass and who desires to take the subject or unit again shall, unless exempted wholly or partially therefrom by the Head of Department concerned, do written and laboratory or other work in that subject or unit to the satisfaction of the teaching staff concerned.

(b) A candidate who has twice failed to obtain a Division I pass or higher in the examination in any subject shall not enrol for the subject again except by permission of the Faculty and under such conditions as the Faculty may prescribe. For the purpose of this clause a candidate who fails to receive permission to sit for or absents himself from the examination in any subject after having attended substantially the full course of instruction in it, shall be deemed to have failed to pass the examination. A candidate who obtains a higher division pass only after being granted permission to enrol for the third time shall not take a subject for which that higher division pass is a pre-requisite, save in exceptional circumstances and with the permission of the Faculty.

* Amended 21 December, 1972.

8. (a) A candidate who has passed subjects in other faculties or universities or elsewhere, may on written application to the Academic Registrar be granted such exemption from these regulations and from schedules made under them as the Council on the recommendation of the Faculty may determine.

*(b) A graduate in another faculty, who wishes to proceed to the degree of Bachelor of Science in the Faculty of Science and to count towards that degree subjects which he has already presented for another degree may do so, subject to the following conditions:

(i) he shall present a range of subjects which fulfils the requirements of the relevant schedule made under regulation 3, and

(ii) he shall present two third-year subjects not presented for any other degree.

9. (a) There shall be the following classifications for the Honours degree and the names of successful candidates in each subject shall be published in alphabetical order within each classification:

First Class
Second Class
Division A
Division B
Third Class.

(b) A candidate who fails to obtain one of the foregoing classifications at his first attempt shall not be permitted to present himself again for the examination.

*10. A graduate who has obtained the Honours degree of Bachelor of Arts, or the Honours degree of Bachelor of Science in the Faculty of Mathematical Sciences, may not proceed to the Honours degree of Bachelor of Science in the Faculty of Science in the same subject.

11. Applications for approval under clauses 4(a), 4(b), 7(a), 7(b), or 8 shall be submitted in writing to the Academic Registrar.

Regulations allowed 17 December, 1970.
* Amended 21 December, 1972.

SCHEDULES

(Made by the Council under Regulation 3.)

NOTE: Syllabuses of subjects for the degree of B.Sc. in the Faculty of Science are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

I. The Ordinary Degree

Definitions for the purposes of these Schedules

A Group A subject: A subject in first year, equivalent to one-quarter of a year's work.

A Group A half-subject: A half-subject in first year, equivalent to one-eighth of a year's work.

A Group B subject: A subject in second year, equivalent to one-third of a year's work.

A Group C subject: A subject in third year, equivalent to one-half of a year's work, basically consisting of six units or three double units.

A Group D subject: A double subject in third year, equivalent to two Group C subjects.

A Group E subject: A subject which forms part of a combination approved in lieu of a Group C subject under clause 5 of these schedules.

1. The subjects of study for the Ordinary degree shall be as follows:

Group A subjects:

Biology I
Chemistry I
Geology I
Mathematics I and IM
Physics I
Psychology I
Zoology I*

Group A half-subjects:

Astronomy IH
Computing IH
General Biology IH
Genetics and Human Variation IH
Geology IH
Mathematics IH
Plant Biology IH
Statistics IH

* To be offered for the last time in 1975.

Group B subjects:

Applied Mathematics IIA and IIB
Biochemistry II
Botany II
Chemical Engineering I
Chemistry II
Genetics II
Geology II
Mathematical Statistics II
Mathematics IIM
Organic Chemistry II
Physical and Inorganic Chemistry II
Physics II
Physiology II
Psychology II
Pure Mathematics II
Zoology II

Group C subjects:

Applied Mathematics III, IIIA and IIIM
Biochemistry III and IIIM
Botany III and IIIM
Computing Science III, IIIA and IIIM
Economic Geology III
Genetics III
Geochemistry III and IIIM
Geology III and IIIM
Geophysics III
Histology and Cell Biology III and IIIM
Mathematical Statistics III
Microbiology III
Organic Chemistry III and IIIM
Physical and Inorganic Chemistry IIIB and IIIM
Physics III and IIIM
Physiology III, IIIA, IIIB, and IIIM
Psychology III
Pure Mathematics III, IIIA and IIIM
Theoretical Physics III
Zoology III and IIIM

Group D subject:

Physical and Inorganic Chemistry IIIA

Group E subjects:

Palaeontology III
Zoology IIIE*

* To be offered for the last time in 1975.

2. To qualify for the Ordinary degree a candidate shall, subject to the conditions and modifications specified in clauses 3, 4 and 5 below, satisfactorily complete the following range of subjects:

(a) Four Group A subjects or their equivalent.

(b) *Either* three subjects from Group B *or* two subjects from Group B and a fifth Group A subject or its equivalent.

(c) *Either* two subjects from Group C or their equivalent, provided that (i) no part of the work is common to both subjects, and (ii) only one combination of subjects permitted under paragraph 5 is presented, *or* one subject from Group D.

3. A candidate may present Engineering I or not more than the equivalent of one first-year subject available in the Faculty of Arts, *in lieu* of not more than one Group A subject or its equivalent required under paragraphs 2(a) and 2(b), except that Physics, Man and Society IH shall not be counted towards the degree.

4. The following combinations of subjects shall not be presented:

Biology I and *any one of* Botany I, Zoology I, General Biology IH, *or* Plant Biology IH;

Any two of Mathematics IS, IM, I, IH;

Mathematics IIM and *any one of* Applied Mathematics II, Applied Mathematics IIA, Applied Mathematics IIB *or* Pure Mathematics II;

Applied Mathematics IIA and IIB;

Computing IH and *either* Applied Mathematics IIB *or* Mathematics IIM;

Chemistry II and *either* Physical and Inorganic Chemistry II *or* Organic Chemistry II.

Geology I and *any one of* Geology IH, General Geology IH and Physical Geology IH.

Geology IH and *either* General Geology IH *or* Physical Geology IH.

More than four of the following subjects:

Applied Mathematics II, IIA, IIB, III, IIIA, IIIM;

Computing Science III, IIIA, IIIM;

Mathematical Statistics II, III;

Pure Mathematics II, III, IIIA, IIIM.

5. A candidate may present one of the following combinations of subjects, *in lieu* of a subject from Group C:

Palaeontology III and Genetics II;

Palaeontology III and Botany II;

Palaeontology III and Zoology II;

Zoology IIIE and Biochemistry II;

Zoology IIIE and Mathematical Statistics II.

6. (a) Final examinations in any subject or unit shall be held in the examination period defined by the Council following the completion of the course of instruction in that subject or unit.

(b) An examination counting as part of a final examination may be held in a part only of a subject if the Faculty so approve. Such examination should be held during the examination period defined by the Council.

Class and terminal examinations in a subject or unit may be held at any time fixed by the examiners concerned, provided that the examination is not held in the vacation and that attendance at the examination is not compulsory.

7. When, in the opinion of the Faculty of Science, special circumstances exist, the Council, on the recommendation of the Faculty in each case, may vary any of the provisions of clauses 1-6 above.

8. The names of the candidates who pass in any subject shall be published in an official list and be arranged in alphabetical order in the classifications: Pass with Distinction, Pass with Credit and Pass.

NOTE (not forming part of the schedules):

Work required to complete an Adelaide degree.

To qualify for the degree:

(i) students coming from other universities and wishing to obtain an Adelaide degree, are required to complete the whole of the work of the final year of the course;

(ii) with special permission of the Faculty, a student who has completed most of the degree in Adelaide, including one third-year subject, may be permitted to complete the requirements for the degree at another institution.

All applications must be made in writing to the Academic Registrar.

II. The Honours Degree

1. A candidate may, subject to approval by the Head of the Department concerned, proceed to the Honours degree in one of the following subjects:

Anatomy and Histology
Biochemistry
Botany
Genetics
Geology
Geophysics
Mathematical Physics
Microbiology
Organic Chemistry
Pharmacology
Physical and Inorganic Chemistry
Physics
Physiology
Psychology
Zoology

2. A candidate may, subject to the approval of the Faculty in each case, proceed to the Honours degree in a subject taught in a department in another faculty. The Chairman of the department concerned must seek permission to accept candidates who have applied before 30 November in the preceding year for admission to the honours course.

3. A candidate for the Honours degree in any subject shall not begin final-year Honours work in that subject until he has qualified for the Ordinary degree of Bachelor of Science in either the Faculty of Science or the Faculty of Mathematical Sciences, and has completed such pre-requisite subjects (if any) as may be prescribed in the syllabus.

4. When, in the opinion of the Faculty of Science, special circumstances exist, the Council, on the recommendation of the Faculty in each case, may vary the provisions of clauses 1, 2 and 3 above.

OF THE DEGREE OF

BACHELOR OF SCIENCE
IN THE FACULTY OF SCIENCE

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus numbers:

The first letter identifies the Faculty of Science: S.

The second letter identifies the department teaching the subject, as follows:

Biochemistry - - - - - - - Y
Botany - - - - - - - - - B
Chemistry: see Physical and Inorganic Chemistry; Organic Chemistry
Economic Geology - - - - E
Genetics - - - - - - - - - J
Geology and Mineralogy - - G
Human Physiology and Pharmacology (for subjects, see under Physiology) - - S
Microbiology - - - - - - K
Organic Chemistry (for subjects, see under Chemistry) - - - - - - O
Physical and Inorganic Chemistry (for subjects, see under Chemistry) - - C
Physics - - - - - - - - - P
Physiology: see Human Physiology and Pharmacology
Zoology - - - - - - - - - Z

The first digit—

0–6: Indicates that the subject is in sequence with another subject.
7 or 9: Indicates that the subject is not in sequence with another subject.
8: Indicates a group C third-year subject.

The second digit—

1, 2, 3: Indicates year of subject, e.g. first, second or third.
(4–7: Not used.)
8: Indicates subject taken by intending Honours student before the Honours year.
9: Final Honours.

The letter H used in place of the second digit indicates a half-subject two of which count towards the degree as a whole subject.

NOTE: Some subjects for the degree of B.Sc. are taught by departments of other faculties. In the syllabus numbers of those subjects the two digits do not necessarily have the significance shown in the Faculty of Science table above.

ANATOMY AND HISTOLOGY.
(FOR THE DEGREE OF BACHELOR OF SCIENCE)

SECOND YEAR.

For details of the Histology and Cell Biology section of SS02 Physiology II, see under Physiology.

THIRD-YEAR SUBJECTS IN HISTOLOGY AND CELL BIOLOGY.

Pre-requisite subject: SS02 Physiology II (which includes a course in Histology and Cell Biology) at Division I or higher standard; or an equivalent standard in a subject approved by the Chairman of the Department of Anatomy and Histology. Generally, units H301, H302 and H304 will require an acceptable standard in a morphological science, while units H305 and H306 will require an acceptable standard in a physiological discipline; for unit H303 background knowledge in physics is desirable.

The Department offers 6 units dealing with the relationships between microscopic structure and function in mammalian cells and tissues, and stressing recent advances in knowledge and techniques. Each unit consists of approximately 14 hours of lectures, and 50 hours of practical work and demonstrations.

H301 General Cytology: First half of Term I.

The ultrastructure and function of cell organelles and intercellular substances. Special study of tissues, differentiation and histogenesis, repair, transplantation and ageing. Special histological and cytological methods.

Text-book:

Toner, P. G., and Carr, K. E., *Cell structure, an introduction to biological electron microscopy* (Livingstone).

H302 Neurocytology: Second half of Term I.

The structure and functional dynamics of nerve cells. Neurocytological methods. Special study of degeneration, regeneration, and the production, transportation and release of biogenic amines and neurohormones.

Reading will be suggested during the course.

H303 Optical and Electron Microscopy: Second half of Term II.

The principles, techniques and applications of the various forms of optical microscopy, and of transmission and scanning electron microscopy and freeze etching, with practical instruction in the techniques studied. Quantitative methods of ultrastructural analysis.

Text-book:

Hartley, W. G., *Teach yourself microscopy* (Hodder and Stoughton).

H304 Histochemistry and Cytochemistry: First half of Term II.

The principles and techniques of qualitative and quantitative histochemistry and cytochemistry. Cellular localisation of chemical substances including enzymes. Freeze drying methods.

Reading will be suggested during the course.

H305 Neuroendocrinology: First half of Term III.

The central coordinating role of the neuroendocrine system in physiological function. The role of hypothalamic and extra-hypothalamic centres in endocrine regulation. To provide a basis for the specialised course in Reproductive Biology (H306).

Text-book:

Donovan, B. T., *Mammalian neuroendocrinology* (McGraw-Hill).

H306 REPRODUCTIVE BIOLOGY: Second half of Term III.

Physiology and endocrinology of reproduction. Study of environmental control of oestrous and menstrual cycles, fertilisation, implantation, gestation and parturition. Biological basis of contraceptive methods.

Reading will be suggested during the course.

Books for reference and further reading (all units):

Austin, C. R., and Short, R. V., *Reproduction in mammals*, vols 1-5 (C.U.P., paperback).
Bloom, W., and Fawcett, D. W., *A textbook of histology* (Saunders).
Bourne, G. H., *Cytology and cell physiology* (Clarendon).
Bourne, G. H., *The structure and function of nervous tissue*, vols 1-6 (Academic Press).
Fawcett, D. W., *An atlas of fine structure. The cell* (Saunders).
Lipson, H. S., and Taylor, C. A., *Optical transforms* (Academic Press).
McClung, C. E. (ed.), *Handbook of microscopic technique* (Hoeber).
Martini, L., and others, *The hypothalamus* (Academic Press).
Meek, G. A., *Practical electron microscopy for biologists* (Wiley).
Pearse, A. G. E., *Histochemistry* (Churchill).
Young, J. Z., *An introduction to the study of man* (Clarendon).

The subjects offered are:

MA13 Histology and Cell Biology III.

A Group C subject consisting of the 6 units listed above.

MA43 Histology and Cell Biology IIIM.

A Group C subject. At least 4 units from the above list, with 1 or 2 units, or a double unit, from another Department in the physical or biological sciences. The combination of units must be approved at the time of enrolment by the Heads/Chairmen of the Departments concerned.

HONOURS DEGREE.

MA79 Anatomy and Histology for the Honours degree of B.Sc.

Pre-requisite: MA13 Histology and Cell Biology III at a standard satisfactory to the Professor of Anatomy and Histology. Students who have taken individual units of the course, other disciplines of Anatomy (e.g. Embryology, Neurobiology, Gross Anatomy) or other suitable subjects will also be considered.

An intending candidate should consult the Professor of Anatomy and Histology during the year preceding the Honours year, and give full attendance for an academic year to a special course of study and laboratory work and participate in experimental research work under the supervision of Staff members of the Department. A course of reading, suggested by the Department of Anatomy and Histology, should be commenced during the long vacation prior to the Honours year.

BIOCHEMISTRY.

There are several combinations of subjects with SY02 Biochemistry II in second year which are appropriate for students intending to take Biochemistry III (SY03 *or* SY83) in third year. There is a place in the subject for those strongly biased towards the biological or towards the chemical subjects. For appreciation of modern biochemistry probably the most suitable subjects to take along with SY02 Biochemistry II are two of the following: SJ02 Genetics II, SO02 Organic Chemistry II, SC02 Physical and Inorganic Chemistry II, SS02 Physiology II. Other subjects are, however, not excluded.

SY02 Biochemistry II.

Division I pass in SC01 Chemistry I. This requirement may be waived, in rare circumstances, subject to the approval of the Head of Department or his nominee.

A course of three hour lectures and six hours practical work a week and tutorials.

The course will include: protein structure and function; biochemistry of enzymes; metabolism of carbohydrates, amino acids and lipids; biochemical control mechanisms in the cell; specialised functions—visual process, bone mineralisation, muscle contraction; nucleic acids and protein synthesis; biochemistry of gene action; microbiology and bacterial genetics; biochemistry in medicine and industry.

The practical work will be related to these topics.

Text-books:

White, A., and others, *Principles of biochemistry*, 4th edition (McGraw-Hill).

Lehninger, A. L., *Biochemistry* (Worth Publishers).

Reference books:

Herskowitz, I. H., *Basic principles of molecular genetics* (Nelson).

Watson, J. D., *Molecular biology of the gene*, 2nd edition (Benjamin).

Brock, T. D., *Biology of micro-organisms* (Prentice-Hall).

Larner, J., *Intermediary metabolism and its regulation* (Prentice-Hall).

THIRD-YEAR SUBJECTS IN BIOCHEMISTRY.

Pre-requisite subjects for all third-year subjects in Biochemistry: SY02 Biochemistry II at Division I pass, or higher, standard.

The Department offers the following units, each consisting of not more than 16 lectures and about 50 hours practical work. Because of the rapid development of the subject most of the reading matter in all units will be reviews or original articles. These will be made available by the Department.

Y301 Nucleic Acid Structure and Biosynthesis: First term.

Sequence analysis of DNA and RNA, methods and results; sequence and structure of transfer RNA and viral RNA. DNA biosynthesis in bacteria, enzymology, RNA initiation, mechanisms, DNA repair, Nucleic acid hybridisation, methods and problems. RNA biosynthesis in bacteria, enzymology, inhibitors, precursor RNA. Replication of RNA bacteriophages and RNA plant viruses. DNA and RNA tumour viruses, structure, properties and oncogenesis.

Reference book:

Davidson, J. N., *The biochemistry of the nucleic acids*, 7th edition (Chapman and Hall).

Y302 Protein Structure and Function: First term.

Chemical and physical principles and procedures applied to the elucidation of the structure and behaviour of protein molecules at different organisational levels. The areas to be covered will include the following: purification of proteins, reactions with ions, electrophoresis; amino acid sequences, protein evolution; secondary structure—determination of degree of helicity in native and denatured states; conformation—chemical and physical techniques for recognition of reactive groups, size and shape determination by ultracentrifuge, osmotic pressure, viscosity, light scattering, electron microscopy, X-ray diffraction analysis. Active sites of enzymes. Quaternary structure with examples; ribosomes, microtubules, fibrous proteins.

Y303 Gene Expression and Its Control in Higher Organisms: Second term.

Components of eukaryote cell nucleus and comparison of the mechanisms involved in gene expression (RNA synthesis, processing, transport and translation) in higher cells with those in bacteria; structure of the eukaryote chromosome; and isolation of specific genes for *in vitro* studies. Components of isolated chromatin and their possible role in a gene expression. Types and mechanisms of control in eukaryotes—differentiation, transcriptional and post-transcriptional.

The course will cover a variety of biological systems for illustrative material and will include oocyte maturation, tissue culture, cell fusion studies, hormone action, and red blood cell maturation.

Y304 Gene Expression and Its Control in Bacteria and Their Viruses: Second term.

Control of genetic expression, (a) at the DNA template level—promoter region, operator region and binding of control proteins to these; role of RNA polymerase in control; mRNA termination, (b) at the RNA template level—ribosome binding, initiation factors, repressor binding, template conformation, tRNA availability.

The course will use bacterial and bacteriophage systems for illustrative material.

Y305 Mechanism and Control of Enzyme Activity: Third term.

Locating metabolic control points; types of control at the enzymic level (allosteric enzymes, modified enzymes, tissue- and species-specific isoenzymes). Procedures for probing the various types of reactions; interpretation of these in terms of mechanism of enzyme action.

Y306 Biochemistry of Membranes and Cell Surfaces: Third term.

Types of biological membranes and their functions; structure of membranes and methods of studying them; membranes involved in protein synthesis and secretion of proteins; transport across membranes in bacterial and higher cells; membranes and oxidative phosphorylation. Hormone action and membranes. Cell surfaces of eukaryotes; contact inhibition; virus-induced changes.

The subjects offered are:

SY03 Biochemistry III.

A group C subject. Units Y301, Y302, Y303, Y304, Y305, Y306.

SY83 Biochemistry IIIM.

A group C subject. With approval of the Heads/Chairmen of Departments concerned a combination of four together with one double-unit or two single-units from other Departments.

HONOURS DEGREE.

SY99 Biochemistry for the Honours degree of B.Sc.

Pre-requisite subject: SY03 Biochemistry III *or* SY83 Biochemistry IIIM. In exceptional cases students having passed another group C subject, which includes as part of it one or more of the Biochemistry units, may be considered for entry into the Honours class.

Candidates are required to give their full time for an entire academic year to a special course of study and experimental work in the Department of Biochemistry. Candidates will normally be expected to start the course on the first Monday of February, but this can be altered in special circumstances by arrangement with the Professor of Biochemistry.

The work will include a course on techniques used in biochemical research; participation in a series of lecture-symposia on topics of modern biochemistry; participation in research seminars, and the performance of research work under the supervision of one or more members of the Biochemistry Department staff. Toward the end of the first term the student will report on the aim, significance and approach of his research topic. Toward the end of the second term the student will give a short research report to the department. At the end of the year the candidate may present and defend an original proposition on science and submit the results of his research in the form of a thesis, which will also contain a literature review surrounding his research topic.

ADDITIONAL SUBJECTS.

SY72 Biochemistry for the degrees of M.B., B.S.

SY89 Biochemistry for the Honours degree of B.Med.Sc.

SY82 Biochemistry for the degree of B.D.S.

SY79 Biochemistry for the Honours degree of B.Sc.Dent.

BOTANY.

Students are directed to refer to the Laboratory Rules, which are published at the end of the volume.

EXAMINATIONS.—All examinations in Botany cover *both* theoretical and practical aspects. These cannot be taken separately.

Botany I.

This subject is a combination of the two half-subjects SB1H General Biology and SB2H Plant Biology.

SB1H General Biology IH.

A half-subject comprising one lecture and two hours' practical work a week and one discussion period a fortnight throughout the year.

The course is concerned with the principles of biology which are applicable to all organisms, viz: cell structure and function, elementary biochemistry, genetics, the mechanism of evolution, the species concept, general ecological principles. Field work may be included.

Text-book:

Raven, P. H., and Curtis, H., *Biology of plants* (Worth).

SB2H Plant Biology IH.

This half-subject can only be taken in conjunction with SB1H General Biology IH.

A half-subject comprising one lecture and two hours' practical work a week and one discussion period a fortnight throughout the year.

The course is concerned with the principles of biology which relate to plants; evolutionary relationships, structure, physiology and reproduction of plants; human interactions with ecosystems. Field work may be included.

Text-book:

Raven, P. H., and Curtis, H., *Biology of plants* (Worth).

SZ71 Biology I.

For SZ71 Biology I, a subject which is given jointly by the Departments of Botany and Zoology, see under Zoology.

SB02 Botany II.

Pre-requisite subjects: A pass at Division I or higher standard in *either* Botany I [i.e. an aggregate of SB1H General Biology and SB2H Plant Biology] *or* SZ71 Biology I. A pass in SC01 Chemistry I is also required but a candidate may be permitted to proceed to SB02 Botany II without this pre-requisite subject to the approval of the Chairman of the Botany Department (obtained in writing through the Academic Registrar).

The course comprises two lectures and two practical periods a week throughout the year.

A. PLANT PHYSIOLOGY:

Enzymes; intermediary metabolism; sources of metabolic energy; permeability of cells to water and solutes; movement of water mineral ions and organic solutes within the plant. Plant growth.

Text-book:

Salisbury, F. B., and Ross, C., *Plant physiology* (Wadsworth).

B. PLANT ECOLOGY:

Principles and practice of plant ecology; ecological anatomy; biostatistics.

Text-books:

Esau, K., *Anatomy of seed plants* (Wiley).

Kormondy, E. J., *Concepts of ecology* (Prentice-Hall: paperback).

Reference books:

Kershaw, K. A., *Quantitative and dynamic ecology* (Edward Arnold).

Greig-Smith, P., *Quantitative plant ecology*, 2nd edition (Butterworth).

FIELD WORK: An ecology field camp of five days during the third week of the August vacation (costs approx. $2 a day); several half-day excursions during second term.

C. EVOLUTION AND TAXONOMY OF THE ANGIOSPERMS:

Natural selection and speciation, chromosome botany, recombination systems; taxonomic concepts illustrated by selected families and general; biogeography and origin of angiosperms.

A representative herbarium of between 50 and 80 species of South Australian plants is to be made during the year and submitted by the last day of lectures, and a taxonomic project is carried on throughout the year. Both herbarium and project count towards final marks. This may be varied and candidates are advised to consult the Department Chairman at their earliest convenience.

Text-books:

Stebbins, G. L., *Processes of organic evolution*, 2nd edition (Prentice-Hall).

Heywood, V. H., *Plant taxonomy* (Institute of Biology. Studies in Biology No. 5).

Black, J. M., *Flora of South Australia*, vols. 1-4 (Government Printer, Adelaide).

Eichler, Hj., *Supplement to J. M. Black's Flora of South Australia* (Government Printer, Adelaide).

Reference books:

A list of references will be provided at one of the first lectures of Term.

THIRD-YEAR SUBJECTS IN BOTANY.

Pre-requisite subjects: SB02 Botany II at Division I or higher standard. Students who entered SB02 Botany II having passed only SB1H General Biology IH are required to have passed SB2H Plant Biology IH; or gain special permission of the Chairman of the Department for particular units.

The Department offers the seven double-units listed below. Numbers B303-B307 each comprise three lectures and the equivalent of one and a half days (11 hours) practical work a week, for one term. The other two are each equivalent in content to this but the work is done during intensive courses of four weeks duration. These two courses are available to qualified visiting students, space permitting. The two courses in a term are at different times so that both may be taken in appropriate combination with unit courses in another department.

B301 RANGELAND ECOLOGY:

An intensive course given during four weeks in January. Students wishing to enrol for this course must inform the Chairman of Department by 24 December of the preceding year. The course will include no more than two weeks continuous field work on an arid-zone station (cost approx. $2 a day).

A course in ecology emphasising the study of the interactions between grazing animals and vegetation in arid areas, the principles involved, and their application to management practices.

This course will not be available in 1976.

References:

A reprint collection is made available to students.

B302 MARINE PLANT BIOLOGY:

An intensive course given during four weeks mostly in February. Students wishing to enrol for this course must inform the Chairman of Department by 24 December of the preceding year. Field work is a normal part of the course and will be undertaken when weather and tides are convenient (cost about $10).

The main groups of marine plant organisms—marine algae, phytoplankton, marine angiosperms; comparative morphology, reproduction and relationships; marine ecology and biogeography; primary productivity; economic aspects.

Text-book:

Dawson, E. Y., *Marine botany* (Holt).

Reference books as set during the course.

B303 ENVIRONMENTAL PHYSIOLOGY AND ECOLOGY: First term.

Physics of the plant environment and physiological responses to it; plant water relations, the effects of water deficits; drought resistance mechanisms of arid zone vegetation; understanding and use of instrumentation in the field. The course will include a field excursion for five days during the first vacation (cost approx. $2 a day).

Reference books:

Geiger, R., *The climate near the ground* (Harvard Univ. Press).

Kozlowski, T. T. *Water deficits and plant growth*, vols. I and II (Academic Press).

Munn, R. E., *Descriptive micrometeorology* (Academic Press).

Rose, C. W., *Agricultural physics* (Pergamon Press).

Slatyer, R. O., *Plant-water relationships* (Academic Press).

Wijk, W. R. van, *Physics of the plant environment* (North Holland).

Levitt, J., *Responses of plants to environmental stresses* (Academic Press).

B304 CELLS AND EMBRYOS: Second term.

A course in developmental biology given jointly with Zoology.

Fertilisation; normal and asymmetrical division of cells; differentiation of cells and regulation of cellular activities; movement of cells; induction of growth and form in embryos.

Text-book:

Ebert, J. D., and Sussex, I. M., *Interacting systems in development*, 2nd edition (Holt).

Reference books:

Dowben, R. M., *Cell biology* (Harper).

du Praw, E. J., *Cell and molecular biology* (Academic Press).

Torrey, J. G., *Development in flowering plants* (Macmillan).

B305 MYCOLOGY: Second term.

It is intended that the course will cover the taxonomy of the major groups of fungi. The physiology and ecology of fungi will also be considered, especially with respect to such topics as saprophytic, parasitic and symbiotic modes of nutrition.

This course is normally given at the Waite Institute. In 1975 this will not be possible, and it is intended that the course be given in the Benham Building. Intending students must consult the Chairman of the Department regarding availability of Mycology in 1975.

Text-book:

Alexopolous, C. J., *Introductory mycology* (Wiley).

Reference book:

Burnett, J. H., *Fundamentals of mycology* (Arnold).

B306 COMPARATIVE MORPHOLOGY AND PALAEOBOTANY: Third term.

This course involves comparative studies of living and fossil representatives of the bryophytes and vascular plants. The course may include day field trips.

Text-books:

Sporne, K. R., *The morphology of pteridophytes* (Hutchinson).

Sporne, K. R., *The morphology of gymnosperms* (Hutchinson).

Watson, E. V., *The structure and life of bryophytes* (Hutchinson).

Reference books as set during the course.

B307 BIOCHEMISTRY AND BIOPHYSICS OF PLANT CELLS: Third term.

Cell physiology, photosynthesis, respiration, bio-energetics and mechanisms of energy conservation; membrane biophysics, ion transport.

Reference books:

Conn, E. E., and Stumpf, P. K., *Outlines of biochemistry*, 3rd edition (Wiley).

Lehninger, A. L., *Biochemistry* (Worth).

Nobel, P. S., *Introduction to biophysical plant physiology* (Freeman).

Papers to be notified during the course.

The subjects offered are:

SB03 Botany III.

A group C subject. Three double-units from the above list selected with the approval of the Chairman of the Department.

SB83 Botany IIIM.

A group C subject. With approval of the Heads/Chairmen of the Departments concerned, a combination of two double-units from the above list together with two units or one double-unit from another department.

HONOURS DEGREE.

SB99 Botany for the Honours degree of B.Sc.

Pre-requisite subjects: A satisfactory standard in SB03 Botany III or SB83 Botany IIIM or special permission of the Chairman of the Department.

Candidates are expected to acquire a more detailed knowledge than is required for the Ordinary degree. A course of reading is prescribed and students are required to lead seminars and write essays. In addition, candidates are expected to study more deeply one branch of botany, to carry out research in this field and to present the results in a written report. A small proportion of the total course is flexible and candidates choose, with approval, between additional project work and courses such as third-year science units, AG74 Science German, Fortran programming, etc.

Candidates should consult the Chairman of the Department during the final year of their Ordinary degree course. The Honours course commences at the beginning of February.

ADDITIONAL SUBJECT.

SB4H Ecology and Taxonomy IIH for the degree of B.A.

CHEMISTRY.

Students who intend to take third-year subjects in the Departments of Physical and Inorganic Chemistry or Organic Chemistry are advised to take the following combinations of first- and second-year subjects: *First Year*: SC01 Chemistry I, SP01 Physics I, QM01 Mathematics I *or* QM11 Mathematics IM, and *either* SZ71 Biology I *or* SG01 Geology I; *Second Year*: SC02 Physical and Inorganic Chemistry II, SO02 Organic Chemistry II, and SY02 Biochemistry II *or* QM02 Pure Mathematics II *or* QN22 Applied Mathematics IIA *or* QN12 Applied Mathematics IIB *or* QM22 Mathematics IIM *or* SP02 Physics II. Other combinations are acceptable but students are advised to consult Heads/Chairmen of Departments before enrolling.

Before enrolling for third-year unit-courses all students *must* discuss their programmes with the Heads/Chairmen of the Departments.

A student who wishes, or who thinks he may wish, to proceed to Honours in either Department of Chemistry is advised to discuss his course programme with Heads/Chairmen of Departments concerned as early as possible.

PHYSICAL AND INORGANIC CHEMISTRY.

SC01 Chemistry I.

A knowledge of Matriculation Chemistry will be assumed. In addition, students would be assisted greatly by a study of Physics and either Mathematics IS or both Mathematics I and II at Matriculation level.

The course consists of three lectures and three hours practical work and one tutorial each week throughout the three terms of the year.

Students may be required to complete regular work assignments based on the lecture course and prescribed text-books:

The course is given in three sections:

Chemical Structure, including molecular and crystal structure, methods of structure determination, bonding models.

Energetics, including an introduction to thermodynamics, energetic considerations in the synthesis and stability of compounds, intermolecular forces, gases, liquids and solutions; kinetics of chemical reactions.

Reaction and Synthesis. The reactions of inorganic and organic compounds and applications to synthesis.

Mechanism of chemical reactions.

Extensive lectures notes are issued for all sections of the lecture course.

Text-books:

Mahan, B. H., *University chemistry*, 2nd edition (Addison Wesley).

Richards, J. H., and others, *Elements of organic chemistry* (International Student Edition) (McGraw-Hill); *or*

Tedder, J. M., and Nechvatal, A., *Basic organic chemistry* (Wiley).

Reference book:

Campbell, J. A., *Chemical systems* (Freeman).

Students are recommended to obtain a suitable set of molecular models. Further details will be circulated in the Department.

SC02 Physical and Inorganic Chemistry II.

Pre-requisite subjects: A Division I pass, or higher, in SC01 Chemistry I. The course assumes a knowledge of some topics covered in first-year Mathematics courses and students wishing to enrol for SC02 Physical and Inorganic Chemistry II without having passed QM01 Mathematics I, QM11 Mathematics IM, *or* QM7H Mathematics IH in combination with *either* QA7H Computing IH *or* QT7H Statistics IH must obtain special permission from the Head of the Department of Physical and Inorganic Chemistry.

The course consists of three lectures, one tutorial and not less than six hours' practical work a week throughout the three terms of the year.

This course has been extensively revised for 1975 and deals with structural chemistry and the solid state; the chemistry of simple and complex compounds, electron deficient compounds, ligand field and molecular orbital theories; the synthesis of inorganic compounds and reaction mechanisms; thermodynamics, surface chemistry; electrochemistry, electrode reactions, polarography and corrosion chemistry; electrons in atoms and molecules, experimental spectroscopy, electronic energy levels.

A more detailed syllabus will be available from the Department during the enrolment period.

The laboratory course is designed to illustrate and link in with the lecture course and also to introduce essential experimental techniques.

Text-books:

Cotton, F. A., and Wilkinson, G., *Advanced inorganic chemistry*, 3rd edition (Interscience).

Denaro, A. R., *Elementary electrochemistry* (Butterworth).

Banwell, C. N., *Fundamentals of molecular spectroscopy*, 2nd edition (McGraw-Hill).

Reference books:

Wells, A. F., *Structural inorganic chemistry*, 3rd edition (O.U.P.).

Castellan, G. W., *Physical chemistry*, 2nd edition (Addison Wesley).

Dickerson, R. E., *Molecular thermodynamics* (Benjamin).

Moore, W. J., *Physical chemistry*, 5th edition (Longmans).

SC12 Chemistry II.

Pre-requisite subjects: A Division I pass, or higher, in SC01 Chemistry I. A pass in a full or a half Mathematics subject in first year is desirable; a student without such qualification should consult the Head of the Department of Physical and Inorganic Chemistry for advice before enrolling.

The course consists of three lectures and six hours practical work a week throughout the three terms of the year.

The course overall is directed to principles of inorganic, organic and physical chemistry as applied to biological systems. The lectures in physical chemistry will serve as an introduction to the thermodynamics of living systems, macromolecules, kinetics of enzyme catalysed reactions, surface chemistry and biodegradability, analytical spectroscopy, and electrochemistry. The lectures in inorganic chemistry will serve as an introduction to transition metal chemistry and metal complexes, especially their bonding, structure and reactions, as a basis for later studies in metallo-biochemistry. The lectures in organic chemistry will deal with the chemistry of the heterocyclic compounds with special reference to nitrogenous and other compounds of significance to the biologist, the mechanisms of organic reactions, the chemistry of carbohydrates, the chemistry of amino acids and related compounds. The practical course will illustrate lecture topics in physical chemistry, the synthesis and instrumental investigation of coordination compounds, and the main methods and techniques of organic chemistry.

Text-books:

English, J., and others, *Principles of organic chemistry* (McGraw-Hill).

Basolo, F., and Johnson, R. E., *Coordination chemistry* (Benjamin).

Moore, W. J., *Physical chemistry*, 5th edition (Longmans, paperback).

Reference books:

Sykes, P. A., *A guidebook to mechanism in organic chemistry*, 3rd edition (Longmans).

Dickerson, R. E., *Molecular thermodynamics* (Benjamin).

Browning, D. R. (ed.), *Spectroscopy* (McGraw-Hill).

Shaw, D. J., *Introduction to colloid and surface chemistry*, 2nd edition (Butterworth).

Cowie, J. M. G., *Polymers; chemistry and physics of modern materials* (Intertext).

Plowman, K. M., *Enzyme kinetics* (McGraw-Hill).

THIRD-YEAR SUBJECTS IN PHYSICAL AND INORGANIC CHEMISTRY.

Pre-requisite subjects: A Division I pass, or higher, in SC02 Physical and Inorganic Chemistry II is the desirable pre-requisite for third-year units. However, subject to the approval of the Head of the Department of Physical and Inorganic Chemistry in each case, students may be allowed to proceed to a limited programme of third-year units in SC03 Physical and Inorganic Chemistry III on the basis of Division I passes or higher, in second-year (Group B) subjects other than SC02 Physical and Inorganic Chemistry II.

The Department offers the following units, each of which consists of about 15 lectures and about 54 hours' practical work and tutorials.

A pamphlet giving further information on unit courses will be available from the Department of Physical and Inorganic Chemistry in December and during the enrolment period. Prior to enrolling all third-year students taking unit courses should discuss their course with members of staff of the Department and finally with the Head of Department.

Students enrolling in any of the units C301, C305 or C308 will undertake a short course in *Molecular symmetry and group theory* which will be held at the beginning of First Term. The number of lectures in each of the three units will be reduced accordingly.

Reference book:

Cotton, F. A., *Chemical applications of group theory*, 2nd edition (Wiley Interscience).

C301 Quantum Chemistry: First term.

Wave mechanics, hydrogen, hydrogen-like atoms, more complex atoms, molecular orbitals, simple and complex molecules, π molecular orbitals, calculation of charge densities, bond orbitals and dipole moments; symmetry operations; group theory.

Text-books:

Phillips, L. F., *Basic quantum chemistry* (Wiley, paperback); *or*
Murrell, J. N., and others, *Valence theory*, 2nd edition (Wiley).

C302 Statistical Thermodynamics: Second term.

Use of statistical methods to calculate thermodynamic properties and equilibrium constants; Maxwell-Boltzmann, Fermi-Dirac and Bose-Einstein quantum statistics. Determination of intermolecular forces from equilibrium and transport properties.

Text-book:

Denbigh, K. G., *The principles of chemical equilibrium* (C.U.P.).

C303 Crystallography: First term.

Symmetry and structure determination; application of diffraction methods to structural and analytical problems.

Text-books:

Sands, D. E., *Introduction to crystallography* (Benjamin); *or*
Glusker, J. P., and Trueblood, K. N., *Crystal structure analysis* (O.U.P.).

Reference books:

Stout, G. H., and Jensen, L. H., *X-ray structure determination* (Macmillan).
Azaroff, L. V., *Elements of X-ray crystallography* (McGraw-Hill).

C304 Reaction Kinetics: Third term.

Theories of gas and liquid phase reactions; unimolecular, bimolecular, termolecular, chain, and photochemical reactions; stationary state and non-stationary state systems. The practical work illustrates the use of kinetic measurements to deduce reaction mechanisms.

Text-books:

Laidler, K. J., *Reaction kinetics*, vol. 1 (Pergamon); *or*
Laidler, K. J., *Chemical kinetics*, 2nd edition (McGraw-Hill); *or*
Pratt, G. L., *Gas kinetics* (Wiley).

Reference books:

Benson, S. W., *Foundations of chemical kinetics* (McGraw-Hill).

Frost, A. A., and Pearson, R. G., *Kinetics and mechanism*, 2nd edition (Wiley).

Benson, S. W., *Thermochemical kinetics* (Wiley).

C305 Molecular Spectra: First term.

Theory and selected applications of emission, absorption and resonance spectroscopies including the use of polarised radiation.

Text-books:

Dixon, R. N., *Spectroscopy and structure* (Science paperback); *or*

Chang, R., *Basic principles of spectroscopy* (McGraw-Hill); *or*

Banwell, C. N., *Fundamentals of molecular spectroscopy*, 2nd edition (McGraw-Hill).

Reference book:

Walker, S., and Straw, H., *Spectroscopy*, vols. 1 and 2 (Chapman and Hall).

C306 Organometallic Chemistry: Second term.

Complexes containing organic ligands (e.g. CO, unsaturated hydrocarbons, etc.) attached to transition metals occupy an important position in present-day chemistry. The course discusses many interesting features of their chemistry including bonding theory, principles of synthesis, physico-chemical studies and reactions of the major types of complex, including those of catalytic and industrial importance. Some topics of wider applicability, such as stereochemical nonrigidity, polyatom-cluster chemistry and metal-directed reactions of organic molecules, will also be covered.

Text-books:

Cotton, F. A., and Wilkinson, G., *Advanced inorganic chemistry*, 3rd edition (Interscience).

Coates, G. E., and others, *Organometallic compounds*, vol. 2, 3rd edition (Methuen).

C307 Macromolecular Chemistry: Third term.

A physical chemical discussion of the structure and solution properties of natural and synthetic macromolecules.

Reference books:

Tanford, C., *Physical chemistry of macromolecules* (Wiley).

Billmeyer, F. W., *Textbook of polymer science*, 2nd edition (Wiley).

Mahler, H. R., and Cordes, E. H., *Biological chemistry* (Harper International).

C308 Metal Complexes: First term.

Bonding in complexes, crystal field and charge transfer spectra. Formation of complexes in solution: species, equilibria, and energy changes.

Text-books:

Cotton, F. A., and Wilkinson, G., *Advanced inorganic chemistry*, 3rd edition (Interscience).

Sutton, D., *Electronic spectra of transition metal complexes* (McGraw-Hill).

C309 Inorganic Reaction Mechanisms: Third term.

Typical reactions at metal and non-metal centres including bio-inorganic and excited state processes. Solvent and ligand exchange, substitution, isomerisation, oxidation-reduction.

Text-book:

Tobe, M. L., *Inorganic reaction mechanisms* (Nelson, paperback).

Reference books:

Basolo, F., and Pearson, R. S., *Mechanisms of inorganic reactions*, 2nd edition (John Wiley).

Taube, H., *Electron transfer reactions of complex ions in solution* (Academic Press).

Edwards, J. O., *Inorganic reaction mechanisms* (Benjamin).

C310 ELECTROLYTE SOLUTIONS: Second term.

Equilibrium and transport properties of electrolyte solutions. Interpretation in terms of simple models.

Reference books:

Robinson, R. A., and Stokes, R. H., *Electrolyte solutions*, 2nd edition (Butterworth).

Gurney, R. W., *Ionic processes in solution* (McGraw-Hill).

Bockris, J.O'M., and Reddy, A. K. N., *Modern electrochemistry* (Plenum Press).

Three different subjects in third-year Physical and Inorganic Chemistry are offered depending on whether eight, six or four units from the above list are taken along with units from other Departments. All students intending to take courses in third-year Physical and Inorganic Chemistry *must* obtain notes issued by the Department on suggested combinations of units and *must* make an appointment to discuss their course with the Head of Department or members of Staff prior to enrolment during the enrolment period and/or immediately after the results of the November examinations are made known.

The subjects offered are:

SC03 Physical and Inorganic Chemistry IIIA.

A Group D subject. Eight units from the above list selected with the approval of the Head of Department together with four units or two double-units in either Organic Chemistry; or Biochemistry; or Pure and Applied Mathematics III; or other third-year subjects chosen after consultation with the Heads/Chairmen of the Departments concerned.

Note: The pre-requisites for the subjects in other Departments must be observed.

SC13 Physical and Inorganic Chemistry IIIB.

A Group C subject. Six units from the above list selected with the approval of the Head of Department.

SC83 Physical and Inorganic Chemistry IIIM.

A Group C subject. Four units from the above list with two units or one double-unit from one other Department selected with the approval of the Heads/Chairmen of the Departments concerned.

HONOURS DEGREE.

SC99 Physical and Inorganic Chemistry for the Honours degree of B.Sc.

Pre-requisite subjects: Any third-year subject in the Department of Physical and Inorganic Chemistry together with subjects in any of the Departments of Organic Chemistry, Biochemistry, Mathematics, Mathematical Physics, Geology or Physics, or such other third-year subjects as may be approved by the Head of the Department of Physical and Inorganic Chemistry. Subject to the approval of the Head of the Department of Physical and Inorganic Chemistry in each case, a student may proceed to Honours in Physical and Inorganic Chemistry if he has taken a first degree programme which has not included a Physical and Inorganic Chemistry III subject.

A series of unit courses in advanced Physical and Inorganic Chemistry will be provided for the Honours course. The units at present offered are:

C311 CHEMICAL INSTRUMENTATION.

C312 RESONANCE SPECTROSCOPY.

C313 MOLECULAR SYMMETRY AND GROUP THEORY.

C315 NON-ELECTROLYTES AND THEIR SOLUTIONS.

C317 ADVANCED QUANTUM CHEMISTRY.

but these may be amended for 1975; a final list of units offered in 1975 is available from the Department. Students will select courses from Honours units and from third-year units in Physical and Inorganic Chemistry not taken in the course for the Ordinary degree. Lectures or unit courses in other Departments may also be taken. The lecture programme of each student will be determined by consultation with his research supervisor and the Head of Department. Each student will be assigned a research problem which he will investigate under the personal guidance of a member of staff of the Department of Physical and Inorganic Chemistry. The performance of each student will be assessed on the basis of written and oral examinations and the student's written report of his research investigation.

Books: Those for the Ordinary degree, and in addition other reference books which will be recommended by supervisors and lecturers.

ADDITIONAL SUBJECT.

SC71 Chemistry IM for the degrees of B.D.S., and M.B., B.S.

ORGANIC CHEMISTRY.

SO02 Organic Chemistry II.

Pre-requisite subject: A Division I pass, or higher, in SC01 Chemistry I.

The course, which is given annually, consists of three lectures and at least six hours practical work a week throughout the three terms of the year.

The lectures will provide an introduction to the physical and theoretical aspects of organic chemistry, and a discussion of the reactions and properties, including those of biological significance, of compounds belonging to the major families of aliphatic, aromatic and heterocyclic compounds.

Text-books:

Morrison, R. T., and Boyd, R. N., *Organic chemistry*, 2nd edition *or* Student edition (Allyn and Bacon).

Sykes, P., *A guidebook to mechanism in organic chemistry*, 3rd edition (Longmans).

Students should also purchase a set of Framework Molecular Models (Prentice-Hall).

A list of reference books is available from the Departmental Office.

THIRD-YEAR SUBJECTS IN ORGANIC CHEMISTRY.

Pre-requisite subjects for all third-year subjects in Organic Chemistry: SO02 Organic Chemistry II at Division I pass, or higher standard. Subject to the approval of the Chairman of the Organic Chemistry Department in each case students may be allowed to proceed to a limited programme of third-year units in Organic Chemistry on the basis of Division I passes or higher in second-year subjects other than SO02 Organic Chemistry II.

The Department offers the following units each of which consists of about 15 lectures and about 54 hours' practical work and tutorials.

O301 Spectroscopy: First term.

Theory and applications in organic chemistry of infra-red, ultra-violet, nuclear magnetic resonance, electron paramagnetic resonance, and mass spectrometry.

O302 Physical-Organic Chemistry: First term.

Thermodynamics and kinetics of organic systems; conformational analysis; medium effects; photochemistry.

O303 Reactive Intermediates: Second term.

Structure, stereochemistry and reactions of free radicals, carbenes, nitrenes, carbonium ions and carbanions. Reactions involving dissolving metals.

O304 Synthetic Methods I: Second term.

General synthetic methods; skeletal transformations; selective reactions; functional group manipulations; protecting groups.

O305 Synthetic Methods II: Third term.

Modern concepts of organic chemistry illustrated by the synthesis of complex molecules.

O306 Biosynthesis and Heterocyclic Compounds: Third term.

Biosynthetic pathways; the chemistry of heterocyclic compounds with emphasis on those of biological significance.

O307 Organic Chemicals in the Environment: Third term.

Petrochemicals, air pollution, photochemical smog; production, properties, reactions and degradation of pesticides; food additives, plastics and plasticisers; detection and assay of organic chemicals in the environment.

The subjects offered are:

SO03 Organic Chemistry III.

A group C subject. Six units from the above list selected with the approval of the Chairman of Department.

SO83 Organic Chemistry IIIM.

A group C subject. Four units from the above list together with two units or one double-unit from one other Department selected with the approval of the Heads/Chairmen of the Departments concerned.

NOTE: All students intending to take courses in third-year organic chemistry *must* obtain notes issued by the Department concerning suggested combinations of units and *must* make an appointment prior to enrolment with the Chairman of Department or member of staff to discuss their course either during the enrolment period or immediately after the results of the November examinations are made known.

Text-books:

All Units

Morrison, R. T., and Boyd, R. N., *Organic chemistry*, 2nd edition *or* Student edition (Allyn and Bacon).

Fleming, I., and Williams, D. H., *Spectroscopic methods in organic chemistry* (McGraw-Hill).

Unit 2

Alder, R. W., and others, *Mechanism in organic chemistry* (Wiley-Interscience).

Depuy, C. H., and Chapman, O. L., *Molecular reactions and photochemistry* (Prentice-Hall).

Units 3, 4 *and* 5

Carruthers, W., *Some modern methods of organic synthesis* (C.U.P.).

Students should also obtain a set of Framework Molecular Models (Prentice-Hall).

A list of reference books is available from the Departmental Office.

HONOURS DEGREE.

SO99 Organic Chemistry for the Honours degree of B.Sc.

Pre-requisite subjects: A third-year subject in the Department of Organic Chemistry [preferably SO03 Organic Chemistry III] *and* a third-year subject in the Department of Physical and Inorganic Chemistry, *or* a third-year subject in the Department of Biochemistry, *or* such other third-year subject as may be approved by the Professor of Organic Chemistry.

The course, which is given annually, will consist of lectures and seminars in advanced Organic Chemistry and such lectures in Physical and Inorganic Chemistry, and Biochemistry as the Professor of Organic Chemistry may deem necessary. All time not devoted to lectures and seminars will be given to laboratory work. Each student will be expected to investigate a research problem under the guidance and supervision of one or more members of the staff of the Department of Organic Chemistry.

Students who wish to take the Honours degree should consult the Professor of Organic Chemistry during the preceding year in order that they can be advised on a suitable course of study.

Books: Those for the Ordinary degree and, in addition, other reference books, a list of which will be published in the Department of Organic Chemistry.

ADDITIONAL SUBJECT.

SC71 Chemistry IM for the degrees of B.D.S., and M.B., B.S.

GENETICS.

SJ7H Genetics and Human Variation IH.

A first-year half-subject designed to introduce the principles of human genetics as a means of understanding the diversity and underlying unity of mankind.

There will be one lecture each week and three hours of practical and tutorial work fortnightly throughout the year.

The nature, causes and maintenance of human variation. Family patterns for rare differences. Human chromosomes. Sex determination and differentiation. Human populations and their genetical structure. Elements of demography. Assortative mating. Consanguinity. Common genetical differences—blood groups, transplantation antigens, colour-blindness, etc. Selection in primitive and civilized communities. Effects of migration and racial mixture. Gene action and inborn errors of metabolism. Polygenic variation (body shape and size, fingerprints, intelligence, etc.). Twin comparisons. Mutation and radiation hazards. Human evolution.

Text-book:

Carter, C. O., *Human heredity* (Pelican).

Reference books:

McKusick, V. A., *Human genetics*, 2nd edition (Prentice-Hall).

Stone, G. K., *Evidence in science. A simple account of the principles of science for students of medicine and biology* (Wright).

SJ02 Genetics II.

The following subjects are recommended as most suitable for taking along with SJ02 Genetics II in second year: SY02 Biochemistry II, SB02 Botany II, SC02 Chemistry II, QT02 Mathematical Statistics II, SO02 Organic Chemistry II, SS02 Physiology II, AY02 Psychology II, QM02 Pure Mathematics II, SZ02 Zoology II.

Pre-requisites: *either*

(A) Passes in one biological and one mathematical subject or half-subject from Group A; *or*

(B) In special circumstances a knowledge of biology and mathematics deemed satisfactory by the Head of the Department or his nominee.

Three lectures, three hours' practical work and one tutorial a week for three terms.

Views on the origin of the universe and of life. Mendelian inheritance. Probability and inductive inference in genetics. Linkage. Mitosis and meiosis. The chromosome theory of heredity. Structural changes in chromosomes. Recombination systems in micro-organisms. The genetic material. Gene mutation. Gene structure and function. Protein synthesis. Gene regulation. The genetic code. Cytoplasmic inheritance. Differentiation. Sex determination and differentiation. Polyploidy. Breeding systems in plants. Population growth and the elements of demography. Population genetics and natural selection. Polygenic variation (e.g. height, yield, intelligence) and its particulate basis. Heritability and the response to selection. Inbreeding and outbreeding. Speciation. Genetics and Man—pedigree analysis, chromosomal variants, inborn errors of metabolism, twin comparisons, common genetical differences, genetic counselling.

Text-books:

Bailey, N. T. J., *Statistical methods in biology* (E.U.P.).

McKusick, V. A., *Human genetics*, 2nd edition (Prentice-Hall).

Strickberger, M. W., *Genetics* (Macmillan).

SJ03 Genetics III.

Pre-requisite subject: SJ02 Genetics II at Division I or higher standard.

Four courses, J301, J302, J303 and J304, are offered as part of SJ03 Genetics III. Each course extends over three terms and consists of one lecture and an average of 2-3 hours of practical or tutorial work per week. A student who enrols for SJ03 Genetics III takes three of these courses. Students who have passed AY02 Psychology II may take the double-unit B333 Social Biology in place of one of the courses J301, J302, J303 and J304. (For syllabus see below under "Social Biology".)

J301 Gene and Chromosome Structure and Function:

Text-books:

Hartman, P. E., and Suskind, S. R., *Gene action*, 2nd edition (Prentice-Hall).

Swanson, C. P., and others, *Cytogenetics* (Prentice-Hall).

Reference books:

Whitehouse, H. L. K., *Towards an understanding of the mechanism of heredity*, 3rd edition (Arnold).

Fincham, J. R. S., *Genetic complementation* (Benjamin).

Stent, G., *Molecular genetics* (Freeman).

J302 Recombination and Genetic Systems:

Text-books:

Hayes, W., *The genetics of bacteria and their viruses*, 2nd edition (Blackwell).

Fincham, J. R. S., and Day, P. R., *Fungal genetics*, 3rd edition (Blackwell).

Reference books:

Darlington, C. D., *Evolution of genetic systems*, 2nd edition (Oliver and Boyd).

Lewis, K. R., and John B., *Chromosome marker* (Churchill).

Wilkie, D., *The cytoplasm in heredity* (Methuen).

J303 Ecological Genetics. Human Genetics:

Text-books:

Ford, E. B., *Ecological genetics* (Methuen).

Harris, H., *The principles of human biochemical genetics* (North Holland)

Race, R. R., and Sanger, R., *Blood groups in man*, 5th edition (Blackwell).

Reference books:

Cavalli-Sforza, L. L., and Bodmer, W. F., *The genetics of human populations* (Freeman).

Ephrussi, B., *Hybridisation of somatic cells* (Princeton).

Giblett, E. R., *Genetic markers in human blood* (Blackwell).

Robinson, D. N., *Heredity and achievement* (Oxford U. Press).

J304 Quantitative Genetics:

Text-books:

Crow, J. F., and Kimura, M., *An introduction to population genetics theory* (Harper and Row).

Falconer, D. S., *Introduction to quantitative genetics.* (Oliver and Boyd).

Reference books:

Allard, R. W., *Principles of plant breeding* (Wiley).

Mather, K., and Jinks, J. L., *Biometrical genetics*, 2nd edition (Chapman and Hall).

Newton Turner, H., and Young, S. S. Y., *Quantitative genetics in sheep breeding* (Macmillan).

HONOURS DEGREE.

SJ99 Genetics for the Honours degree of B.Sc.

Pre-requisite subject: A pass in SJ03 Genetics III at a standard satisfactory to the Head of the Department of Genetics.

Candidates are required to give their full attendance for one academic year to a special course of study in the Department of Genetics. Each candidate will have a prescribed reading list and a research investigation to be carried out under the supervision of a member of staff. The course will include participation in seminars and discussions on advanced topics and the writing of essays and literature reviews. Candidates will be required to take a written examination and to present a thesis embodying the results of their research work.

Intending Honours candidates should consult the Head of the Department during the previous year so that they can be advised on suitable reading for the Long Vacation.

ADDITIONAL SUBJECTS.

SJ8H Genetics IM for the degrees of B.D.S., and M.B., B.S.

SJ89 Genetics for the Honours degree of B.Med.Sc.

The pre-requisites are passes in SJ02 Genetics II and in the Third-Year Examination in Medicine. Intending candidates should consult the Professor of Genetics as early as possible.

SJ79 Genetics for the Honours degree of B.Ag.Sc.

SJ69 Genetics for the Honours degree of B.Sc.Dent.

GEOLOGICAL SCIENCES.

One first-year subject and one half-subject are available. SG01 Geology I provides a balanced introduction to the geological sciences through lectures and practical work and is the normal pre-requisite for entry to SG02 Geology II. It also serves students in the Faculties of Engineering and Agricultural Science. SG7H Geology IH is a lecture course, available to students who have a general interest in the science or its relevance to problems of the environment and earth resources but who are unable to take the full subject.

SG01 Geology I.

There are no formal pre-requisites for SG01 Geology I but a knowledge of Matriculation Chemistry and Physics will be helpful. The course consists of three lectures, three hours practical work and one tutorial a week throughout the year. There are occasional field excursions.

The basic lecture course (two lectures a week) is given in three sections:

Global Geology and Geophysics, including global gravity, seismicity, radioactivity, magnetism, global tectonics, sea floor spreading, continental drift, petrology and plate tectonics.

Geological History and Evolution of the Landscape, including weathering and erosion, sedimentary rocks, the fossil record, principles of stratigraphy, rock structures, landscape evolution.

Earth Resources and Conservation, including mineral and energy resources, aspects of engineering geology and hydrogeology.

A supplementary lecture course (one lecture a week) provides the additional background in mineralogy, petrology, palaeontology and geophysics required for the course of practical work. The latter includes the study of crystals, minerals, rocks and fossils; interpretation of elementary geological maps; geophysical exercises. The practical course thus illustrates and develops the lecture course with reference to Australian examples.

Text-books:

Press, F., and Siever, R., *Earth* (Freeman).

Ernst, W. G., *Earth materials* (Prentice-Hall).

Rickard, M. J., *Geological mapping* (Department of Geology, A.N.U.).

Reference books:

Bloom, A. L., *The surface of the earth* (Prentice-Hall).

Clark, S. P., *Structure of the earth* (Prentice-Hall).

Dana, J. D., *Manual of mineralogy*, 18th edition, revised by C. S. Hurlbut (Wiley).

Dott, R. H., and Batten, R. L., *Evolution of the earth* (McGraw-Hill).

Faul, H., *Age of rocks, planets and stars* (McGraw-Hill).

Garland, G. D., *The earth's shape and gravity* (Pergamon).

Griffiths, D. H., and King, R. F., *Applied geophysics for engineers and geologists* (Pergamon).

Jacobs, J. A., *The earth's core and geomagnetism* (Pergamon).

McAlester, A. L., *The history of life* (Prentice-Hall).

Shelton, J. S., *Geology illustrated* (Freeman).

Skinner, B. J., *Earth resources* (Prentice-Hall).

Turekian, K. K., *Oceans* (Prentice-Hall).

SG7H Geology IH.

There are no formal pre-requisites for SG7H Geology IH though some scientific background is desirable. The course consists of two lectures and one tutorial a week throughout the year. The lecture course is identical to the basic lecture course for SG01 Geology I (see above). The tutorials, however, will be specially designed for the half-subject and will include some practical activities.

Text-book:

Press, F, and Siever, R., *Earth* (Freeman).

Reference books:

As for SG01 Geology I above.

SG02 Geology II.

Pre-requisite subjects: Division I pass or higher in SG01 Geology I. SC01 Chemistry I is not a formal pre-requisite but is strongly recommended.

LECTURES.—This course consists of three lectures a week throughout the year as follows:—

Crystallography: The symmetry of crystals and lattices.

Geophysics: The application of geophysical methods to solving problems in oil and mineral exploration.

Mineralogy: The theory of optical mineralogy.

Petrology: The characteristics and mode of occurrence of igneous, metamorphic and sedimentary rocks; a study of the accepted classifications of rocks.

Structural Geology: The geometry and interpretation of geological structures.

Stratigraphy and Sedimentation: Principles, with application to the study of Australian stratigraphy.

Palaeontology: Principles of the study of fossils.

LABORATORY WORK.—Not less than six hours a week.

Crystallography: Symmetry of crystals.

Mineralogy: Optical mineralogy; study of minerals in the hand specimen.

Petrology: Identification and classification of rocks; study of typical rocks both in hand specimen and under the microscope.

Structural Geology: Interpretation of geological maps; solving of structural problems by graphical methods. Introduction to photogeological interpretation.

Palaeontology: Introduction to morphology and taxonomy; interpretation of fossil assemblages.

The geophysics course will include tutorial classes at which problems will be set and discussed.

FIELD WORK.—A minimum of ten days will be spent in the field during the year. Excursions to localities of special interest will be arranged.

APPARATUS.—Students need to provide themselves with field equipment of approved pattern.

Text-books:

*Dana, J. D., *Manual of mineralogy*, 18th edition, revised by C. S. Hurlbut (Wiley).

*Verhoogen, J., and others, *The earth* (Holt, Rinehart and Winston).

*Williams, Howel, and others, *Petrography* (Freeman).

Dunbar, C. O., and Rodgers, J., *Principles of stratigraphy* (Wiley).

*Heinrich, E. W., *Microscopic identification of minerals* (McGraw-Hill).

*Blatt, H., and others, *Origin of sedimentary rocks* (Prentice-Hall).

Dobrin, M. B., *Introduction to geophysical prospecting* (McGraw-Hill).

Reference books:

Handbook of South Australian geology, ed. by L. W. Parkin (Geological Survey of South Australia).

Hills, E. S., *Elements of structural geology* (Methuen).

Brown, D. A., *et al.*, *The geological evolution of Australia and New Zealand* (Pergamon).

Gay, P., *An introduction to crystal optics* (Longmans).

Lahee, F. H., *Field geology*, 6th edition (McGraw-Hill).

Folk, R. L., *Petrology of sedimentary rocks* (Hemphills, Texas).

Hyndman, D. W., *Petrology of igneous and metamorphic rocks* (McGraw-Hill).

Jennings, J. N., and Mabbutt, J. A., *Landform studies from Australia and New Guinea* (A.N.U. Press).

Parasnis, D. S., *Mining geophysics* (Elsevier).

* These are also Geology III texts.

THIRD-YEAR SUBJECTS IN GEOLOGICAL SCIENCES.

Pre-requisites vary according to the units or subjects taken and are given below.

The Department of Geology and Mineralogy and the Department of Economic Geology offer the following units, each of which consists of about 16 lectures together with about 48 hours' practical work:

G301 STRATIGRAPHY AND TECTONICS: Third term.

Principles of stratigraphy and historical geology followed by an introduction to tectonics. Field studies will form a part of the course.

Text-book:

Donovan, D. T., *Stratigraphy* (Murby).

Reference books:

Kummel, B., *History of the earth*, 2nd edition (Freeman).

Krumbein, W. C., and Sloss, L. L., *Stratigraphy and sedimentation*, 2nd edition (Freeman).

Rayner, D. H., *Stratigraphy of the British Isles* (D.U.P.).

Clark, S. P., *Structure of the earth* (Prentice-Hall).

Wyllie, P. J., *The dynamic earth* (Wiley).

Bird, J. M., and Isacks, B. (eds.), *Plate tectonics* (American Geophysical Union).

G302 SEDIMENTOLOGY AND BASIN STUDIES: Third term.

Determination of ancient sedimentary environments from field and borehole analyses, and the integrated study of sedimentary basins. Field work will form part of the course.

Text-books:

Selley, R. C., *Ancient sedimentary environments* (Chapman and Hall).

Blatt, H., *Origin of sedimentary rocks* (Prentice-Hall).

Reference books:

Potter, P. E., and Pettijohn, F. J., *Paleocurrents and basin analysis* (Springer-Verlag).

Pettijohn, F. J., and others, *Sand and sandstones* (Springer-Verlag).

Folk, R. L., *Petrology of sedimentary rocks* (Hemphills, Texas).

Krumbein, W. C., and Sloss, L. L., *Stratigraphy and sedimentation* (Freeman).

G303 Structural Geology and Deformation Mechanisms: Second term.

The physical background for the advanced study of geological structures.

Text-books:

Price, N. J., *Fault and joint development in brittle and semi-brittle rock* (Pergamon).

Ramsay, J. G., *Folding and fracturing in rocks* (McGraw-Hill).

Wulff, J. (ed.), *The structure and properties of materials*, vols. 1, 2 and 3 (Wiley).

Reference books:

Jaegar, J. C., and Cook, N. G. W., *Fundamentals of rock mechanics* (Methuen).

Turner, F. J., and Weiss, L. E., *Structural analysis of metamorphic tectonites* (McGraw-Hill).

G304 Igneous and Metamorphic Petrology A: First term.

The characteristics and origin of the principal associations of igneous and metamorphic rocks. Field studies will form a part of the course.

Text-books:

Hyndman, D. W., *Petrology of igneous and metamorphic rocks* (McGraw-Hill).

Either Heinrich, E. W., *Microscopic identification of minerals* (McGraw-Hill); *or*

Deer, W. A., and others, *An introduction to the rock forming minerals* (Longmans).

Williams, H., and others, *Petrography* (Freeman).

Reference books:

Verhoogen, J., and others, *The earth* (Holt, Rinehart and Winston).

Hatch, F. H., and others, *Petrology of the igneous rocks*, 12th edition (Murby).

Winkler, H. F. G. *Petrogenesis of metamorphic rocks*, 2nd edition (Springer).

Carmichael, I. S. E., Turner, F. J., and Verhoogen, J., *Igneous petrology* (McGraw-Hill).

Turner, F. J., *Metamorphic petrology* (McGraw-Hill).

G305 Igneous and Metamorphic Petrology B: Third term.

The application of theoretical and experimental petrology to natural rock systems.

Text-books:

Hyndman, D. W., *Petrology of igneous and metamorphic rocks* (McGraw-Hill).

Either

Heinrich, E. W., *Microscopic identification of minerals* (McGraw-Hill).

or

Deer, W. A., and others, *An introduction to the rock forming minerals* (Longmans).

Williams, H., and others, *Petrography* (Freeman).

Reference books:

Broecker, W. S., and Oversby, V. M., *Chemical equilibria in the earth* (McGraw-Hill).

Zussman, J. (ed.), *Physical methods in determinative mineralogy* (Academic Press).

G306 PRINCIPLES OF ECONOMIC GEOLOGY: Second term.

Geological processes leading to mineral accumulations of economic interest.

Text-books:

Stanton, R. L., *Ore petrology* (McGraw-Hill).

Lamey, C. A., *Metallic and industrial mineral deposits* (McGraw-Hill).

G307 METALLIC MINERAL DEPOSITS: Third term.

Solution chemistry, phase equilibria and genesis of the common metallic mineral deposits.

Text-books:

Barnes, H. L., *Geochemistry of hydrothermal ore deposits* (Holt, Rinehart and Winston).

Garrels, R. M., and Christ, C. L., *Solutions, minerals and equilibria* (Harper and Row).

G308 CRYSTAL CHEMISTRY OF MINERALS: Second term.

Text-books:

Bragg, W. L., and Claringbull, G. F., *Crystal structures of minerals* (Bell).

Verhoogen, J., and others, *The earth* (Holt, Rinehart and Winston).

Reference books:

Evans, R. C., *Introduction to crystal chemistry*, 2nd edition (C.U.P.).

Fyfe, W. S., *Geochemistry of solids* (McGraw-Hill).

G309 GEOCHEMICAL CYCLES AND ISOTOPE GEOLOGY: Second term.

Study of geochemical differentiation processes. Isotope geology.

Text-books:

Krauskopf, K., *Introduction to geochemistry* (McGraw-Hill).

Faul, H., *Ages of rocks, planets and stars* (McGraw-Hill).

Reference books:

Mason, B. H., *Principles of geochemistry*, 3rd edition (Wiley).

Broecker, W. S., and Oversby, V. M., *Chemical equilibria in the earth* (McGraw-Hill).

G310 GENERAL PALAEONTOLOGY AND BIOSTRATIGRAPHY: First term.

Text-book:

Raup, D. M., and Stanley, S. M., *Principles of palaeontology* (Freeman).

Reference book:

Beerbower, J. R., *Search for the past*, 2nd edition (Prentice-Hall).

G311 PALAEONTOLOGY A: Second term.

Micropalaeontology and lower invertebrates; evolution and biostratigraphy.

Text-book:

Beerbower, J. R., *Search for the past*, 2nd edition (Prentice-Hall).

G312 PALAEONTOLOGY B: Third term.

Higher invertebrates and vertebrates; evolution and biogeography.

Text-books:

Beerbower, J. R., *Search for the past*, 2nd edition (Prentice-Hall).

Colbert, E. H., *Evolution of the vertebrates*, 2nd edition (Wiley).

G313 EXPLORATION GEOPHYSICS: Second term.

This course covers the design, conduct and interpretation of geophysical surveys used for petroleum and mineral exploration and in applied geology. Field studies will form part of this Unit.

Text-book:

Slotnick, M., *Lessons in seismic computing*, vol. 2 (Theory) (S.E.G.).

Reference books:

Grant, F. S., and West, G. F., *Interpretation theory in applied geophysics* (McGraw-Hill).

Hillier, F. S., and Lieberman, G. J., *Introduction to operations research* (Holden Day).

Keller, G. V., and Frischknecht, F. C., *Electrical methods in geophysical prospecting* (Pergamon).

Morley, L. W., *Canadian centennial conference on mining and groundwater geophysics* (Geological Survey of Canada).

Tarr, G., *The management of problem solving* (Macmillan).

Society of Exploration Geophysicists, *Mining geophysics*, vol. 1: Case histories, vol. 2: Theory.

G314 INTERPRETATION OF GEOPHYSICAL DATA: Third term.

More advanced aspects of the use and interpretation of gravity, magnetic and seismic surveys will be covered in this course.

Text-book:

Grant, F. W., and West, G. F., *Interpretation theory in applied geophysics* (McGraw-Hill).

Reference books:

Garland, G. D., *The earth's shape and gravity* (Pergamon).

Society of Exploration Geophysicists, *Seismic filtering*, ed. R. Van Nostrand.

G315 MINING ENGINEERING: First term.

The role of size, shape and location of mineralised bodies in the decision making process of mine development and exploitation. The economics of exploitation.

Text-books:

Cummins, A. B., and Given, I. A., *Mining engineering handbook*, vol. I and II (Soc. Mining Eng. Amer. Inst. Mining Eng. N.Y.).

Flawn, P. T., *Mineral resources: geology—engineering economics—politics and law* (Rand McNally, Chicago).

G316 MINERAL ENGINEERING: Third term.

Solution chemistry and physical properties of minerals as they affect ore dressing and extractive processes.

Text-book:

Burkin, A. R., *The chemistry of hydrometallurgical processes* (Van Nostrand, Princeton, N.Y.).

G317 CHEMICAL EQUILIBRIA IN THE EARTH: First term.

The application of thermodynamics in geology; reactions in natural gases; distribution of trace elements and trace isotopes between co-existing phases; solid state mineral transformations; melting phenomena; solid solution phenomena; and reactions in natural waters.

Text-book:

Broecker, W. L., and Oversby, V. M., *Chemical equilibria in the earth* (McGraw-Hill).

Reference book:

Kern, R., and Weisbrod, A., *Thermodynamics for geologists* (Freeman, Cooper).

The subjects offered are:

SG03 Geology III.

(A Group C subject.) Units G301, G302, G303, G304, G306 and G310. Greater flexibility in the choice of units is afforded by SG83 Geology IIIM and other IIIM subjects.

SG23 Geochemistry III.

(A Group C subject.) Units G305, G307, G308, G309, G317 together with the unit in crystallography offered by the Department of Physical and Inorganic Chemistry.

SG33 Economic Geology III.

(A Group C subject.) Units G306, G307, G313, G315, G316 and G317.

Students also presenting Geochemistry III should substitute G304 for G317 and G301 for G307.

Students also presenting Geophysics III should substitute G303 for G313.

Students also presenting Geology III should substitute G309 for G306.

SG73 Geophysics III.

(A Group C subject.) Units G313 and G314 together with four units from the Departments of Mathematics and Physics, including the unit on Elasticity.

SG13 Palaeontology III.

(A Group E subject.) Units G311 and G312. SG13 Palaeontology III may be taken together with SJ02 Genetics II *or* SB02 Botany II *or* SZ02 Zoology II, in lieu of a Group C subject.

SG83 Geology IIIM.

(A Group C subject.) With approval of the Heads/Chairmen of Departments concerned, a combination of four units chosen from G301, G302, G303, G304, G305, G306, G307, G310, G311, G312, G313, G314 (two terms' work) together with two units or one double unit (one term's work) in another department. Pre-requisites will depend on the units approved.

SG93 Geochemistry IIIM.

(A Group C subject.) With approval of the Heads/Chairmen of Departments concerned a combination of four units chosen from G305, G307, G308, G309 and G317 (two terms' work) together with two units or one double unit (one term's work) in another department. Pre-requisites will depend on the units chosen.

Subject Combinations and Pre-requisites.

Students majoring in the Geological Sciences will normally take SG03 Geology III and *either* SG23 Geochemistry III *or* SG73 Geophysics III *or* SG13 Palaeontology III *or* SG33 Economic Geology III, but any one of the above subjects can be taken in combination with other subjects offered by the Departments of Geology and Mineralogy and Economic Geology *or* with subjects offered by other departments providing the following pre-requisites are satisfied:

Pre-requisite subjects for SG03 Geology III: SG02 Geology II at Division I pass or higher standard. There are no other formal pre-requisites but QM01 Mathematics I, SP01 Physics I and SC01 Chemistry I are all highly desirable.

Pre-requisite subjects for SG23 Geochemistry III: SG02 Geology II at Division I pass or higher standard and SC02 Physical and Inorganic Chemistry II at Division I pass or higher standard.

Pre-requisite subjects for SG33 Economic Geology III: SG02 Geology II, SP01 Physics I and QM01 Mathematics I, all at Division I pass or higher standard.

Pre-requisite subjects for SG73 Geophysics III: QN12 Applied Mathematics IIB; other second-year subjects from the Faculty of Mathematical Sciences may be accepted. A working knowledge of computing techniques is essential. SP01 Physics I and SG01 Geology I, both at Division I pass or higher standard.

Pre-requisite subjects for SG13 Palaeontology III: SG02 Geology II and SZ71 Biology I or SZ01 Zoology I at Division I or higher standard and unit G310 above (General palaeontology and biostratigraphy).

The pre-requisites for individual units will usually be the same as those for the subjects in which they occur but in special circumstances exemption from certain pre-requisites may be granted on application to the Chairman of the Department of Geology or his nominee.

HONOURS DEGREE.

SG99 Geology for the Honours degree of B.Sc.

Pre-requisite subjects: Passes satisfactory to the Professors concerned in any third-year subject, other than Geophysics, offered by the Departments of Economic Geology and Geology and Mineralogy together with a second subject in Geological Sciences or a subject offered by the Departments of Pure Mathematics, Applied Mathematics, Statistics, Physics, Physical and Inorganic Chemistry or Organic Chemistry.

In general it is expected that students proceeding to Honours in Geology will have passed SG03 Geology III at a level acceptable to the Professors concerned.

Candidates will be required to attend several courses from a number which will be given in specialised fields of geology and economic geology including geophysics, geochemistry and palaeontology. In addition, candidates will undertake supervised individual projects involving one or more of these fields. Special courses of reading and laboratory studies will be laid down and each candidate will be required to give all the time not required for lectures or in the field to work in the laboratory. Candidates may be required to satisfy the examiners that they have a reading knowledge of French, German or Russian. They will also be required to contribute to a series of seminars.

Candidates must apply, before the end of the year preceding that in which they wish to enrol, to the Professor concerned for approval of their proposed courses of study.

SG89 Geophysics for the Honours degree of B.Sc.

Pre-requisite subjects: Passes satisfactory to the Professor of Geophysics in SG73 Geophysics III and one of the other third-year subjects offered by the Departments of Economic Geology and Geology and Mineralogy, or a third-year subject offered by the Departments of Applied Mathematics or Physics. Students with a different background of third-year courses may be accepted at the discretion of the Professor of Geophysics.

Candidates will be required to attend several courses from a number which will be given in specialised fields of geology, economic geology, mathematics and physics. Honours students may, after consultation with the Head/Chairman of the appropriate department, also be required to take some third-year units in the Departments of Geology, Applied Mathematics or Physics, which they did not take in third year. In addition, candidates will undertake supervised individual projects: possible topics should be discussed with the Professor of Geophysics before the end of the preceding year. Special courses of reading and laboratory studies will be laid down and each candidate will be required to give all the time not required for lectures or in the field to work in the laboratory. Candidates may be required to satisfy the examiners that they have a reading knowledge of French, German or Russian. They will also be required to contribute to a series of seminars.

Candidates must apply, before the end of the year preceding that in which they wish to enrol, to the Professor of Geophysics for approval of their proposed courses of study.

MICROBIOLOGY.

THIRD-YEAR SUBJECT IN MICROBIOLOGY.

Pre-requisites: A Division I pass or higher standard in any two subjects from Group B. Students intending to take Microbiology are advised to take SY02 Biochemistry II. Students who have not taken SY02 Biochemistry II as a Group B subject should consult a member of the staff of the Department prior to enrolment.

The Department offers the following course, consisting of approximately 22 lectures, 18 hours of tutorials and seminars and 70 hours of practical work a term.

K301 GENERAL MICROBIOLOGY: First term.

The course illustrates that while bacteria share with other forms of life many common features of structure, development and function, they also differ in some fundamental ways. An introduction to the bacteria will be given, followed by a more detailed consideration of the distinctive characteristics of their growth, sexual and asexual multiplication and genetic recombination. Bacterial viruses will be discussed in some detail.

K302 IMMUNOLOGY: Second term.

The aim of the course during the second term is to acquaint the student with the basic principles and concepts of immunological mechanisms whereby mature vertebrates resist invasion by bacteria, viruses and foreign tissue cells.

The structure and diversity of antibodies and antigens will be considered, together with a discussion of the methods available for the detection of antibodies in relation to the specificity of antigen-antibody reactions. This will be followed by an examination of the kinetics of the immune response, with particular reference to the cells involved in antibody formation, immune tolerance, hypersensitivity reactions and immunity to transplanted foreign tissues. Finally, the genetic control of susceptibility to infection will be discussed on the basis of present knowledge of the immunological mechanisms involved in the removal of parasites from mammalian hosts.

K303 IMMUNOLOGY: Third term.

During the third term the general importance of the mechanisms of natural and acquired immunity to fundamental biology will be considered. The roles that phagocytic cells and humoral factors, including antibody and complement, play in the recognition and removal of foreign and effete materials in invertebrates and vertebrates will be discussed. Emphasis will be placed on the evolutionary sequence and increasing complexity of the systems involved in recognition of unwanted materials. Consideration will be given to the role of the thymus in the development of immunological competence in foetal and newborn animals. Finally, various theories of antibody production will be considered in the light of present knowledge of the detailed structure of antibody molecules, including allotype specificities, the relationship of antibody structure to function and the genetic control of protein synthesis.

The subject offered is:

SK03 Microbiology III.

A group C subject.

Text-book:

Davis, B. D., and others, *Microbiology*, 2nd edition (Harper and Row).

Reference books:

Humphrey, J. H., and White, R. G., *Immunology for students of medicine*, 3rd edition (Blackwell).

Kabat, E. A., *Structural concepts in immunology and immunochemistry* (Holt, Rinehart and Winston).

Boyd, W. C., *Fundamentals of immunology*, 4th edition (Interscience).

Kabat, E. A., and Mayer, M. M., *Experimental immunochemistry*, 2nd edition (Thomas).

HONOURS DEGREE.

SK99 Microbiology for the Honours degree of B.Sc.

Pre-requisite subject: Students intending to take the Honours course in Microbiology are recommended to take the course SK03 Microbiology III. Students taking other suitable science disciplines will, however, be considered.

An intending candidate should consult a member of the staff of the Microbiology department some time during the year preceding the Honours year.

Candidates are required to give their full attendance for an entire academic year to a special course of study and laboratory work, and to participate in experimental work of a research character under the direction and supervision of staff members of the Department. A course in reading, which should be commenced during the long vacation prior to the Honours year, will be provided by the Department of Microbiology.

ADDITIONAL SUBJECTS.

MP03 Biology of Disease.
(For M.B., B.S. Third-Year Examination.)

Microbiology.
(For M.B., B.S. Fourth-Year Examination—MX74.)

SK79 Microbiology for the Honours degree of B.Sc.Dent.

SK89 Microbiology for the Honours degree of B.Med.Sc.

PHYSICS.

INTRODUCTORY NOTES.

Students intending to proceed at least as far as SP02 Physics II are advised to take QM01 Mathematics I with SP01 Physics I in their first year, and QN22 Applied Mathematics IIA *or* QN12 Applied Mathematics IIB concurrently with SP02 Physics II. Students interested primarily in physics and mathematics will normally take QM02 Pure Mathematics II as their third Group B subject, but any other Group A or B subject (e.g. SG02 Geology II, SC02 Physical and Inorganic Chemistry II), or any two Group A half-subjects is entirely satisfactory.

In the third year, 15 "unit courses" are offered by the Physics Department covering a wide range of topics. Students taking SP03 Physics III choose six of these units. Up to four further physics units may be taken, depending on the other subject taken with SP03 Physics III. This other subject would, in general, be of a physical and mathematical nature, e.g. SP83 Physics IIIM, QF03 Theoretical Physics III, QN03 Applied Mathematics III, QN13 Applied Mathematics IIIA, QN83 Applied Mathematics IIIM, QM03 Pure Mathematics III, QM13 Pure Mathematics IIIA, QM83 Pure Mathematics IIIM, SG73 Geophysics III, QA83 Computing Science IIIM, SC13 Physical and Inorganic Chemistry IIIB, SC83 Physical and Inorganic Chemistry IIIM.

In the Honours year, a further range of unit courses is offered, some of which are related to the research interests of the Department. Honours students will also take some of the third-year units which they did not take in third year.

All physics students should refer to the Laboratory rules, which are printed in this volume of the Calendar. For all laboratory classes students must provide stiff-covered practical notebooks with alternate pages ruled for graphical work.

SP8H Astronomy IH.

There is no formal pre-requisite for SP8H Astronomy IH. The course comprises three lectures and one tutorial a fortnight throughout the year, plus four three-hour laboratory or observational sessions a term. Evening observations form a major part of the practical work in the first term.

The course will include the following topics:

Historical introduction. Examples of ancient and modern astronomical instruments.

The Solar System, Planet Earth, Earth-Moon System, distance scales within the Solar System, the Sun, Planets, planetary motion, space probes, eclipses, meteors, asteroids and comets.

Stars, stellar distances, types of stars, variable stars, star clusters, the Milky Way, stellar evolution.

Galaxies, galactic distance scale, radioastronomy, space astronomy, cosmology.

Text-book:

Brandt, J. C., and Maran, S. P., *New horizons in astronomy* (Freeman).

Reference books:

Wyatt, S., *Principles of astronomy*, 2nd edition (Allyn and Bacon).

Menzel, D. H., and others, *Survey of the universe* (Prentice-Hall).

Gingerich, O. (ed.), *Frontiers in astronomy—readings from Scientific American* (Freeman).

SP01 Physics I.

There are no formal pre-requisites for SP01 Physics I, but a knowledge of Matriculation Physics and Matriculation Mathematics I and II (or Matriculation Mathematics IS) will be assumed.

The course comprises three lectures, one tutorial and three hours of practical work a week, and is given annually.

The course is given in the following parts:

Mechanics, including classical mechanics, gravitation, special relativity, and introductory quantum physics.

Structure of matter: the nature and important features of classical mechanics, and the molecular interpretation of the properties of matter.

Oscillations and waves, including forced and natural oscillations, elastic waves, dispersion, interference and diffraction.

Electricity and magnetism, including electrostatics, electromagnetic effects, alternating currents, particles and fields.

Text-books:

Resnick, R., and Halliday, D., *Physics*, combined edition (Wiley-Toppan).
Resnick, R., *Basic concepts in relativity and early quantum theory* (Wiley).

Reference books:

Gamow, G., *Matter, earth and sky*, 2nd edition (Prentice-Hall).
Weidner, R. T., and Sells, R. L., *Elementary modern physics* (Allyn and Bacon).
Feynman, R. P., and others, *The Feynman lectures on physics*, vol. 1 (Addison-Wesley).
Shortley, G., and Williams, D., *Elements of physics*, 4th edition (Prentice-Hall).
Taylor, E. F., *Introductory mechanics* (Wiley).
French, A. P., *Principles of modern physics* (Wiley).
French, A. P., *Vibrations and waves* (Norton).
Resnick, R., *Introduction to special relativity* (Wiley).
Bondi, H., *Relativity and common sense* (Heinemann).
Crawford, F. S., *Berkeley physics course*, vol. 3, *Waves* (McGraw-Hill).
Weidner, R. T., and Sells, R. L., *Elementary classical physics*, vols. 1 and 2 (Allyn and Bacon).

SP02 Physics II.

Pre-requisite subjects: SP01 Physics I at Division I or higher standard and QM01 Mathematics I *or* QM11 Mathematics IM.

The course comprises three lectures, one tutorial and six hours practical work a week, and is given annually.

The lecture topics are:

A. Electromagnetism and Optics.

Circuit theory: analysis of D.C. and A.C. circuits with applications. Electromagnetism: the electromagnetic field, radiation from accelerated charges. Optics: interference, polarisation, refractive index, crystal optics.

B. Mechanics.

Relativity: properties of space-time, four-vectors. Classical mechanics: properties of gases, liquids and solids. Thermodynamics: first and second laws, heat engines, statistical concepts, introduction to quantum statistics.

C. Quantum Physics.

Introduction to quantum mechanics: Schroedinger wave equation with applications. Atomic and nuclear physics: properties and interaction of radiation, atoms and nuclei. Electrons in solids: free electron and band models of solids, semiconductors and practical semiconductor devices.

Text-books:

Winch, R. P., *Electricity and magnetism* (Prentice-Hall); *or*
Duffin, W. J., *Electricity and magnetism* (McGraw-Hill).
Kittel, C., *Introduction to solid state physics* (Wiley).
Eisberg, R. M., *Fundamentals of modern physics* (Wiley).
Tabor, D., *Gases, liquids and solids* (Penguin Library of Physical Sciences).
Brophy, J. J., *Basic electronics for scientists* (McGraw-Hill).
Taylor, E. F., and Wheeler, J. A., *Spacetime physics* (Freeman).

Reference books:

Fowles, G. R., *Introduction to modern optics* (Holt, Rinehart and Winston.)

MacFadyen, K. A., *Physics laboratory handbook for students* (University of London Press).

Mermin, N. D., *Space and time in special relativity* (McGraw-Hill).

King, A. L., *Thermophysics* (Freeman).

French, A. P., *Special relativity* (Norton).

Pippard, A. B., *Elements of classical thermodynamics* (Cambridge U.P.).

Close, C. M., *The analysis of linear circuits* (Harcourt, Brace and World).

Jenkins, F. A., and White, H. E., *Fundamentals of physical optics*, 3rd edition (McGraw-Hill).

THIRD-YEAR SUBJECTS IN PHYSICS.

Pre-requisite subjects: SP02 Physics II at Division I or higher standard and QM02 Pure Mathematics II *or* QM12 Applied Mathematics II *or* QM22 Mathematics IIM.

The Department offers the following units, each of which consists of about 16 lectures and 36 hours of laboratory work.

A pamphlet giving information on timetables of unit courses will be available from the Department during the enrolment period.

P301 ELECTROMAGNETISM: Second term.

Derivation of Maxwell's equations from the experimental laws of electricity and magnetism—a consistent formulation in terms of fields and sources, with sources determined by macroscopic properties of material media.

Propagation of electromagnetic waves in homogeneous isotropic media. Poynting's theorem. Theory of dielectrics and dispersion—using a classical microscopic model.

Text-book:

Ramo, S., and others, *Fields and waves in communication electronics* (Wiley); *or*

Slater, J. C., and Frank, N. H., *Electromagnetism* (McGraw-Hill).

Reference books:

Feynman, R. P., *Lectures on physics*, vol. II (Addison-Wesley).

Panofsky, W. K. H., and Phillips, M., *Classical electricity and magnetism* (Addison-Wesley).

P302 ELECTROMAGNETIC WAVES: Third term.

Propagation of electromagnetic waves on transmission lines and in wave guides; resonant cavities, radiation density. Propagation, scattering and absorption of electromagnetic waves in weakly ionised gases; ionospheric propagation, effect of magnetic field. Reflection and transmission of electromagnetic waves at a dielectric interface; Fresnel equations, evanescent waves. Radiation by accelerated charges.

Text-book:

Ramo, S., and others, *Fields and waves in communication electronics* (Wiley).

P303 QUANTUM MECHANICS: First term.

Wave-particle duality and the need for wave-mechanics. Wave and ray optics, Hamilton's and Fermat's principles. The postulates of wave mechanics. Setting up a wave equation. Operators, expectation values. Application to one-dimensional problems. Ehrenfest's theorem and correspondence principle. Spherical symmetry. Angular momentum. The hydrogen atom.

Text-book:

Gasiorowicz, S., *Quantum physics* (Wiley).

P304 Optics: Third term.

Geometrical optics, Kirchhoff-Helmholtz diffraction integral, Fresnel and Fraunhofer diffraction, diffraction gratings, multiple beam inteferometers, Fourier methods, Abbe's theory, coherence, spatial filtering, holography and other related topics in modern optics.

Reference books:

Fowles, G. R., *Introduction to modern optics* (Holt, Rinehart and Winston).
Hecht, E., and Zajac, A., *Optics* (Addison-Wesley).
Smith, F. G., and Thomson, J. H., *Optics* (Wiley).
Born, M., and Wolf, E., *Principles of optics* (Pergamon).

P305 Statistical Mechanics: First term.

The fundamentals of statistical mechanics, statistical thermodynamics and applications of macroscopic thermodynamics, the microcanonical, canonical and grand canonical ensembles, some simple applications, introduction to the quantum statistics of ideal gases. The formulation and solving of problems is an important part of the course.

Text-book:

Reif, F., *Fundamentals of statistical and thermal physics* (McGraw-Hill).

Reference books:

Pippard, A. B., *The elements of classical thermodynamics* (Cambridge).
Tolman, R. C., *The principles of statistical mechanics* (Oxford).

P306 Atomic Physics: Second term.

This course aims to provide an introduction to the fundamentals of atomic physics including a discussion of some processes which are basic to Astrophysics.

Text-book:

Eisberg, R. M., *Fundamentals of modern physics* (Wiley).

Reference books:

Leighton, R. B., *Principles of modern physics* (McGraw-Hill).
Herzberg, G., *Atomic spectra and atomic structure* (Dover).
Kuhn, H. G., *Atomic spectra* (Longmans).
Series, G. W., *Spectrum of atomic hydrogen* (Oxford).

P307 Nuclear Physics: Third term.

This course is concerned with the two basic problems of nuclear physics, namely the nature of nuclear forces and nuclear structure. It consists of a brief survey of nuclear properties in general and a revision of appropriate aspects of quantum theory followed by a discussion of nuclear forces as deduced from studies of two nucleon systems. Finally nuclear structure is discussed, largely in terms of the shell model. A knowledge of the Atomic Physics and Quantum Mechanics courses would be an advantage.

Text-book:

Cohen, B. L., *Concepts of nuclear physics* (McGraw-Hill).

Reference books:

Burcham, W. E., *Introduction to nuclear physics* (Longmans).
Enge, H. A., *Introduction to nuclear physics* (Addison-Wesley).
Roy, R. R., and Nigam, B. P., *Nuclear physics—theory and experiment* (Wiley).
Segré, E., *Nuclei and particles* (Benjamin).

P308 Solid State Physics: First term.

Crystal structure, reciprocal lattice. Crystal binding. Lattice vibrations. Dielectric properties. Free electron gas. Electrons in periodic lattice. Energy bands. Semi-conductors.

Text-book:

Kittel, C., *Introduction to solid state physics*, 4th edition (Wiley).

(It is advisable for students taking this unit to take unit P303.)

P309 RELATIVITY: Second term.

This course is common with the Mathematical Physics unit F304.

P310 ASTROPHYSICS: Second term.

This course aims to provide an introduction to the basic ideas of astrophysics and stellar astronomy, including discussions of the sun, stellar radiation, stellar evolution, the interstellar medium and galactic structure.

Text-book:

To be advised.

(Reference books will be discussed at the beginning of the course.)

P311 ATMOSPHERIC PHYSICS: Second term.

An introduction to physical and dynamical meteorology. Topics will be selected under the headings: cloud physics; atmospheric electricity; solar and terrestrial radiation and heat balance; the wind—equations of motion, etc., approximations and applications; turbulence, diffusion of pollutants; general circulation; numerical forecasting.

Reference books:

Hess, S. L., *Introduction to theoretical meteorology* (Holt).

Haltiner, G. J., and Martin, F. L., *Dynamical and physical meteorology* (McGraw-Hill).

Holton, J. A., *An introduction to dynamic meteorology* (Academic Press).

P312 PLANETARY INTERIORS: First term.

Elastic wave propagation; the outer layers of the earth; crustal reflection and refraction techniques (explosion seismology); evidence of large scale crustal movements. Detection of elastic waves and location of earthquakes. Travel time curves and structure of the deep interior of the earth; density and composition. The moon and the other planets.

Reference books:

Howell, B. F., *Introduction to geophysics* (McGraw-Hill).

Bullen, K. E., *An introduction to the theory of seismology* (Cambridge).

Stacey, F. D., *Physics of the earth* (Wiley).

P313 HISTORY AND PHILOSOPHY OF PHYSICS: Third term.

The topics to be discussed in 1975 are: statistical physics and the history of the theory of heat; history and philosophy of special relativity; philosophy and interpretation of quantum mechanics.

Reference books:

Brush, S. G., *Kinetic theory*, vols. 1 and 2 (Pergamon).

Gibbs, J. W., *Elementary principles in statistical mechanics* (Dover).

Whittaker, E., *A history of the theories of aether and electricity* (Dover).

Bohm, D., *The special theory of relativity* (Benjamin).

Williams, L. P., *Relativity theory: its origins and impact on modern thought* (Wiley).

Cropper, W. H., *The quantum physicists* (O.U.P.).

Jammer, M., *The conceptual development of quantum mechanics* (McGraw-Hill).

Schilpp, P. A. (ed.), *Albert Einstein: philosopher-scientist* (Tudor).

Born, M., *Natural philosophy of cause and chance* (Dover).

Bohm, D., *Causality and chance in modern physics* (Routledge and Kegan Paul).

P314 Environmental Physics: Third term.

The earth as a planet, the sun, the earth's atmosphere and oceans, evolution of the atmosphere, biological processes and atmospheric composition, global effects of industrial activity, remote monitoring, energy resources.

Reference books:

Kuiper, G. P. (ed.), *The earth as a planet* (Chicago).

Glasstone, S., *Sourcebook on the space sciences* (Van Nostrand).

Singer, S. F. (ed.), *Global effects of environmental pollution* (Reidel).

Man's impact on the global environment: Assessment and recommendations for action, report of the Study of critical environmental problems (M.I.T.).

The Biosphere (Scientific American, September 1970).

P315 Biophysics: First term.

Biological structure and function. Microscopy and X-ray diffraction. Atoms, molecules and bonding. Crystals, liquids and monolayers. Proteins and nucleic acids. Large molecules in solution. Topics chosen from: membranes, transport phenomena, muscle, ionising radiation. It is emphasised that familiarity with first-year mathematics will be assumed.

Reference books:

Snell, F. M., and others, *Biophysical principles of structure and function* (Addison-Wesley).

Setlow, R. B., and Pollard, E. C., *Molecular biophysics* (Addison-Wesley).

LABORATORY WORK IN THIRD YEAR:

The work includes formal courses in Laboratory Techniques (first term only), Electronics and Vacuum Physics. In addition research type projects are carried out under a supervisor who is usually attached to one of the research groups. Students undertake laboratory work in proportion to the number of lecture units to be counted.

The subjects offered are:

SP03 Physics III.

A group C subject. Six units, including P301 and P303, but not more than two from units P310-P315. The Mathematical Physics unit F301 Mathematical Methods may be taken in place of one of the units P302, P304-P315 above. A minimum of nine hours' laboratory work each week is required.

SP83 Physics IIIM.

A group C subject. Four units from the list above with two units from one other Department selected with the approval of the Heads/Chairmen of the Departments concerned. With the approval of both Heads/Chairmen of Departments, a unit in Mathematical Physics may be taken in place of one of the units listed above. Two terms of laboratory work with a minimum of nine hours a week are required.

QF03 Theoretical Physics III.

This is a third-year Science subject, offered by the Mathematical Physics Department and may be taken with either SP03 Physics III or SP83 Physics IIIM. For syllabus see under Faculty of Mathematical Sciences.

HONOURS DEGREE.

SP99 Physics for the Honours degree of B.Sc.

The Honours course will normally include courses of lectures on quantum mechanics, electromagnetism, statistical mechanics, nuclear physics, solid state physics, Fourier methods, atmospheric physics, astrophysics, and atomic and molecular physics, but not all topics will necessarily be offered every year. Honours students will be required to take some compulsory courses, and a selection of optional courses, and they will also be required to take some third-year units which they did not take in third year. Full details may be obtained on application to the Chairman of the Department. Students also carry out a research project, on which they submit a report.

Normal pre-requisites for Honours Physics are a pass in SP03 Physics III at a standard satisfactory to the Chairman of the Department of Physics, together with a pass in SP83 Physics IIIM, or QF03 Theoretical Physics III, or QN03 Applied Mathematics III, or *any* other group C subject.

ADDITIONAL SUBJECTS.

SP7H Physics IM for the degrees of B.D.S., and M.B., B.S.

SP9H Physics, Man and Society IH for the degree of B.A.

PHYSIOLOGY.

Physiology is a subject that can be taken in combination with a variety of Physical, Biological and Mathematical subjects. It is requested that all students consult the Department of Human Physiology before enrolling in any course in Physiology.

SS02 Physiology II.

Pre-requisite subjects: SC01 Chemistry I, and *either* SZ01 Zoology I *or* SZ71 Biology I. In special circumstances a candidate may be permitted to enrol in SS02 Physiology II with only one pre-requisite, subject to the approval of the Chairman of the Department of Human Physiology (obtained in writing through the Academic Registrar).

This course consists of approximately one-third Histology and two-thirds Physiology.

HISTOLOGY AND CELL BIOLOGY:

The course comprises about 20 lectures and 60 hours' practical work and includes microscopy; introductory cytology and cytochemistry; and the histology of intercellular substance, tissues and systems of the body. Emphasis is laid on the relationship of structure to function.

Students are provided with loan collection of slides. Some microscopes are available on loan.

PHYSIOLOGY:

The course comprises about 50 lectures and 100 hours' practical work. The subject matter deals with the function of the principal mammalian tissues, organs and systems, together with the hormonal and neural integrations of the organism.

Text-books:

For Histology:

Leeson, T. S., and Leeson, C. R., *Histology*, 2nd edition (Saunders).

The living cell (Scientific American).

For Physiology:

Vander, A. J., Sherman, J. H., and Luciano, D. S., *Human physiology* (McGraw-Hill).

Reference books:

Clark, Sir W. E. Le Gros, *The tissues of the body* (O.U.P.).

Butler, J. A. V., *Inside the living cell* (Allen and Unwin).

Mountcastle, V. B. (ed.), *Medical physiology*, 13th edition, vol. 1 and 2 (Mosby).

THIRD-YEAR SUBJECTS IN PHYSIOLOGY AND PHARMACOLOGY.

Pre-requisite subject: SS02 Physiology II at Division I pass or higher standard. A Division II pass may be acceptable provided that the student has achieved in the Physiology component of the examination a standard acceptable to the Chairman of the Department of Human Physiology. Students taking units in third year must nominate their units at the time of enrolment and have them approved by the Chairman of the Department of Human Physiology.

The Department offers five double units, each of which comprises three lectures a week and nine hours' practical work a week for one term:

S301 PRINCIPLES OF PHARMACOLOGY AND TOXICOLOGY: Term 1.

Principles of drug action. Factors which modify the intensity and duration of drug action. Drug toxicity and development. Environmental toxicology.

S302 CELLULAR NEUROPHYSIOLOGY: Term 1.

Membrane electrical properties and membrane potentials. Ionic fluxes, action potentials, synaptic mechanisms.

S303 ACTIONS OF DRUGS: Term 2.
A survey of the actions of drugs on the major organ systems, the peripheral and the central nervous systems. Drug dependance and problems of drug abuse.

S304 SYSTEMATIC NEUROPHYSIOLOGY: Term 2.
Somaesthetics, special senses, and the motor system. Sleep, consciousness, the limbic system, memory.

S305 CARDIOVASCULAR AND RENAL PHYSIOLOGY: Term 3.
Physiology and biophysics of the circulation. Kidney and body fluids.

The subjects offered are:

SS03 Physiology III.

A group C subject. Any three of the above double units, other than the particular combinations listed under SS33 and SS43.

SS33 Physiology IIIA (Physiology).

A group C subject. Double units S302, S304, S305.

SS43 Physiology IIIB (Pharmacology).

A group C subject. Double units S301, S303, S305.

SS83 Physiology IIIM.

A group C subject. With the approval of Heads/Chairmen of Departments concerned, a combination of two double units from the above list, together with two units or one double unit (one term's work) in another department. Attention is drawn in particular to the possibility of combinations with B333 Social Biology. (For syllabus see below under "Social Biology".)

Textbooks:

Double units: S301, S303.
Lewis, J. J., *Introduction to pharmacology*, 4th edition, by J. Crossland.

Double unit: S302.
Katz, B., *Nerve, muscle and synapse* (McGraw-Hill).
Eccles, J. C., *The understanding of the brain* (McGraw-Hill).

Double unit: S304.
Eccles, J. C., *The understanding of the brain* (McGraw-Hill).
Melzack, R., *The puzzle of pain* (Penguin).
Thompson, R., *Foundations of physiological psychology* (Harper Row).

Double unit: S305.
Berne, R. M., and Levy, M. N., *Cardiovascular physiology*, 2nd edition (Mosby).
Guyton, A. C., *Textbook of medical physiology* (Saunders).

Reference books (for all units):
Aidley, D. J., *The physiology of excitable cells* (C.U.P.).
Cooke, I., and Lipkin, M., *Cellular neurophysiology* (Holt, Rinehart and Winston).
Pitts, R. G., *Physiology of the kidney and body fluids* (Year Book).
Mountcastle, V. B. (ed.), *Medical physiology*, 13th edition, vol. 1 and 2 (Mosby).
Goldstein, A., and others, *Principles of drug action* (Hoeber).
Goodman, L. S., and Gilman, A., *The pharmacological basis of therapeutics*, 4th edition (Macmillan).

PHARMACOLOGY OR PHYSIOLOGY FOR THE HONOURS DEGREE OF B.Sc.

SS89 Pharmacology for the Honours degree of B.Sc.

Pre-requisite subjects: SS03 Physiology III, SS43 Physiology IIIB, or the three units S305, S308, S309.

The course extends over three terms.

Candidates are required to give their full attendance for an entire academic year to a special course of study and laboratory work in the pharmacology laboratory, and to participate in experimental work of a research character under the direction and supervision of the Chairman of the Department. A course in reading, which should be commenced during the long vacation prior to the Honours year, will be published in the Department of Human Physiology and Pharmacology. Candidates may be required also to satisfy the Chairman of the Department that they have a reading knowledge of French and German.

SS99 Physiology for the Honours degree of B.Sc.

Pre-requisite subject: SS03 Physiology III *or* SS33 Physiology IIIA.

The course extends over three terms.

Candidates are required to give their full attendance for an entire academic year to a special course of study and laboratory work in the physiology laboratory, and to participate in experimental work of a research character under the direction and supervision of the Professor of Physiology. A course in reading, which should be commenced during the long vacation prior to the Honours year, will be published in the Department of Human Physiology and Pharmacology. Candidates may be required also to satisfy the Professor that they have a reading knowledge of French and German.

ADDITIONAL SUBJECTS.

SS12 Human Physiology for the degrees of M.B., B.S. (Second Year).

SS13 Human Physiology for the degrees of M.B., B.S. (Third Year).

Applied Physiology and Pharmacology.
(For M.B., B.S. Fourth-Year Examination—MX74.)

SS69 Physiology for the Honours degree of B.Med.Sc.

SS79 Pharmacology for the Honours degree of B.Med.Sc.

SS22 Human Physiology for the degree of B.D.S.

SS39 Physiology for the Honours degree of B.Sc.Dent.

SS49 Pharmacology for the Honours degree of B.Sc.Dent.

PSYCHOLOGY.

(FOR THE DEGREE OF BACHELOR OF SCIENCE)

In 1975, the following Psychology courses will be offered in the Faculty of Science:

AY01 Psychology I; AY02 Psychology II; AY23 Psychology III.

The pre-requisite for AY02 Psychology II will be a Division I or higher level pass in AY01 Psychology I, and the pre-requisite for AY23 Psychology III will be AY02 Psychology II.

AY23 Psychology III is a group C subject, and consists of two double-units, and two single-units. The single-unit Y301 Psychological Statistics must be included unless the subject QT02 Mathematical Statistics II has been passed. A particular double-unit or up to two single-units may also form part of any scheduled IIIM subject offered by another department, subject to the approval of the Chairman of that department and the Psychology Department.

Full details of syllabuses for these subjects may be found under the degree of B.A. in the Faculty of Arts.

HONOURS DEGREE OF B.Sc.

AY89 Psychology for the Honours degree of B.Sc.

Candidates are required to give their full attendance for an entire academic year to a special course of study in the psychological laboratory. The course will include lectures and discussions on advanced topics. It will also involve the writing of a substantial essay and the presentation of a dissertation embodying the results of, and a survey of the literature relevant to, a research investigation carried out under the supervision of a member of the staff of the Department.

SOCIAL BIOLOGY.

(DOUBLE-UNIT FOR THE DEGREE OF BACHELOR OF SCIENCE)

B333 Social Biology.

Pre-requisite subjects: Two second-year half-subjects in Anthropology *or* two second-year half-subjects in Geography *or* the subject AY02 Psychology II *and* one of SJ02 Genetics II, SS02 Physiology II and SZ02 Zoology II. A student who has not passed *either* SJ02 Genetics II *or* AY02 Psychology II must have passed QT7H Statistics IH or another mathematical subject. A student who has not passed SJ02 Genetics II must have passed SJ7H Genetics and Human Variation IH.

B333 Social Biology is equivalent to one-third of a third-year subject and can be presented as a double-unit as part of SZ83 Zoology IIIM, SS83 Physiology IIIM *or* SJ03 Genetics III. It may be presented as part of only one subject.

The course will examine problems such as social stratification, migration, education and racial differences in the light of scientific argument about genetic diversity and the determination of behavioural patterns.

Preliminary reading:

Pringle, J. W. S. (ed.), *Biology and the human sciences* (O.U.P.).

Fuller, W. (ed.), *The social impact of modern biology* (Routledge and Kegan Paul).

Berger, P. L., *Invitation to sociology* (Pelican).

Text-books:

Young, J. Z., *An introduction to the study of man* (Clarendon Press or Oxford Paperback).

Dobzhansky, T., *Mankind evolving* (Yale U.P.).

Reference books:

Beteille, A. (ed.), *Social inequality* (Penguin).

Dyer, K. F., *The biology of racial integration* (Scientechnica).

Ehrman, L., and others (eds.), *Genetics environment and behaviour* (Academic Press).

Harrison, G. A., and Boyce, A. J. (eds.), *The structure of human populations* (O.U.P.).

Hudson, L. (ed.), *The ecology of human intelligence* (Penguin).

Montagu, A., *Man and aggression*, 2nd edition (O.U.P.).

Shipman, M. D., *The limitations of social research* (Longman).

ZOOLOGY.

EXAMINATIONS:

All assessments in Zoology include both practical and theoretical work; these cannot be taken separately.

PRACTICAL ZOOLOGY:

A record of all work done in the laboratory must be kept in a suitable notebook; these records will be inspected periodically and at the final assessment.

SZ01 Zoology I.

There will be seven hours of formal instruction each week of which not more than three will be spent on lectures.

The emphasis in this course is on the study of animals in relation to their environment. Some adaptations of animals that live in the sea, in fresh water and on land. Parasites and their environment.

The following topics are also dealt with: the principles of genetics, ecology, physiology and taxonomy, the mechanism of evolution, the nature of science and scientific method.

The lectures and the practical course centre around the following animals: *Amoeba, Euglena, Paramecium, Hydra, Dugesia, Megascolex, Cherax, Daphnia, Bufo; Ciona, Aldrichetta; Periplaneta, Helix, Rattus; Plasmodium, Fascolia, Taenia, Ascaris.*

Tutorials are given and discussions on topics concerned with human biology are held.

SZ01 Zoology I will be given for the last time in 1975. A student who fails in the final examination in 1975 will receive sympathetic consideration in regard to a supplementary examination. Should he fail in this supplementary examination, he will be expected to pass SZ71 Biology I as a pre-requisite for entry into SZ02 Zoology II.

Text-books:

Villee, C. A., and others, *General zoology*, 4th edition (Saunders).

Buchsbaum, R. M., *Animals without backbones*, vols. 1 and 2 (Penguin).

Hardin, G. J., *Science, conflict and society*, readings from Scientific American (Freeman). This book consists of selected articles from *Scientific American*. No lectures will be given on the book but prescribed articles are discussed at tutorials during the year.

Students should consult:

Romer, A. S., *Man and the vertebrates*, vols. 1 and 2 (Penguin).

Ramsay, J. A., *A physiological approach to the lower animals* (C.U.P.).

Dowdeswell, W. H., *The mechanism of evolution* (Heinemann).

Abercrombie, M., Hickman, C. J., and Johnson, M. L., *A dictionary of biology* (Penguin).

SZ02 Zoology II.

Pre-requisite subjects: SC01 Chemistry I and a pass at Division I standard or higher in SZ01 Zoology I *or* SZ71 Biology I. In special circumstances a candidate may be permitted to enrol in SZ02 Zoology II without the pre-requisite of SC01 Chemistry I, subject to the approval of the Chairman of the Department of Zoology.

The course is to be composed of about one third classical zoology which is functional morphology and evolution of complexity in invertebrates and vertebrates; one third cellular and animal physiology which is mechanisms, adaptations and evolution of physiological processes as well as a view of modern scientific method; and one third ecology and mechanisms of evolution. Statistics is taught as a method for dealing with biological data and is thus incorporated within the practical part of the course.

Text-books:

Campbell, R. C., *Statistics for biologists* (C.U.P.).
Russell-Hunter, W. D., *A biology of the higher invertebrates* (Macmillan).
Russell-Hunter, W. D., *A biology of lower invertebrates* (Macmillan).
Dobzhanzky, T. G., *Genetics of the evolutionary process* (Columbia U.P.).
Wood, D. W., *Principles of animal physiology* (Arnold).

Reference books:

Barnes, R. D., *Invertebrate zoology*, 2nd edition (Saunders).
Borradaile, L. A., and others, *The invertebrata*, 4th edition (C.U.P., 1961).
Bullough, W. S., *Practical invertebrate anatomy* (Macmillan).
Florkin, M., *Biochemical evolution*, edition translated and augmented by S. Morgulis (Academic Press).
Hyman, L. H., *The invertebrates*, vols. 1-6 (McGraw-Hill).
Kenyon, D. H., and Steinman, G., *Biochemical predestination* (McGraw-Hill).
Mayr, E., *Animal species and evolution* (Harvard U.P.).
Saunders, J. T., and Manton, S. M., *A manual of practical vertebrate morphology*, 4th edition (O.U.P.).
Watson, J. D., *Molecular biology of the gene*, 2nd edition (W. A. Benjamin).
Young, J. Z., *The life of the vertebrates*, 2nd edition (O.U.P.).
Loewy, A. G., and Siekevitz, P., *Cell structure and function*, 2nd edition (Holt, Rinehart and Winston).

THIRD-YEAR SUBJECTS IN ZOOLOGY.

Pre-requisite subject for all third-year subjects in Zoology: SZ02 Zoology II at Division I pass or higher standard.

The Department offers the following double-units:

Z301 Ecology and Marine Biology: First term.

Three lectures, one three-hour practical session and one six-hour practical session each week during first term (total 27 lectures, 81 hours' practical).

The half-day practicals will involve laboratory work on standard techniques, especially of marine ecology. The all-day practicals will be devoted to fieldwork in which small groups of students conduct their own projects in an intertidal habitat.

There will be a number of small-group discussions during the three-hour practical times.

Students will be assessed on assignments and practical work during the term, and in an examination.

About one-third of the course deals specifically with marine animals. The following topics will be discussed. The use of models in ecology. Studies of populations, communities and ecosystems from several viewpoints. Conditions in the sea; ocean currents, tides and waves, chemical composition, temperature of waters, the ocean floor, the intertidal zone. Ecology of plankton. Studies and management of fisheries. Aquaculture. Ecology of intertidal organisms. Man's influence on inshore waters.

Text-books:

Krebs, C. J., *Ecology. The experimental analysis of distribution and abundance* (Harper and Row).
Tait, R. V., *Elements of marine ecology*, 2nd edition (Butterworth).

Reference books:

Andrewartha, H. G., *Introduction to the study of animal populations*, 2nd edition (Methuen).

Andrewartha, H. G., and Birch, L. C., *The distribution and abundance of animals* (Chicago U.P.).

Elton, C. S., *Animal ecology* (Sidgwick and Jackson).

Ford, E. B., *Ecological genetics* (Methuen).

Ford, R. F., and Hazen, W. E., *Readings in aquatic ecology* (Saunders).

Hardy, A. C., *The open sea*, parts I and II (Collins).

Harvey, H. W., *The chemistry and fertility of seawaters* (C.U.P.).

Odum, E. P., *Fundamentals of ecology*, 3rd edition (Saunders).

Weyl, P. K., *Oceanography, an introduction to the marine environment* (Wiley).

Z302 COMPARATIVE BIOCHEMISTRY AND POLLUTION: First term.

The initial part of the course will be on evolution at a molecular level and this theme will be emphasised in the two text-books. Topics to be covered will include protein polymorphism, sequence homology, and biochemical taxonomy. Animals living in different habitats will be compared at the level of allosteric effects and substrate affinities of homologous proteins and at the level of qualitative and quantitative differences in metabolic pathways.

In its later part the course will feature an analysis of various aspects of pollution and related topics at various levels from the molecular to the social. Topics will include air pollution, water pollution, smoking, radiation, heavy metals, herbicides, pesticides and food additives.

Laboratory work will include electrophoretic studies on populations from polluted and non-polluted habitats and radio-isotope concentration in food chains.

Text-books:

Manwell, C., and Baker, C. M. A., *Molecular biology and the origin of species* (Sidgwick and Jackson).

Hochachka, P., and Somerco, G., *Strategies of biochemical adaptation* (Saunders).

Reference books:

Warren, C. E., *Biology and water pollution control* (Saunders).

Rudd, R. L., *Pesticides and the living landscape* (Wisconsin U.P.; Faber and Faber).

Parke, D. V., *The biochemistry of foreign compounds* (Pergamon).

Rothman, H., *Murderous providence: a study of pollution in industrial societies* (Bobbs-Merrill).

Z303 ENVIRONMENTAL PHYSIOLOGY: Third term.

Twenty-four lectures, seminars and practicals during the third term. The practical work consists of formal three-hour practicals throughout the term. As well students are divided into small groups and given a special project to develop throughout the term. Assessment is based on a formal examination at the end of the term and on practical work.

The course is concerned with how vertebrates are physiologically adapted to the environment in which they live. Emphasis will be placed on the adaptations of Australian vertebrates. Topics will include nutrition, osmotic regulation, reproduction and temperature regulation.

Text-book:

Gordon, M. S., *Animal physiology: principles and adaptations* (Macmillan, N.Y.).

Reference book:

Wessells, N. K., *Vertebrate adaptations*, readings from Scientific American (Freeman).

Tyndale-Biscoe, H., *Life of marsupials*, Contemporary Biology Series (Arnold).

Z304 CELLS AND EMBRYOS: Second term.

A course in developmental biology given jointly with Botany.

Fertilisation; normal and asymmetrical division of cells; differentiation of cells and regulation of cellular activities; movement of cells; induction of growth and form in embryos.

Text-book:

Ebert, J. D., and Sussex, I. M., *Interacting systems in development*, 2nd edition (Holt).

Reference books:

Dowben, R. M., *Cell biology* (Harper and Row).

Du Praw, E. J., *Cell and molecular biology* (Academic Press).

Torrey, J. G., *Development in flowering plants* (Macmillan).

Z305 SYSTEMATICS AND BIOGEOGRAPHY: Third term.

Twenty-four lectures or tutorials and twenty-four practicals during third term.

Where possible, tutorials stemming from specified reading will be given in place of formal lectures. A proportion of the practicals will also be conducted informally, with each student investigating his or her own project in field and laboratory. Students will be assessed from their practical work and by means of essays. Topics discussed will include the following: Aspects of variation in relation to distribution; concepts of the species; function and taxonomic importance; types of classification; essentialism and weighting; phylogenetic systematics; numerical taxonomy and biogeography; taxonomic characteristics of the biota of isolated islands and lakes, high mountains, and the tropics; latitudinal gradients in diversity; relict faunas; the distribution of plants and animals in the southern cold temperate zone.

Text-book:

Mayr, E., *Principles of systematic zoology* (McGraw-Hill).

Reference books:

Cain, A. J. (ed.), *Function and taxonomic importance* (Systematics Association, London).

Darlington, P. J., *Zoogeography: the geographical distribution of animals* (Wiley).

Darlington, P. J., *The biogeography of the southern end of the world* (Harvard U.P.).

Good, R. D., *The geography of the flowering plants*, 3rd edition (Longmans).

International Congress of Zoology, 15th London, 1958. *International code of zoological nomenclature*, ed. N. R. Stoll and others (Internat. Trust for Zool. Nomenclature).

Mayr, E., *Animal species and evolution* (Harvard U.P.).

Mayr, E., and others, *Methods and principles of systematic zoology* (McGraw-Hill).

Hennig, W., *Phylogenetic systematics* (Illinois U.P.).

Z306 LIMNOLOGY: Second term.

An introductory course to the basic physical, chemical and biological characteristics of inland waters, with emphasis on ecological aspects and Australian environments. River pollution, eutrophication and other applied limnological topics will also be discussed.

Recommended text-books:

Bayly, I. A. E., and Williams, W. D., *Inland waters and their ecology* (Longman).

Ruttner, F., *Fundamentals of limnology* (University of Toronto Press).

Williams, W. D., *Australian freshwater life: the invertebrates of Australian inland waters* (Sun Books).

Additional reading:

Aston, H. I., *Aquatic plants of Australia* (Melbourne University Press).

Hutchinson, G. E., *A treatise on limnology*, vols. I and II (Wiley).

Hynes, H. B. N., *The ecology of running waters* (Liverpool University Press).

Lake, J. S., *Freshwater fishes and rivers of Australia* (Nelson).

Russell-Hunter, W., *Aquatic productivity* (Collier-Macmillan).

Weatherley, A. H. (ed.), *Australian inland waters and their fauna: eleven studies* (Australian National University Press).

Weatherley, A. H., *Growth and ecology of fish populations* (Academic Press).

The subjects offered are:

SZ03 Zoology III.

A group C subject. Any three double-units from the above list taken with the approval of the Chairman of the Department.

SZ73 Zoology IIIE.

A group E subject. With the approval of the Heads/Chairmen of Departments concerned double-unit Z301 *or* Z302, combined with QT02 Mathematical Statistics II or SY02 Biochemistry II.

This combination will be available for the last time in 1975.

SZ83 Zoology IIIM.

A group C subject. With the approval of the Heads/Chairmen of the Departments concerned, a combination of two double-units from the above list (two terms' work), together with two units or one double-unit (one term's work) in another department. B333 Social Biology will be acceptable. (For syllabus see above under "Social Biology".)

Students who wish to enrol for SZ83 Zoology IIIM and then to take an Honours degree in Zoology should consult the Chairman of the Department before they enrol for SZ83 Zoology IIIM.

SZ71 Biology I.

A course consisting of two lectures, one tutorial and approximately 4 hours of practical work each week throughout the year. Both day and evening classes will be held.

The course includes: an introduction to the structure, physiology and functional evolution of plants and animals; elementary biochemistry, cell physiology and genetics; the mechanisms of evolution, and the principles of ecology.

Text-books:

Villee, C. A., and others, *General zoology*, 4th edition (Saunders).

Raven, P. H., and Curtis, H., *Biology of plants* (Worth).

Reference books:

Browning, T. O., *Animal populations* (Hutchinson).

Holdren, J. P., and Ehrlich, P. R. (ed.), *Global ecology* (Harcourt Brace Jovanovich).

Galston, A. W., *The life of the green plant*, 2nd edition (Prentice-Hall).

Hardin, G., *Biology, its principles and implications*, 2nd edition (Freeman).

Johnson, W. H., and others, *Biology*, 3rd edition (Holt, Rinehart and Winston).

HONOURS DEGREE.

SZ99 Zoology for the Honours degree of B.Sc.

Students enrolled in SZ03 Zoology III or SZ83 Zoology IIIM who wish to take an Honours degree in Zoology should consult the Chairman of the Department some time during the third year.

Candidates are expected to attain a higher standard in general zoology than that required for the Ordinary degree. To this end, a course of reading and several essays are prescribed. In addition, candidates are expected to study more deeply one branch of Zoology, and to carry out research as an exercise in scientific method.

Students are expected to begin work during the long vacation, and to work full-time at their courses throughout the year.

OF THE DEGREE OF

MASTER OF SCIENCE
IN THE FACULTY OF SCIENCE

REGULATIONS

†1. The following persons may become candidates for the degree of Master of Science in the Faculty of Science (a) Bachelors of Science, (b) Bachelors of Agricultural Science, and (c) other graduates whose academic qualifications are accepted by the Faculty of Science as sufficient:

Provided that, subject to the approval of the Council, the Faculty may, in special cases and subject to such conditions (if any) as it may see fit to impose in each case, accept as a candidate for the degree a person who does not hold a degree of a university, but has given evidence satisfactory to the Faculty of his fitness to undertake work for the degree.

°1A. Unless the candidate has obtained the Honours Degree of Bachelor of Science or of Agricultural Science he shall, before submitting his thesis as provided for in regulation 4, pass such qualifying examination as the Faculty may in the circumstances deem proper.

2. Subject to conditions to be determined in each case a graduate of a university recognised by the University of Adelaide, whose degree is accepted by the Faculty of Science as equivalent to one of the qualifications required in regulation 1, may be allowed by the Council to proceed to the degree in compliance with these regulations. Every such candidate must spend at least three consecutive academic terms or twelve calendar months at the University of Adelaide or at an institution approved for the purpose by the University of Adelaide.

°°3. A candidate who holds the Honours degree of Bachelor of Science or Bachelor of Agricultural Science or its equivalent in a University recognised by the University of Adelaide may proceed to the degree of Master of Science in the Faculty of Science at the expiration of one year from the date of his admission to the Honours degree of Bachelor; no other candidate shall proceed to the degree before the expiration of two years from the date of the beginning of his candidature.

° Allowed 14 December, 1944; amended 15 January, 1959, 12 December, 1963, and 28 February, 1974.
† Amended 4 April, 1963, and 28 February, 1974.
°° Amended 28 February, 1974.

°°4. To qualify for the degree a candidate shall submit a thesis upon an approved subject and shall adduce sufficient evidence that the thesis is his own work. The thesis shall give the results of original research or of an investigation on which the candidate has been engaged. A candidate may also submit other contributions to science in support of his candidature.

*5. A person seeking enrolment as a candidate for the degree shall apply to the Academic Registrar and shall submit as part of his application, a statement of his academic standing, accompanied, in the case of a person who is not a graduate of the University of Adelaide, by acceptable proof of such standing and an outline of the research work or investigation on which he intends to submit a thesis. The Faculty of Science, if it approve the subject of his research, may appoint a supervisor to guide the candidate in his work. The candidate shall submit his thesis not earlier than three terms and, except by special permission of the Faculty, not later than nine terms after approval by the Faculty of the subject of his research.

‡6. The Faculty shall appoint a Board of Examiners to report upon the thesis and any supporting papers that the candidate may submit. The Board of Examiners may require any candidate to pass an examination in the branch of science to which his original research or investigation is cognate.

†7. A candidate for the degree of Doctor of Philosophy or Doctor of Science whose work is considered by the Faculty, after report by the examiners appointed to adjudicate upon it, not to be of sufficient merit to qualify for the degree of Doctor but of sufficient merit for the degree of Master may be admitted to the degree of Master provided that he is qualified to become a candidate for the degree.

††8. On completion of his work a candidate shall lodge with the Academic Registrar three copies of his thesis prepared in accordance with directions given to candidates from time to time.*

§§9. A candidate's progress shall be reviewed by the Faculty annually. If in the opinion of the Faculty of Science a candidate is not making satisfactory progress the Faculty may, with the consent of the Council, withdraw its approval of his candidature and the candidate shall cease to be enrolled for the degree.

‡‡10. A candidate who complies with the foregoing conditions and satisfies the Board of Examiners shall on the recommendation of the Faculty of Science be admitted to the degree of Master of Science in the Faculty of Science.

§11. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 7 December, 1939.
°° Amended 12 December, 1963.
§ Allowed 18 October, 1956.
†† Allowed 16 March, 1961.
‡ Allowed 14 December, 1944.
† Amended 8 December, 1949.
‡‡ Allowed 28 February, 1974.
§§ Awaiting allowance at time of printing.
* Published in "Notes and Instructions to candidates for Higher Degrees": *see* Table of Contents.

OF THE DEGREE OF

DOCTOR OF SCIENCE

IN THE FACULTY OF SCIENCE

REGULATIONS

*1. (a) Subject to these regulations a person who has been admitted in the University of Adelaide to an Honours degree of Bachelor or a degree of Master in Science, Agricultural Science, Applied Science or Engineering, or to the degree of Doctor of Philosophy in a field of study approved by the Faculty of Science, may proceed to the degree of Doctor of Science in the Faculty of Science.

(b) On the recommendation of the Faculty of Science the Council may accept as a candidate for the degree a person who has been admitted to a degree in the University of Adelaide other than one named in section (a) of this regulation, or who is a graduate of another university or institution of higher education recognised by the University of Adelaide and has a substantial association with the University; provided that in each case the graduate concerned has, in the opinion of the Faculty of Science, had an adequate scientific training.

†(c) On the recommendation of the Faculty of Science the Council may, in special cases, accept as a candidate for the degree a person who does not hold a degree of a university or institution of higher education, provided that in each case the candidate concerned has a substantial association with the University and has, in the opinion of the Faculty of Science, adequate scientific credentials.

†(d) Except where a person has been accepted as a candidate under regulation 1(c), no person shall be accepted as a candidate for the degree of Doctor of Science in the Faculty of Science before the expiration of five years from the date of his original graduation.

2. (a) A person who desires to become a candidate for the degree shall give notice of his intended candidature in writing to the Academic Registrar and with such notice shall furnish particulars of his scientific achievements and of the work which he proposes to submit for the degree.

* Amended 28 February, 1974.
† Awaiting allowance at time of printing.

(b) The Faculty of Science shall appoint a committee to examine the information submitted and to advise the Faculty on whether the Faculty should—(i) allow the applicant to proceed, and approve the subject or subjects of the work to be submitted; *or* (ii) advise the applicant not to submit his work: and the Faculty's decision shall be conveyed to the applicant.

(c) If it accept the candidature and approve the subject or subjects of the work to be submitted the Faculty shall nominate examiners of whom one at least shall be an external examiner.

3. (a) To qualify for the degree the candidate shall furnish satisfactory evidence that he has made an original contribution of distinguished merit adding to the knowledge or understanding of any subject with which the Faculty is directly concerned.

(b) The degree shall be awarded primarily on a consideration of such of his published works as the candidate may submit for examination.

(c) The candidate in submitting his published works shall state generally in a preface and specifically in notes the main sources from which his information is derived and the extent to which he has availed himself of the work of others, especially where joint publications are concerned. He may also signify in general terms the portions of his work which he claims as original.

(d) The candidate is required to indicate what part, if any, of the work he has submitted for a degree in this or any other University.

4. The candidate shall lodge with the Academic Registrar three copies of the work prepared in accordance with the directions given in sub-paragraph (b) of clause 2B of Chapter XXV of the Statutes. If the work is accepted for the degree the Academic Registrar will transmit two of the copies to the University Library.

*5. A candidate who complies with the foregoing conditions and satisfies the examiners may, on the recommendation of the Faculty of Science, be admitted to the degree of Doctor of Science in the Faculty of Science.

6. The fees to be paid by candidates shall be prescribed from time to time by the Council. The schedule of fees so prescribed shall be published in the University Calendar.

Regulations allowed 4 November, 1965.
* Amended 28 February, 1974.

FACULTY OF TECHNOLOGY AND APPLIED SCIENCE

REGULATIONS, SCHEDULES AND SYLLABUSES OF DEGREES

Bachelor of Technology (B.Tech.)

Regulations and Schedules - - - - - - 1054
Syllabuses - - - - - - - - - 1065
Building Technology - - - - - - - 1066
Civil Engineering - - - - - - - - 1067
Surveying - - - - - - - - - 1070
Electrical Engineering - - - - - - 1071
Electronic Engineering - - - - - - 1072
Mechanical Engineering - - - - - - 1073
General Studies Electives - - - - - - 1101

Bachelor of Applied Science (B.App.Sc.)

Regulations and Schedules - - - - - - 1075
Syllabuses - - - - - - - - - 1087
Applied Chemistry - - - - - - - 1088
Applied Physics - - - - - - - - 1089
Primary Metallurgy - - - - - - - 1090
Secondary Metallurgy - - - - - - - 1091
Mineral Engineering - - - - - - - 1092
Data Processing - - - - - - - - 1094
General Studies Electives - - - - - - 1101

Bachelor of Pharmacy

Regulations and Schedules - - - - - - 1095
Syllabuses - - - - - - - - - 1099
Pharmacy Subjects - - - - - - - 1100
General Studies Electives - - - - - - 1101

OF THE DEGREE OF

BACHELOR OF TECHNOLOGY

REGULATIONS

NOTE: This course is being discontinued. No new enrolments have been accepted since 1969, except as provided under Regulation 9.

1. There shall be an Ordinary degree of Bachelor of Technology.

*2. Schedules defining the courses of study, including lectures, laboratory and other practical work to be undertaken, the examinations to be passed and the fees to be paid by candidates, shall be drawn up by the Faculty of Technology and Applied Science and submitted to the Councils of the University and the South Australian Institute of Technology.

Such schedules shall become effective as from the date of approval by both Councils or such other date as the Councils may determine, and shall be published in the next University Calendar which is issued after that approval has been given.

†3. §(a) To qualify for the degree of Bachelor of Technology a candidate must regularly attend such tutorials as may be prescribed and do written, laboratory and other practical work, where such is required, and pass examinations in the subjects prescribed for one of the following courses:

Building Technology,
Civil Engineering,
Electrical Engineering,
Electronic Engineering,
Mechanical Engineering,
Surveying,

*(b) Before being admitted to the degree a candidate shall also satisfy the Faculty of Technology and Applied Science that he has fulfilled the requirements in practical experience that are prescribed in the schedule relating thereto.

† Amended 15 January, 1959, 17 December, 1959, 16 March, 1961, 4 October, 1962, 4 April, 1963, 22 December, 1966.
* Amended 12 December, 1963, and 28 January, 1965.
§ Amended 24 December, 1969.

4. (a) All annual examinations, other than supplementary, shall take place towards the end of the academic year, except that practical examinations and examinations in a subject in which the course of instruction has been completed by the end of the second term, may be held at any convenient time fixed by the Faculty.

§(b) A candidate shall enter for examination on the form and by the date prescribed by the Council, but shall not be eligible to present himself for examination unless he has regularly attended the prescribed tutorials and has done written and laboratory or other practical work where required to the satisfaction of the professors and lecturers concerned.

(c) Written and practical work done by candidates at the direction of the professors or lecturers and the results of terminal or other examinations in any subject may be taken into consideration at the final examination in that subject.

**(d) There shall be three classifications of pass at the annual examination in any subject or division of a subject for the degree, as follows: Pass with Distinction, Pass with Credit, Pass. The names of candidates who pass with Distinction or with Credit shall be arranged in order of merit within the classification; the names of other candidates who pass shall be arranged in alphabetical order.

††‡(e) A candidate who fails to pass in any subject shall again attend tutorials and do practical work in that subject to the satisfaction of the professors and lecturers unless exempted by the Faculty of Technology and Applied Science. Any such exemptions will hold for one academic year only.

(f) Supplementary examinations will be held only in special circumstances approved by the Faculty after consideration of individual cases.

*(g) Except by permission of the Faculty a candidate shall not be admitted to the class in any subject for which he has not completed the pre-requisite work prescribed in the syllabus for that subject.

‡5. Except in case of illness or other sufficient cause allowed by the Faculty, no candidate shall be credited in any year with attendance at tutorials or laboratory work in a subject unless he has attended at least three-fourths of the tutorials and laboratory work respectively in that subject.

‡6. No candidate shall be granted exemption from attendance at tutorials or practical work except upon grounds approved by the Faculty.

7. A candidate who has twice failed to pass the examination in any subject or division of a subject may not present himself again for instruction or examination therein unless his plan of study is approved by the Dean. If he fails a third time he may not proceed with the subject again except by special permission of the Faculty, and under such conditions as the Faculty may prescribe.

* Allowed 9 January, 1958.
** Amended 22 December, 1966.
† Amended 12 December, 1963.
‡ Amended 24 December, 1969.
§ Amended 24 December, 1969.

For the purpose of this regulation a candidate who is refused permission to sit for examination in any subject or division of a subject shall be deemed to have failed to pass the examination.

°°8. A student who has passed examinations *in pari materia* in another faculty or otherwise, or who desires that his work at other universities or technical schools should be counted *pro tanto* for the degree of Bachelor of Technology may on application be granted such exemption from the requirements of the regulations as the Councils shall determine.

§9. Only those candidates who had entered upon the course for the degree in or before the academic year 1969 will be permitted to enrol in the course for the degree after 31 December, 1969, provided that candidates who had entered upon the courses for an Associateship Diploma of the South Australian Institute of Technology at Whyalla or Port Pirie in or before the academic year 1966 will be permitted to enrol for the degree on such conditions as the Council may approve. Such students will be eligible to proceed to the degree under these Regulations provided that they qualify for the degree not later than 31 March, 1976, unless the Council approve an extension of time in a particular case under clause 5 of Chapter XXV of the Statutes.

Regulations allowed 20 December, 1956.
°° Amended 22 December, 1966.
§ Amended 21 December, 1967 and 17 December, 1970.

SCHEDULES

(Made by the Council under Regulation 2.)

NOTE: Syllabuses of subjects for the degree of B.Tech. are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

1. Approval of Courses

Each candidate must obtain the approval of the Director of Studies of the Faculty for his proposed course of study.

2. Arrangement of Courses

The course shall occupy three years of full-time study. Details of these courses are set out in clauses 4 to 9.

3. Completion of Subjects

Except by permission of the Faculty, a candidate may not enrol for subjects in the second or third year of the course before he has passed the examinations in all of the subjects prescribed in the Schedules for the previous year of the course.

4. Building Technology

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
TM91	Mathematics IB	Lectures Tutorial	3 2
TP91	Applied Physics IR	Lectures Tutorial Practical	2 1 2
TH81	Engineering Chemistry and Materials	Lectures Practical	2 3
TB21	Tectonics I	Lectures Tutorial Practical	3 1 6
	A General Studies Elective (see Schedule 11)	Tutorials	2

SECOND YEAR

TB02	Building Science IR	Lectures Practical	2 3
TB12	Design of Structures IR	Lectures Tutorial Practical	1 1 2
TB22	Tectonics IIB	Lectures Practical	2 7
TC62	Surveying IB	Lectures Practical	1 3
TB92	Building Law	Lectures Tutorial	2 1
	A General Studies Elective (see Schedule 11)	Tutorials	2
	Vacational Report (First)		

THIRD YEAR

TB03	Building Science IIR	Lectures Practical	2 3
TB13	Design of Structures IIR	Lectures Tutorial Practical	1 1 2
TB23	Tectonics IIIB	Lectures Practical	2 5
TA93	Building Accountancy	Lectures Tutorials	2 2
TM83	Contract Programming	Lectures Tutorial Practical	2 1 2
	A General Studies Elective (see Schedule 11)	Tutorials	2
	Vacational Report (Second)		

5. Civil Engineering

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
TM01	Mathematics IA	Lectures Tutorials	3 2
TP01	Applied Physics I	Lectures Tutorial Practical	3 1 2
TH81	Engineering Chemistry and Materials	Lectures Practical	2 3
TK61	Engineering Mechanics IA	Lectures Tutorial Practical	2 1 1[1]
TC61	Civil Drawing	Practical	3
TK71	Basic Engineering Techniques (Part Course)	Lectures Practical	1 3[1]
	A General Studies Elective (see Schedule 11)	Tutorials	2

SECOND YEAR

TM02	Mathematics IIA	Lectures Tutorials	3 2
TC12	Civil Engineering IIA(T)	Lectures Tutorials Practical	2 2 3
TC22	Civil Engineering IIB(T)	Lectures Tutorial Practical	3 1 3
TC01	Surveying I	Lectures Tutorial Practical	2 1 3[2]
TE72	Electrical Engineering SC(T)	Lectures Practical	1 2[2]
	A General Studies Elective (see Schedule 11)	Tutorials	2
	Vacational Report (First)		

THIRD YEAR

TC13	Civil Engineering IIIA(T)	Lectures Tutorials Practical	3 3[1] 2
TC23	Civil Engineering IIIB(T)	Lectures Tutorials	4 3
TC33	Civil Engineering IIIC(T)	Lectures Practical	3 3[2]
TC93	Structural Design	Practical	4
TC53	Engineering Computations	Lectures Practical	1 2
	A General Studies Elective (see Schedule 11)	Tutorials	2
TC82	Survey Camp		
	Vacational Report (Second)		

6. SURVEYING

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
TM01	Mathematics IA	Lectures Tutorials	3 2
TP01	Applied Physics I	Lectures Tutorial Practical	3 1 2
TC01	Surveying I	Lectures Tutorial Practical	2 1 3
TN12	Applied Geology I	Lectures Tutorial Practical	2 1 3
	A General Studies Elective (see Schedule 11)	Tutorials	2

SECOND YEAR

TM02	Mathematics IIA	Lectures Tutorials	3 2
TC02	Surveying IIA	Lectures Tutorials Practical	2 3 3
TC72	Surveying IIB	Lectures Tutorials Practical	4 3 3
TB82	Land Use	Lectures	1
TC92	Cartography	Practical	4
	A General Studies Elective (see Schedule 11)	Tutorials	2
TC82	Survey Camp	—	—
	Vacational Report (First)		

THIRD YEAR

TC03	Surveying III	Lectures Practical	$4\frac{1}{2}$ [2] $2\frac{1}{2}$ [1]
TC63	Geodesy	Lectures Tutorials	3 3
TC83	Photogrammetry	Lectures Practical	3 6
TC43	Engineering (T)	Lectures Tutorial Practical	2 1 3
	A General Studies Elective (see Schedule 11)	Tutorials	2
	Vacational Report (Second)		

7. Electrical Engineering

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
TM01	Mathematics IA	Lectures	3
		Tutorials	2
TP01	Applied Physics I	Lectures	3
		Tutorial	1
		Practical	2
TH81	Engineering Chemistry and Materials	Lectures	2
		Practical	3
TE91	General Electrical Engineering A	Lectures	1
		Tutorial	1
TK81	Basic Engineering Techniques	Lectures	1
		Practical	3
	A General Studies Elective (see Schedule 11)	Tutorials	2

SECOND YEAR

TM12	Mathematics IIB	Lectures	2
		Tutorials	2[2]
TE02	Electrical Engineering IA	Lectures	2
		Tutorial	1
		Practical	2
TE12	Electrical Engineering IB	Lectures	2
		Practical	2
TK92	Mechanical Design S	Lectures	1
		Tutorial	1
		Practical	3
TK82	Thermo-Fluid Dynamics I	Lectures	2
		Tutorial	1
		Practical	2[2]
	A General Studies Elective (see Schedule 11)	Tutorials	2
	Vacational Report (First)		

THIRD YEAR

TE03	Electrical Engineering IIA	Lectures	3
		Tutorials	3
		Practical	4
TE13	Electrical Engineering IIB	Lectures	1[2]
		Practical	2[1], 3[1]
TE93	Automatic Control I	Lectures	1
		Tutorial	1
		Practical	2
TM13	Mathematics IIC	Lectures	1
		Tutorial	1[2]
TL53	Applied Electronics	Lectures	1
		Practical	2
	A General Studies Elective (see Schedule 11)	Tutorials	2
	Vacational Report (Second)		

8. Electronic Engineering

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
TM01	Mathematics IA	Lectures	3
		Tutorials	2
TP01	Applied Physics I	Lectures	3
		Tutorial	1
		Practical	2
TH81	Engineering Chemistry and Materials	Lectures	2
		Practical	3
TE91	General Electrical Engineering A	Lectures	1
		Tutorial	1
TK81	Basic Engineering Techniques	Lectures	1
		Practical	3
	A General Studies Elective (see Schedule 11)	Tutorials	2

SECOND YEAR

TM12	Mathematics IIB	Lectures	2
		Tutorials	2[2]
TP92	Physics IIE	Lectures	2[1], 1[2]
		Tutorial	1
		Practical	3
TE82	Electrical Engineering SE(T)	Lectures	2
		Practical	2
TL02	Electronic Engineering IA	Lectures	2
		Tutorial	1
		Practical	2
TL12	Electronic Engineering IB	Lectures	2
		Tutorial	1
		Practical	2
	A General Studies Elective (see Schedule 11)	Tutorials	2
	Vacational Report (First)		

THIRD YEAR

TM13	Mathematics IIC	Lectures	1
		Tutorials	1[2]
TL03	Electronic Engineering IIA	Lectures	2
		Tutorial	1
		Practical	3
TL13	Electronic Engineering IIB	Lectures	2
		Tutorial	1
		Practical	3
TL23	Electronic Engineering IIC	Lectures	1
		Tutorial	1
		Practical	4
TE93	Automatic Control I	Lectures	1
		Tutorial	1
		Practical	2
	A General Studies Elective (see Schedule 11)	Tutorials	2
	Vacational Report (Second)		

9. Mechanical Engineering

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
TM01	Mathematics IA	Lectures Tutorials	3 2
TP01	Applied Physics I	Lectures Tutorial Practical	3 1 2
TH81	Engineering Chemistry and Materials	Lectures Practical	2 3
TK01	Engineering Mechanics I	Lectures Tutorial Practical	2^2, 1^1 1 1^1
TK91	Engineering Drawing	Practical	3
TK11	Engineering Manufacturing Practice I	Lectures Practical	1 3
	A General Studies Elective (see Schedule 11)	Tutorials	2

SECOND YEAR

TM12	Mathematics IIB	Lectures Tutorials	2 1^2
TK82	Thermo-Fluid Dynamics I	Lectures Tutorial Practical	2 1 3^2
TK02	Engineering Mechanics II	Lectures Practical	4 3
TK22	Mechanical Design I	Lectures Tutorial	1 3
TK12	Production Technology I(T)	Lectures Practical	2 3
	A General Studies Elective (see Schedule 11)	Tutorials	2
	Vacational Report (First)		

THIRD YEAR

TM13	Mathematics IIC	Lectures Tutorials	1 1^2
TK33	Thermo-Fluid Dynamics II	Lectures Tutorials Practical	2 1^2 3^2
TK03	Engineering Mechanics III	Lectures Tutorial	1 1
TK23	Mechanical Design II	Lectures Tutorial	1 1
TK13	Production Technology II(T)	Lectures Tutorials Practical	2 1^1 3^2
TK93	Mechanical Engineering Projects	Practical	6
TK83	Electrical and Civil Engineering (S)	Lectures Practical	3 2
	A General Studies Elective (see Schedule 11)	Tutorials	2
	Vacational Report (Second)		

10. Practical Experience

To fulfil the requirements in respect of practical experience required under regulation 3(b) a candidate shall:

(a) submit two reports satisfactory to the Faculty on work that he has undertaken during vacations, each report covering a period of not less than two months and at least one period being spent in work related to the student's professional interests; *or*

(b) submit a report satisfactory to the Faculty on work relevant to his professional interests that he has undertaken for at least six months in full-time employment.

The service of the student must be certified by the student's employer during the period concerned.

A student who had entered upon the course for the degree in or before 1964 may fulfil the requirements relating to practical experience by submitting evidence satisfactory to the Faculty of his having had six months' practical experience in work relevant to his professional interests.

11. General Studies Elective

In addition to passing in all of the subjects prescribed for each year of the course, each student must complete three of the following General Studies courses:

Subject No. in Syllabus	Subject
TG91	Social and Technological History
TG81	Literature and Society
TG71	Social and Technological History (C.E.)
TG61	Social and Technological History (S)
TG51	Science and Modern Society
TG41	German Life and Literature
TG31	Political Science
TG21	International Affairs—Asia
TG92	Music
TG82	Philosophy
TG72	The Development of Economic Society
TG62	Psychology and Human Organisation
TG52	Design and Invention
TG42	Japanese Language and Culture

OF THE DEGREE OF

BACHELOR OF TECHNOLOGY

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed. Lists of books are not given. Such lists are supplied to students early in the academic year by the lecturers concerned.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus Numbers:

The first letter identifies the Faculty of Technology and Applied Science: T.

The second letter identifies the School (of the S.A. Institute of Technology) teaching the subjects, as follows:

Accounting	A	General Studies	G
Building	B	Mathematics	M
Chemical Technology	H	Mechanical Engineering	K
Civil Engineering	C	Mineral Engineering	T
Electrical Engineering	E	Physics	P
Electronic Engineering	L		

The first digit—

0–3: Indicates (except in Mathematics: 0–2) that the subject is in sequence with another subject.

4–9: Indicates (except in Mathematics 3–9) that the subject is not in sequence with another subject.

The second digit—

1–4: Indicates year of subject, e.g. first, second, third or fourth.

Syllabuses:

Hours a week—

The figures at the right-hand side of the syllabus number and title indicate, respectively:

Number of lectures a week—number of hours of tutorial work a week—number of hours of practical work a week, throughout the three terms of the academic year.

A figure with a suffix, such as 2^2, means two hours a week for two terms.

Thus $2–2^2–1$ indicates a subject having two lectures and one hour of practical work a week throughout the year, and two hours a week of tutorial work for two terms.

BACHELOR OF TECHNOLOGY (BUILDING TECHNOLOGY).

THIRD YEAR*

TB03 Building Science IIR. (2–0–3)

Timber and metallic alloys as building materials. Further studies in sun, heat, light and sound. Design problems. Heating, cooling, ventilation, intra-building transportation. Gas, electrical, water and sanitary services.

TB13 Design of Structures IIR. (1–1–2)

Statically indeterminate structures. Plastic behaviour. Soil mechanics. Arches. Design of elements and simple statically indeterminate structures in steel, concrete (plain and pre-stressed), timber.

TB23 Tectonics IIIB. (2–0–5)

Industrialised building components, erection and construction of large buildings. Heavy construction. Site reports, visits and projects. (Option.) Quantity surveying methods for more advanced buildings and structures. Cost-planning. Professional quantity surveying. Site and head office administration.

TA93 Building Accountancy. (2–2–0)

The nature and purposes of accounting; basic accounting concepts; the accounting framework and the recording of transactions; income measurement and valuation problems; financial reporting; analysis and interpretation of financial and operating statements; limitations inherent in accounting reports; accounting for different forms of business ownership; cost accumulation, analysis and control; sources and application of funds; business finance.

TM83 Contact Programming (Computer Programming). (2–1–2)

Fortran computer language. Network analyses. Simulation techniques. Critical path methods. Cost, time and resource variable.

A General Studies Elective. (0–2–0)

For syllabuses see below, after Pharmacy.

* For syllabuses of First- and Second-Year subjects: *see* Calendar for 1974.

BACHELOR OF TECHNOLOGY (CIVIL ENGINEERING).

SECOND-YEAR MATHEMATICS SUBJECTS.

TM02 Mathematics IIA. (3–2–0)

TM12 Mathematics IIB. (2–2–0)

TM13 Mathematics IIC. (1–1–0)

The subject matter of Mathematics II is divided into units which are identified by a number. Only one unit of a given number can be submitted for course credit.

The subject award Mathematics IIA, IIB or IIC indicates success in 6, 4 or 2 units. The units approved for the various courses are set out below:

COURSE AND SUBJECT	APPROVED UNITS
Mathematics IIA	
Applied Physics	1, 2, 3, 4, 5, 6
Civil Engineering	1, 2, 3, 4, 5, 6
Surveying	1, 2, 3, 4, 5, 6
Mathematics IIB	
Applied Geology	2, 3, 5, 6
Applied Chemistry	1, 2, 5, 6
Mechanical Engineering (2nd Year)	1, 2, 5, 6
Mineral Engineering (2nd Year)	1, 2, 5, 6
Primary Metallurgy	1, 2, 5, 6
Secondary Metallurgy	1, 2, 5, 6
Electrical Engineering (2nd Year)	1, 2, 3, 5
Electronic Engineering (2nd Year)	1, 2, 3, 5
Data Processing (Option T)	1, 2, 3, 7
Data Processing (Options M and G)	10, 11, 12, 13
Business Administration	10, 11, 12, 13
Mathematics IIC	
Electrical Engineering (3rd Year)	6, 8
Electronic Engineering (3rd Year)	6, 8
Mechanical Engineering (3rd Year)	3, 4
Mineral Engineering (3rd Year)	3, 4

UNIT 1.

Matrices and linear algebra: basic concepts and properties, special forms, transformations, systems of linear equations, eigenvalues and eigenvectors. Markov chains.

UNIT 2.

Ordinary differential equations: laplace transforms, elementary numerical methods. Partial differential equations: basic solutions, separation of variables method, use of Fourier series.

UNIT 3.

Vector calculus: differentiation of vectors, div. grad. and curl; integration and integral theorems; introduction to tensor notation.

UNIT 4.

Complex variable analysis: functions of a complex variable; differentiation, integration, series, conformal, mapping; applications.

UNIT 5.

Fortran programming: input and output statements, arithmetic statements, transfer of control statement, standard routines, subroutines.

UNIT 6.

Statistics: probability; representation of data, measures of location and dispersion: normal, binomial and Poisson distribution; quality control, significance testing, sampling, linear regression.

UNIT 7.

Gamma, beta and error functions; orthogonal functions including Legendre polynomials; series solutions of ordinary differential equations including Bessell functions. Asymptotic expansions.

UNIT 8.

Elementary numerical mathematics: solution of equations; finite difference methods; integration; approximation; solution of differential equations.

UNIT 9.

Statics of ideal flexible cables, beams and columns. Dynamics of systems of particles, plane motion of rigid bodies, 3D rotation of rigid body about a fixed point. Vibrations. Introduction to Lagrangian methods.

UNIT 10.

Recurrence relations; Markov chains; queueing theory; queue lengths for M/M/1: waiting time; simulation for discrete system.

UNIT 11.

Matrices: Arith operations, inverse row operations, solution of equations, rank. Linear programming; Formulation. Simplex method, using the computer; transportation type problem (method).

UNIT 12.

Graphs and network arcs, vertices, paths, matrix representation; critical path methods, network diagram; project time; float; computer package.

UNIT 13.

Analysis of variance; multiple linear regression; experimental design.

THIRD YEAR*

TC13 Civil Engineering IIIA (T). (3–3½–2)

Influence lines for determinate structures, deflection of structures, graphical methods. Moment distribution in rigid frames, column analogy. Prestressed and reinforced concrete, ultimate design, composite construction, plastic analysis of steel structures. Model analysis of structures. Practical work in the laboratory and drawing office in conjunction with the above.

TC23 Civil Engineering IIIB (T). (4–0–3)

Traffic data, geometric design of highways and railways, pavement materials and types, design of pavements, earthworks and drainage. Transportation engineering, airports, highways, railways. Plastic states in soil and applications to retaining wall and foundation problems. Consolidation theory. Effective stress theories and stress paths. Elastic stress distribution. Settlement computations. Slopes. Earth dams, including seepage problems. Construction of foundations—cofferdams and caissons. Unsteady flow in closed conduits pipelines with pumps and turbines, water hammer, surge tank analysis. Open channel flow—wave motion; energy dissipators for hydraulic structures, cavitation. Boundary layer theory, fluid forces on a body in a free stream, flow through porous media, sediment transport. Laws of similarity for hydraulic and aerodynamic models. Hydrology; water resources planning. Water supply, sources, storage, treatment and distribution, sewerage systems, treatment and disposal.

TC33 Civil Engineering IIIC (T). (3–0–3²)

Professional practice, report-writing, public speaking; a short course on the elements of design (aesthetics). Management aspects of construction, including—planning of construction, principles of organisation, contracts, personnel management, estimating control costing and financial aspects. Methods employed in the basic process of civil engineering construction as applied to typical construction projects. Seminars and projects. Students will be expected to prepare a paper with a verbal summary thereof, based on a reading and/or laboratory project.

TC93 Structural Design. (0–0–4)

Design projects covering timber, concrete and steel construction.

TC53 Engineering Computations. (1–0–2)

Fitting of curves to experimental results, construction of monographs, equations of structural analysis expressed in matrix form and their solutions, applications of partial differential equations to problems in hydraulics and structures, conformal mapping used in analysis of flow-nets.

A General Studies Elective.

For syllabuses see below, after Pharmacy.

TC82 Survey Camp.

The survey camp is held annually and is of two weeks' duration. Accommodation and stretchers are provided, but bedding and transportation are the student's responsibility. A charge is also made to cover the cost of meals provided. Each student must obey all regulations whilst in camp. All plans, field notes and computations must be completed satisfactorily and handed to the lecturer-in-charge at the closing of the camp. A candidate whose work is deemed unsatisfactory by the lecturer-in-charge will not be credited with attendance at the camp and he may be required to do additional practical work during the first term of the following year, or to attend another survey camp. Entry for the camp must be made at the Institute of Technology in the first term.

* For syllabuses of First- and Second-Year subjects: *see* Calendar for 1974.

BACHELOR OF TECHNOLOGY (SURVEYING).

THIRD YEAR*

TC03 Surveying III. (4½²–2½¹–0–0)

This subject will consist of the following:

(a) Survey Law. 45 hours of lectures.

The elements of land and property law. Principles of land registration. Development of land registration in Australia. Principles of conveyancing Statutes in the Australian States and those of South Australia. Special statutes.

(b) Land valuation. 20 hours of lectures.

Definition of value, methods and principles of valuation. City suburban and rural lands. Valuation of improvements to land. Depth tables. Terminable interests. Depreciation. Reports. Subdivisions. Business valuations and goodwill. Compensation for compulsory acquisition.

(c) Planning Law. 20 hours of lectures.

A survey of the history of the law and the courts with an analysis of the principles of law under the two western codes. Appeals, arbitration and conciliation methods. Selected legislation in Australia and overseas will be examined with specific reference to South Australia. A survey will be made of the planning law in force in all states of Australia.

(d) Land Utilization. 20 hours of lectures.

Climate in relation to primary and secondary industries. Soil types in relation to primary production. Geological associations. Distribution and identification of the indigenous and exotic timbers in South Australia. Erosion and methods of erosion control.

(e) Town Planning. 30 hours of lectures.

Design and analysis of land use in development, including examples from history, with special references to the problems of the surveyor in practice.

TC63 Geodesy. (3–3–0)

The Oblate spheroid. Laplace equation: Computations connected with triangulation, trilateration and traverses; computation in plane rectangular co-ordinates. Lines on the earth's surface. Curve fitting to observation data. Adjustment of figures, level nets, trigonometric levelling, traverses, etc. Adjustments involving dissimilar quantities. Weighting. Weight of the adjusted value. Interrelation of the geoid and spheroid. Significance of data at the origin. Microwave distance measurement. Gravity measurements. Gravimeters. Reduction of gravity readings. Deflection determination. Gravity influence on trigonometric and geodetic levelling.

TC83 Photogrammetry. (3–0–6)

A short history of the development of photography. Geometry of the aerial photograph: photographic materials. Aerial cameras and calibration. Ground control and flight planning. Radial and aerial triangulation. Rectification. Theory of plotting machines. Analytical methods. Terrestrial photogrammetry.

TC43 Engineering (T). (2–1–3)

Properties of fluids; fluid statics; pressure measurement. Ideal fluid flow—continuity, Euler's equation, Bernoulli's equation; rotational and irrotational motion.

Steady, real fluid flow—laminar and turbulent; hydraulic and energy lines; flow measurement; momentum; impulse turbines and rotodynamic machinery. Potential flow, the flow net; dimensionless groups and dimensional analysis; hydrology. Steady flow in closed conduits—uniform and non-uniform, the Moody chart; pipe networks; pipes with reservoirs. Steady flow in open channels—uniform and non-uniform.

Physical properties of soils and their measurements. Applications to simple retaining wall and foundation problems. Site exploration and soil sampling. Field testing. Classification.

A General Studies Elective.

For syllabuses see below, after Pharmacy.

* For syllabuses of First- and Second-Year subjects: *see* Calendar for 1974.

BACHELOR OF TECHNOLOGY (ELECTRICAL ENGINEERING).

THIRD YEAR*

TE03 Electrical Engineering IIA. (3–3–4)

Four terminal networks, generalised constants. Transmission lines with distributed elements, equivalent T and π networks, power circle diagrams. Transformers under steady state and transient conditions, multiple windings separate and auto connected, polyphase transformation. Complex wave forms. Harmonics in three-phase systems. Symmetrical components. Synchronous machines, salient and non-salient poles, two reaction theory, locus diagrams, parallel operation. Rectification and inversion, high voltage D.C. power links. Induction machines equivalent circuit, circle diagram, slip control, multi-speed, synchronous operation. Unbalanced and single-phase supply. Power supply systems, stability, operation, protection. Fault conditions and circuit breakers. Utilization of plant and application of control systems.

TE13 Electrical Engineering IIB. (1^2–0–2^13^1)

A course of lectures on the principles of design and development of electrical engineering systems, and a student project. The project will be assigned and preliminary studies made in the first term followed by investigation, design and/or construction in the remainder of the year. Written reports and seminar presentations will complete the work.

TE93 Automatic Control I. (1–1–2)

Open and closed loop systems, steady state and transient response, performance requirements. Control system components. Analysis of linear system response in the time, frequency and complex frequency domains. Synthesis of systems and compensation networks.

The application of the analogue computer to control system analysis and synthesis.

Introduction to non-linear system analysis.

TM13 Mathematics IIC. (1–1^2–0)

For syllabus see Subject Index.

TL53 Applied Electronics. (1–0–3)

Pre-requisite or concurrent subjects: Mathematics IIC and Electrical Engineering IIC *or* Mathematics I (Engineering) and Electrical Engineering II(T) *or* IIA(T) *or* Electrical Engineering IA.

Fundamental concepts including semi-conduction, average, peak and RMS values, simple RC, LR and LC networks, ideal transformers; vacuum, semiconductor and gas-diodes as rectifiers; filtering; vacuum-tube and transistor amplifiers; graphical and equivalent circuit analysis; amplified response; feedback; oscillators; class C power amplifiers and applications; characteristics and application of the thyration, ignition, silicon-controlled rectifier, uni junction, glow tube and zener diode; simple DC and AC timers; saw-tooth generators; electronic counters; stroboscope; operational amplifiers; multi-vibrators; logic; storage devices; transducers, varicaps, thermistors and other special devices; integrated circuits.

A General Studies Elective.

For syllabuses see below, after Pharmacy.

* For syllabuses of First- and Second-Year subjects: *see* Calendar for 1974.

BACHELOR OF TECHNOLOGY (ELECTRONIC ENGINEERING).

THIRD YEAR*

TL03 Electronic Engineering IIA. (2–1–3)

Modulation methods; principles of information transmission; the effect of noise on information transmission; signal theory; correlation techniques; RF transmission lines; the Smith chart; impedance matching; determination of field strength, radiation resistance and directive gain of simple antennas and antenna arrays; the receiving antenna; propagation of ground waves, sky waves and space waves; scatter propagation; devices for generating UHF signals; wave-guides; microwave components.

TL13 Electronic Engineering IIB. (2–1–3)

Wave-shaping by non-linear circuit elements; transient response of transistor switching circuits; charge control analysis; multi-vibrators—saturating and non-saturating types, classification; negative resistance switching circuits; blocking oscillators; pulse transformers; voltage comparators; counting circuits; binary arithmetic; sampling techniques; logic, principles and circuits; binary codes; error detecting codes; integrated circuits; minimization techniques; digital computer techniques; machine arithmetic; memory devices; instrumentation systems; A/D-D/A conversion; magnetic recording.

TL23 Electronic Engineering IIC. (1–1–4)

Circuit and system design: Design philosophy, component limitations, worst case and statistical design analysis, the place of analysis and laboratory work in circuit and system design, estimation of reliability, standards, patents, ergonomics. A number of discrete circuits will be designed but the course is orientated towards the use of integrated circuits. Production techniques: Construction methods, quality control, quality assurance, programme evaluation review techniques, electrical and environmental testing. Students will design, construct and test a piece of electronic equipment within the scope of an electronic engineer in design. A report is to be submitted and seminar presented on this design project.

TE93 Automatic Control I.

For syllabus see Subject Index.

A General Studies Elective.

For syllabuses see below, after Pharmacy.

* For syllabuses of First- and Second-Year subjects: *see* Calendar for 1974.

BACHELOR OF TECHNOLOGY (MECHANICAL ENGINEERING).

THIRD YEAR*

TM13 Mathematics IIC.

For syllabus see Subject Index.

TK33 Thermo-Fluid Dynamics II. (2–1^2–3^2)

An advanced course in applied thermodynamics and fluid dynamics establishing design capabilities in these topics.

Fluid dynamics: potential flow theory, stream function, velocity potential, circulation, vorticity, flow nets; continuity, energy and momentum equations, real fluid flow, turbulence, mixing length, incompressible duct flow, Moody chart; flow over bodies, lift, boundary layer, separation, friction, pressure and induced drag; compressible flow, nozzles, normal shock, frictional isothermal, frictional adiabatic, measurement; compressibility effects on lift and drag; cavitation; fluid hammer.

Heat transfer: conduction, lumped and distributed systems, transients, heat generation; convection, thermal boundary layer, forced, Reynold analogy, natural, empirical relationships; condensing heat transfer: pool boiling heat transfer; heat exchangers, effectiveness, extended surface, overall coefficients, pressure losses: radiation, absorptivity, emissivity, reflectivity, transmissivity, view factors, multiple surface interchange, transparent media, gas radiation, luminous flames, combined coefficients.

Reactive mixtures: combustion, thermodynamic laws, adiabatic flame temperature, properties, dissociation, actual processes.

Mass transfer: modes, coefficients, coupled heat transfer.

Fluid turbomachinery: Similarity, incompressible flow parameters, compressible flow parameters, performance design concepts.

TK03 Engineering Mechanics III. (1–1–0)

A continuation course in Dynamics covering mechanical vibration, automatic control and analogue techniques.

Analogue principles, distributed and lumped systems, mathematical models, analogies. Mechanical vibrations of two degrees of freedom systems, coupling, vibration isolation, dynamic vibration absorbers. Natural frequencies of multi-degree freedom lumped parameter systems, torsional oscillations, equivalent systems. Distributed parameter systems, critical speeds, whirling shafts. Introduction to non-linear vibrations.

Automatic control, open and closed loops, continuous and on-off feedback principles, time delays, relative power levels, limiting performance specifications, block diagrams, transfer functions, stability criteria, graphical displays, compensation. Analogue computation, flow diagrams, magnitude and time scaling for solution of ordinary differential equations, basic computer functions and circuits solution of partial differential equations and algebraic equations.

TK23 Mechanical Design II. (1–1–0)

Pre-requisite: Mechanical Design I.

Design of machine elements and systems. Geometric tolerances for pinned assemblies; involute gear geometry; design of brittle materials; impact loading; contact stresses; extreme temperatures; interference fits; structural elements, connecting rods, crankshafts, springs, cams, power screws, flat plates, pressure vessels, piping, brakes and clutches, plain bearings, helical and planetary transmission units.

* For syllabuses of First- and Second-Year subjects: *see* Calendar for 1974.

TK13 Production Technology II (T). (2–1[1]–3[2])

The mechanics, practices and economics of basic mechanical material forming processes. Vibrations in metal-cutting processes. Developments in metal-working processes. Quality control, control charts, sampling systems, process study.

Non-destructive testing; sheet metal drawability testing, anisotropy effects in materials, comparative treatment of pressing materials. Metallurgy of creep, fatigue, brittle fracture and survey of properties of relevant materials. Corrosion, oxidation and surface treatment. Properties and formability of plastic and composite materials under stress, temperature, age, exposure to light and chemical attack. The selecting of engineering materials and specification of treatment to meet specified property requirements.

TK93 Mechanical Engineering Projects. (0–0–6)

Design and experimental investigations of topics related to the whole Mechanical Engineering course content, normally involving literature search, analysis, creative design, planning co-ordination of manufacturing facilities, budget control, and experimentation, with seminars and written reporting.

TK83 Electrical and Civil Engineering S. (3–0–2)

Part A: D.C. circuit response, simple non-linear circuits, practical measurement circuits. Magnetic properties of materials, magnetic circuit analysis, electromagnetic components. A.C. circuit analysis, power factor correction, regulation, three-phase systems transformers. Transient response of linear circuits, switching, control circuits. Characteristics and applications of common transducer elements, photo-electric cells, thermo-couples, associated solid state and vacuum tube amplifiers. Characteristics, starting and control of common D.C. and A.C. machines. Electrical installations, switchboard and protection requirements, three-phase power measurement.

Part B: Elementary surveying instruments and methods, their application and limitations. Design and control of concrete mixes, elementary design of reinforced concrete beams, columns and footings. Physical properties of soils, exploration methods, design of foundations for static and dynamic loads.

A General Studies Elective.

For syllabuses see below, after Pharmacy.

OF THE DEGREE OF

BACHELOR OF APPLIED SCIENCE

REGULATIONS

NOTE: This course is being discontinued. No new enrolments have been accepted since 1969, except as provided under Regulation 8.

§†*1. There shall be an Ordinary and an Honours degree of Bachelor of Applied Science. A candidate may obtain either degree or both provided that until the Council decides otherwise a candidate for the degree in Mineral Engineering or in Data Processing or in Applied Physics may proceed to the Ordinary degree only.

*2. (a) For the Ordinary degree schedules defining the courses of study, including lectures, laboratory and other practical work to be undertaken, the examinations to be passed and the fees to be paid by candidates, shall be drawn up by the Faculty of Technology and Applied Science and submitted to the Councils of the University and the South Australian Institute of Technology.

Such schedules shall become effective as from the date of approval by both Councils or such other date as the Councils may determine, and shall be published in the next University Calendar which is issued after that approval has been given.

(b) For the Honours degree schedules defining the courses of study, including lectures, laboratory and other practical work to be undertaken, the examinations to be passed and the fees to be paid by candidates, shall be drawn up by the Faculty of Engineering and submitted to the Council of the University.

Such schedules shall become effective as from the date of approval by the Council or such other date as the Council may determine, and shall be published in the next University Calendar which is issued after that approval has been given.

3. ††(a) To qualify for the degree of Bachelor of Applied Science, a candidate must regularly attend such tutorials as may be prescribed and do written, laboratory and other practical work, where such is required, and pass examinations in the subjects prescribed for one of the following courses:

* Amended 12 December, 1963.
§ Amended 22 December, 1966.
† Amended 28 January, 1965.
†† Amended 24 December, 1969.

Applied Chemistry.
Primary Metallurgy.
Secondary Metallurgy.
Mineral Engineering.
Data Processing.
Applied Physics.

†(b) Before being admitted to the degree a candidate shall also satisfy the Faculty of Technology and Applied Science (in respect of the ordinary degree) or the Faculty of Engineering (in respect of the honours degree) that he has fulfilled the requirements in practical experience that are prescribed in the schedule relating thereto.

4. (a) All annual examinations, other than supplementary, shall take place towards the end of the academic year, except that practical examinations and examinations in a subject in which the course of instruction has been completed by the end of the second term, may be held at any convenient time fixed by the Faculty.

††(b) A candidate shall enter for examination on the form and by the date prescribed by the Council, but shall not be eligible to present himself for examination unless he has regularly attended the prescribed tutorials and has done written and laboratory or other practical work where required to the satisfaction of the professors and lecturers concerned.

(c) Written and practical work done by candidates at the direction of the professors or lecturers and the results of terminal or other examinations in any subject may be taken into consideration at the final examination in that subject.

*(d) There shall be three classifications of pass at the annual examination in any subject or division of a subject for the degree, as follows: Pass with Distinction, Pass with Credit, Pass. The names of candidates who pass with Distinction or with Credit shall be arranged in order of merit within the classification; the names of other candidates who pass shall be arranged in alphabetical order.

††(e) A candidate who fails to pass in any subject shall again attend tutorials and do practical work in that subject to the satisfaction of the professors and lecturers unless exempted by the Faculty. Any such exemptions will hold for one academic year only.

(f) Supplementary examinations will be held only in special circumstances approved by the Faculty after consideration of individual cases.

(g) Except by permission of the Faculty a candidate shall not be admitted to the class in any subject for which he has not completed the pre-requisite work prescribed in the syllabus for that subject.

† Amended 28 January, 1965.
* Amended 22 December, 1966. †† Amended 24 December, 1969.

††5. Except in case of illness or other sufficient cause allowed by the Faculty, no candidate shall be credited in any year with attendance at tutorials or laboratory work in a subject unless he has attended at least three-fourths of the tutorials and laboratory work respectively in that subject.

††6. No candidate shall be granted exemption from attendance at tutorials or practical work except upon grounds approved by the Faculty.

*7. A candidate who has passed examinations *in pari materia* in another faculty or otherwise, or who desires that his work at other universities or technical schools should be counted *pro tanto* for the degree of Bachelor of Applied Science may on application be granted such exemption from the requirements of these regulations as the Council shall determine.

†8. Only those candidates who had entered upon the course for the degree in or before the academic year 1969 will be permitted to enrol in the course for the degree after 31 December, 1969, provided that candidates who had entered upon the courses for an Associateship Diploma of the South Australian Institute of Technology at Whyalla or Port Pirie in or before the academic year 1966 will be permitted to enrol for the degree on such conditions as the Council may approve. Such students will be eligible to proceed to the degree under these regulations provided that they qualify for the degree not later than 31 March, 1976, unless the Council approve an extension of time in a particular case under clause 5 of Chapter XXV of the Statutes.

Regulations allowed 16 March, 1961.
* Amended 22 December, 1966.
† Amended 21 December, 1967 and 17 December, 1970.
†† Amended 24 December, 1969.

SCHEDULES

(Made by the Council under Regulation 2.)

NOTE: Syllabuses of subjects for the degree of B.App.Sc. are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

1. Approval of Courses

Each candidate must obtain the approval of the Director of Studies of the Faculty for each year of his proposed course of study.

2. Arrangement of Courses

The courses shall occupy three years of full-time study. Details of these courses are set out in clauses 4 to 9.

3. Completion of Subjects

Except by permission of the Faculty, a candidate may not enrol for subjects in the second or third year of the course before he has passed the examinations in all of the subjects prescribed in the schedules for the previous year of the course.

4. Applied Chemistry

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
TM01	Mathematics IA	Lectures Tutorials	3 2
TP01	Applied Physics I	Lectures Tutorial Practical	3 1 2
TH01	Chemistry I(T)	Lectures Tutorial Practical	3 1 3
TH91	Basic Science Techniques	Lectures Tutorials Practical	1[1] 3[1] 3[2]
TT81	Engineering Materials A	Lectures Practical	1 3[1 1/2]
	A General Studies Elective (see Schedule 12)	Tutorials	2

SECOND YEAR

TH02	Chemistry II(T), Physical	Lectures Tutorial Practical	2 1 3
TH12	Chemistry II(T), Organic	Lectures Practical	2 3
TH22	Applied Chemistry I	Lectures Tutorials	2 2
TM12	Mathematics IIB	Lectures Tutorials	2 2[2]
TH92	Engineering Service	Lectures Practical	1 2
TT52	Fluid and Particle Dynamics	Lectures Practical	1 3[1]
	A General Studies Elective (see Schedule 12)	Tutorials	2
	Vacational Report (First)		

THIRD YEAR

TH23	Applied Chemistry II	Lectures Tutorial Practical	2 1 3[2]
TH53	Chemical Process Kinetics	Lectures Tutorial Practical	1 1 3[1]
TH73	Transfer Operations	Lectures Tutorial Practical	2 1 3
TH63	Chemical Instrumentation	Lectures Practical	2 3[2]
TH83	Process Dynamics and Control	Lectures Tutorial Practical	1 1 3[2]
TH93	Applied Chemistry Project	Practical	4[2]
	A General Studies Elective (see Schedule 12)	Tutorials	2
	Vacational Report (Second)		

5. Applied Physics

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
TM01	Mathematics IA	Lectures Tutorials	3 2
TP01	Applied Physics I	Lectures Tutorial Practical	3 1 2
TH01	Chemistry I(T)	Lectures Tutorial Practical	3 1 3
TK81	Basic Engineering Techniques	Lectures Practical	1 3
	A General Studies Elective (see Schedule 12)	Tutorials	2

SECOND YEAR

TM02	Mathematics IIA	Lectures Tutorials	3 2
TP02	Applied Physics II	Lectures Tutorial Practical	4 1 5
TM82	Mechanics I(T)	Lectures Tutorial	1[1] 1[1]
TE92	Electrical Engineering SP(T)	Lectures Practical	1 2
TL92	Electronics (T)	Lectures Practical	2 2
	A General Studies Elective (see Schedule 12)	Tutorials	2
	Vacational Report (First)		

THIRD YEAR

TM03	Mathematics IIIA	Lectures Tutorial	1 1
TP03	Applied Physics III	Lectures Tutorial Practical	5 1 10
	either		
TT93	Metallurgy for Physicists	Lectures Practical	2[2] 3[2]
TM93	Programming Project	Tutorial Practical	1[1] 3[1]
TP93	Control Studies	Lectures Practical	1[2] 2[2]
	or		
TZ71	Biology (T)	Lectures Tutorial Practical	2 1 3
	A General Studies Elective (see Schedule 12)	Tutorials	2
	Vacational Report (Second)		

6. Primary Metallurgy Course

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
TM01	Mathematics IA	Lectures	3
		Tutorials	2
TP01	Applied Physics I	Lectures	3
		Tutorial	1
		Practical	2
TH01	Chemistry I(T)	Lectures	3
		Tutorial	1
		Practical	3
TT71	Basic Science Techniques (M)	Lectures	1[2]
		Tutorials	2[2]
		Practical	3
TT91	Materials Science (T)	Lectures	2
		Tutorials	1
	A General Studies Elective (see Schedule 12)	Tutorials	2

SECOND YEAR

TM12	Mathematics IIB	Lectures	2
		Tutorials	2[2]
TH02	Chemistry II(T), Physical	Lectures	2
		Tutorial	1
		Practical	3
TT62	Applied Mineralogy	Lectures	1
		Practical	2
TT72	Extractive Metallurgy I	Lectures	1
		Practical	3[1]
TT92	Industrial Metallurgy IA	Lectures	1[3]
		Practical	3[1]
TH92	Engineering Service	Lectures	1
		Practical	2
TT32	Mineral Processing I	Lectures	1
		Tutorial	1[2]
		Practical	2[1]
	A General Studies Elective (see Schedule 12)	Tutorials	2
	Vacational Report (First)		

THIRD YEAR

TT63	Mineral Processing II	Lectures	2
		Tutorial	1
		Practical	3
TT73	Extractive Metallurgy II	Lectures	2
		Tutorials	2
		Practical	3
TT05	Chemical Instrumentation (part course)	Lectures	1
		Practical	3[1]
TH73	Transfer Operations	Lectures	2
		Tutorial	1
		Practical	3
TH83	Process Dynamics and Control	Lectures	1
		Tutorial	1
		Practical	3
	A General Studies Elective (see Schedule 12)	Tutorials	2
	Vacational Report (Second)		

7. Secondary Metallurgy Course

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
TM01	Mathematics IA	Lectures	3
		Tutorials	2
TP01	Applied Physics I	Lectures	3
		Tutorial	1
		Practical	2
TH01	Chemistry I(T)	Lectures	3
		Tutorial	1
		Practical	3
TT71	Basic Science Techniques (M)	Lectures	1[2]
		Tutorials	2[2]
		Practical	3
TT91	Materials Science (T)	Lectures	2
		Tutorials	1
	A General Studies Elective (see Schedule 12)	Tutorials	2

SECOND YEAR

TM12	Mathematics IIB	Lectures	2
		Tutorials	2[3]
TH82	Chemistry II(T), Physical (part course)	Lectures	2[3]
		Tutorials	1[2]
		Practical	6[1]
TT02	Physical Metallurgy IA	Lectures	2
		Tutorial	1
		Practical	3
TT22	Industrial Metallurgy I	Lectures	2
		Practical	3[2]
TT12	Metallography I	Lectures	1[3]
		Tutorials	1[2]
		Practical	3[3]
TK92	Mechanical Design S	Lectures	1
		Tutorial	1
		Practical	3
	A General Studies Elective (see Schedule 12)	Tutorials	2
	Vacational Report (First)		

THIRD YEAR

TT03	Physical Metallurgy IIA	Lectures	4
		Tutorials	2
		Practical	3
TT23	Industrial Metallurgy II	Lectures	4
		Tutorial	1
		Practical	5
TT72	Extractive Metallurgy I	Lectures	1
		Practical	3[1]
TT13	Metallography II	Tutorials	2[1]
		Practical	3[2]
TE63	Electrical Engineering SK(T)	Lectures	1[3]
		Practical	2[2]
	A General Studies Elective (see Schedule 12)	Tutorials	2
	Vacational Report (Second)		

8. Mineral Engineering Course

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
TM01	Mathematics IA	Lectures	3
		Tutorials	2
TP01	Applied Physics I	Lectures	3
		Tutorial	1
		Practical	2
TH81	Engineering Chemistry and Materials	Lectures	2
		Practical	3
TK01	Engineering Mechanics I	Lectures	2^2, 1^1
		Tutorial	1
		Practical	1^1
TK91	Engineering Drawing	Practical	3
TK71	Basic Engineering Techniques (Part Course)	Lectures	1
		Practical	3^1
	A General Studies Elective (see Schedule 12)	Tutorials	2

SECOND YEAR

TM12	Mathematics IIB	Lectures	2
		Tutorials	2^2
TK42	Engineering Mechanics IIAS	Lectures	2
		Practical	2
TK82	Thermo-Fluid Dynamics I	Lectures	2
		Tutorial	1
		Practical	2^2
TN12	Applied Geology I	Lectures	2
		Tutorial	1
		Practical	3
TN32	Mining Engineering I	Lectures	2^1, 1^1
		Tutorial	1^2
		Practical	3^1
TC52	Civil Engineering S (T)	Lectures	2^2, 1^1
		Tutorials	1^1
		Practical	3^1, 2^1
	A General Studies Elective (see Schedule 12)	Tutorials	2
TC82	Survey Camp		
	Vacational Report (First)		

THIRD YEAR

TN33	Mining Engineering IIA	Lectures	3^1, 2^2
		Tutorial	1
		Practical	3^1
TN23	Applied Geology IIM	Lectures	3
		Practical	4
TK43	Engineering Mechanics IIBS	Lectures	2
		Practical	1
TK22	Mechanical Design I	Lectures	1
		Tutorials	3
TE72	Electrical Engineering SC (T)	Lectures	1
		Practical	2^2
TM13	Mathematics IIC	Lectures	1
	or	Tutorial	1^2
TV03	Engineering Management	Lectures	1
		Tutorial	1^2
TN43	Mining Engineering IIB	Lectures	1
		Tutorial	1
		Practical	3^1
	A General Studies Elective (see Schedule 12)	Tutorials	2
	Applied Geology Field Camp		
	Vacational Report		

9. Data Processing Course

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
TM01	Mathematics IA	Lectures	3
		Tutorial	2
TP01	Applied Physics I	Lectures	3
		Tutorial	1
		Practical	2
TM21	Programming I	Lectures	2
		Practical	1
TA81	Accounting I	Lectures	2
		Tutorial	1
		Practical	1
	A General Studies Elective (see Schedule 12)	Tutorials	2

SECOND YEAR

TM02	Mathematics IIA	Lectures	3
		Tutorials	2
TM22	Programming II	Lectures	2
		Tutorial	1
		Practical	3
TM92	Statistics	Lectures	3
		Tutorial	1
TA92	Economics (T)	Lectures	2
		Tutorial	1
TU92	Administration	Lectures	2
		Tutorial	1
	A General Studies Elective (see Schedule 12)	Tutorials	2
	Vacational Report (First)		

THIRD YEAR

TM73	Systems Analysis	Lectures	2
		Tutorial	1
TM23	Programming III	Lectures	2
		Tutorial	1
		Practical	3
TM33	Numerical Mathematics	Lectures	3
		Tutorial	1
		Practical	2
TM63	Operations Research I	Lectures	3
		Tutorial	1
	A General Studies Elective (see Schedule 12)	Tutorials	2
	Vacational Report (Second)		

10. Practical Experience

To fulfil the requirements in respect of practical experience required under regulation 3(b) a candidate shall:

(a) Submit two reports satisfactory to the Faculty on work that he has undertaken during vacations, each report covering a period of not less than two months and at least one period being spent in work related to the student's professional interests; *or*

(b) submit a report satisfactory to the Faculty on work relevant to his professional interests that he has undertaken for at least six months in full-time employment.

The service of the student must be certified by the student's employer during the period concerned.

A student who had entered upon the course for the degree in or before 1964 may fulfil the requirements relating to practical experience by submitting evidence satisfactory to the Faculty of his having had six months' practical experience in work relevant to his professional interests.

11. Honours Degree

(a) The Honours degree shall be available in each of the following courses:

Applied Chemistry;
Primary Metallurgy;
Secondary Metallurgy.

(b) No candidate shall proceed to the Honours degree except with the approval of the Faculty of Engineering. Before granting such permission, the Faculty will take into consideration the candidate's work up to the time of his application.

(c) A candidate for the Honours degree shall regularly attend lectures and practical work for one year and shall pass examinations in one of the subjects scheduled in Syllabus Nos. NH69, NH79 and NH89.

(d) A candidate for the Honours degree in any subject shall not begin the final-year Honours work in that subject until he has qualified for the Ordinary degree of Bachelor of Applied Science and has included in his qualifications all the courses in that subject prescribed for the Ordinary degree.

(e) The names of candidates who qualify for the Honours degree shall be published in alphabetical order within the following classes and divisions:

First Class
Second Class
  Division A
  Division B.

12. General Studies Elective

In addition to passing in all of the subjects prescribed for each year of the course, each student must complete three of the following General Studies courses:

Subject No. in Syllabus	Subject
TG91	Social and Technological History
TG81	Literature and Society
TG71	Social and Technological History (C.E.)
TG61	Social and Technological History (S.)
TG51	Science and Modern Society
TG41	German Life and Literature
TG31	Political Science
TG21	International Affairs—Asia
TG92	Music
TG82	Philosophy
TG72	The Development of Economic Society
TG62	Psychology and Human Organisation
TG52	Design and Invention
TG42	Japanese Language and Culture

OF THE DEGREE OF

BACHELOR OF APPLIED SCIENCE

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed. Lists of books are not given. Such lists are supplied to students early in the academic year by the lecturers concerned.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus Numbers:

The first letter identifies the Faculty of Technology and Applied Science: T.

The second letter identifies the School (of the S.A. Institute of Technology) teaching the subjects, as follows:

Accounting	A	General Studies	G
Business Administration	U	Mathematics	M
Chemical Technology	H	Mechanical Engineering	K
Civil Engineering	C	Metallurgy	T
Electrical Engineering	E	Mineral Engineering	N
Electronic Engineering	L	Physics	P

The first digit—

0–3: Indicates (except in Mathematics: 0–2) that the subject is in sequence with another subject.

4–9: Indicates (except in Mathematics 3–9) that the subject is not in sequence with another subject.

The second digit—

1–4: Indicates year of subject, e.g. first, second, third or fourth except in the case of TH05 Chemical Instrumentation (part course) which is a third-year subject.

9: Indicates Honours.

Syllabuses:

Hours a week—

The figures at the right-hand side of the syllabus number and title indicate, respectively:

Number of lectures a week—number of hours of tutorial work a week—number of hours of practical work a week, throughout the three terms of the academic year.

A figure with a suffix, such as 2^2, means two hours a week for two terms.

Thus $2\text{–}2^2\text{–}1$ indicates a subject having two lectures and one hour of practical work a week throughout the year, and two hours a week of tutorial work for two terms.

BACHELOR OF APPLIED SCIENCE (APPLIED CHEMISTRY).

THIRD YEAR*

TH23 Applied Chemistry II. (2–1–3[2])

An advanced treatment of selected topics in applied chemistry; process economics; design of chemical processing systems; application of computers to problems in these areas; presentation of seminars by students; detailed design project.

TH53 Chemical Process Kinetics. (1–1–3[1])

The analysis of kinetic data and its application to the design and operation of chemical reactors.

TH63 Chemical Instrumentation. (2–0–3[2])

Theory of instrumental techniques in modern analytical chemistry; application of analytical instruments in process plant control; measurement of representative process parameters.

TH83 Process Dynamics and Control. (1–1–3[2])

Theory of automatic control as applied in the chemical process industries; dynamic behaviour of process equipment, controllers and controlled systems. Methods of system analysis. Simulation; computer techniques in control; dynamic optimization; non-linear systems.

TH73 Transfer Operations. (2–1–3)

Heat, mass and momentum transfer as encountered in the chemical industry. General principles of countercurrent operation of stagewise and differential contact processes. Separation processes including leaching, distillation, gas absorption, liquid extraction, evaporation, crystallization, drying.

TH93 Applied Chemistry Project. (0–0–4[2])

The project will normally involve theoretical and experimental work on a topic in Applied Chemistry; a detailed report is to be submitted at the conclusion of the project.

A General Studies Elective.

For syllabuses see below, after Pharmacy.

* For syllabuses of First- and Second-Year subjects: *see* Calendar for 1974.

BACHELOR OF APPLIED SCIENCE (APPLIED PHYSICS).

THIRD YEAR*

TM03 Mathematics IIIA. (1–1–0)

Gamma, beta and error functions, asymptotic expansions. Frobenius solution of ordinary differential equations. Special functions and their occurrence in the solution of partial differential equations.

Fourier transforms and their application to the solution of partial differential equations, and communications theory.

Numerical Integration.

Numerical solution of ordinary and partial differential equations.

TP03 Applied Physics III. (5–1–10)

A course of five lectures, one tutorial and 10 hours work per week for one year. The course deals with the basic physics of some specialised topics and additional areas of applied physics.

Solid State: Transport properties of solids and the effects of electric and magnetic fields. Quantum properties of solids.

Nuclear Physics: Nuclear structure and reactions. Introductory reactor physics.

Structure Analysis: The uses of X-rays, electrons and neutrons in the determination of composition and structure.

Geophysics: Application of physical methods to problems concerned with the earth and its atmosphere.

Elements of Quantum Mechanics: The application of the Schrodinger equation.

The physics of non-destructive testing.

Either

TT93 Metallurgy for Physicists. (2^2–0–3^2)

A course of two hours lectures and three hours practical per week for two terms, concerned with the following topics:

A qualitative treatment of the application of crystal defect theory to analysis of the yielding, work hardening, fatigue, creep and fracture of metal single and polycrystals; an introduction to phase transformations in metals and alloys in terms of the processes of nucleation and growth; solidification, recrystallisation, precipitation. Brief consideration of the main features of martensitic transformations.

and

TM93 Programming Project. (0–1^1–3^1)

A problem involving the application of computer techniques applied to practical physics will be set and supervised jointly by the Schools of Mathematics and Physics.

and

TP93 Control Studies. (1^2–0–2^2)

A course of one hour of lecture and two hours of laboratory work per week for two terms, to introduce the students to the field of automatic control and to the use of analogue computation, and covering the following topics:

Open loop and closed loop systems, steady state and transient response, performance requirements; control system components, including potentiometers, synchros, servomotors; analysis of response in the time and in the frequency domains and their correlation; analogies, simulation and introduction to analogue computation.

Or

SZ71 Biology I.

For syllabus see Subject Index.

A General Studies Elective.

For syllabuses see below, after Pharmacy.

* For syllabuses of First- and Second-Year subjects: *see* Calendar for 1974.

BACHELOR OF APPLIED SCIENCE (PRIMARY METALLURGY).

THIRD YEAR*

TT63 Mineral Processing II. (2–1–3)

The theory of mineral separation processes and the application of theory to mineral separation operations. Laboratory techniques for examining and testing ores and selecting mineral separation processes.

TT73 Extractive Metallurgy II. (2–2–3)

Pre-requisite subjects: Extractive Metallurgy IB, Physical Chemistry IIT.

Application of thermodynamics and kinetics to extractive metallurgical processes and process design.

TH73 Transfer Operations.

TH83 Process Dynamics and Control.

For syllabuses see Subject Index.

TH05 Chemical Instrumentation (Part Course). (1–0–3½)

Theory of instrumental techniques in modern analytical chemistry; application of analytical instruments in process plant control; measurement of representative process parameters.

A General Studies Elective.

For syllabuses see below, after Pharmacy.

* For syllabuses of First- and Second-Year subjects: *see* Calendar for 1974.

BACHELOR OF APPLIED SCIENCE (SECONDARY METALLURGY).

THIRD YEAR*

TT03 Physical Metallurgy IIA. (4–2–3)

Pre-requisite subjects: Physical Metallurgy IA, Metallography I, Physical Chemistry IIT.

Introduction to modern alloy theory and its application. Classical and statistical thermodynamic analysis of solid and liquid metallic solutions. Thermodynamics and kinetics of phase transformations. Detailed consideration of yield, work hardening, annealing, fracture, creep and fatigue of metals, alloys and other crystalline materials in terms of crystal defect theory. Basic features of nuclear reactor design. Radiation effects in metallic and non-metallic materials. Metallurgy of uranium, plutonium, thorium, zirconium, and beryllium. Ceramics in nuclear use. Nuclear fuel systems. Selected topics in Physical metallurgy.

TT23 Industrial Metallurgy II. (4–1–5)

The casting of metals. Introduction to theory and practice of commercial metal fabrication processes. Practical metallurgical aspects of deformation and failure. Defects in metals, testing. Quality control. The selection of materials. Welding metallurgy. Corrosion and corrosion prevention.

TT72 Extractive Metallurgy I.

For syllabus see Subject Index.

TT13 Metallography II. ($0–2^1–3^2$)

The observations and analysis of materials by modern penetrative radiation techniques—X-ray diffractometry and radiography, thin foil transmission, replica and scanning techniques of electron microscopy, electron beam micro-analysis, magnetic resonance, Mössbauer effect and field ion/emission microscopy of metals, alloys and non-metallic materials.

TE63 Electrical Engineering SK (T). ($1^2–0–2^2$)

Alternating quantities; use of C.R.O.; A.C. circuits; concept and measurement of phase angle; phasor diagrams; A.C. measurements; power factor correction. Transformers. 3-phase systems; power measurements. Characteristics and uses of common A.C. and D.C. machines. Non-linear conductors; diodes; A.C.-D.C. conversion; triode and transistor characteristics and uses. D.C. bridges and potentiometer circuits: Transducers: Electrical control circuits.

A General Studies Elective.

For syllabuses see below, after Pharmacy.

* For syllabuses of First- and Second-Year subjects: *see* Calendar for 1974.

BACHELOR OF APPLIED SCIENCE (MINERAL ENGINEERING).

THIRD YEAR*

TM13 Mathematics IIC.

TK22 Mechanical Design I.

TE72 Electrical Engineering SC (T).

For syllabuses see Subject Index.

TN23 Applied Geology IIM. (3–0–4)

Mineralogy, including microscopy and mineragraphy of the common rock forming minerals and ore minerals. Petrology; constitution, origin, occurrence of the main types of rocks; internal features affecting use as engineering materials. Classification, correlation. Bedding planes, joints, faults, folds, schistosity, massive rocks; relation of structure to strength. Erosion, weathering, supergene alteration.

Natural fuels; metallic and non-metallic deposits, nature, origin, composition, character, distribution. Geological and geophysical prospecting, mapping, photo-interpretation. Influence of rock types and structures on cuttings, tunnels, excavations; foundations for buildings, dams, roads; reservoirs; water supply, flooding, scouring, silting.

Field Practicals and Field Camp.

TN33 Mining Engineering IIA. (3^1 2^2–1–3^1)

Theory of drilling and rock fracture by explosives and other means. Soil Mechanics; consolidation, plasticity in soil masses, stress-strain properties, stress distribution, settlement, seepage problems, retaining structure and silos, stability of slopes, earth dams and mine tailings dams. Mechanical and other physical properties of rocks. Experimental stress analysis, laboratory techniques and methods of field instrumentation. Stability of rock slopes. Design and support of excavations. Ground control in surface and underground mining. Control of surface subsidence and design of shaft pillars. Rock burst phenomena and layout of deep mines.

TK43 Engineering Mechanics II BS. (2–0–1)

Dynamics: motion of points and rigid bodies, mechanisms, velocities and accelerations, fundamental law of gearing; kinetics of particles, rigid bodies and connected systems, work, energy, impulse and momentum; clutches, brakes and belt drives; diversion of fluid streams, motion with varying mass, impact of bodies, free and forced vibrations, damping, balancing of rotors and engines.

Either

TM13 Mathematics IIC.

For syllabus see subject index.

or

TU03 Engineering Management. (1–2^1–0)

An introductory course in the principles of Engineering Management. Purpose and functions of a business, management and control of work, service functions. Organisation concepts, management and decision theory, financial evaluation of decisions, management of people, industrial legislation.

* For syllabuses of First- and Second-Year subjects: *see* Calendar for 1974.

TN43 Mining Engineering IIB. (1–1–3[1])

Methods of working stratified and unstratified deposits; alluvial open cast and underground metal mines, coal mines, petroleum reservoirs; mine design planning, layout, scheduling. Shaft sinking and tunnelling; selection of site, shape, optimum size; sinking, driving, lining, equipping. Mine ventilation; environmental conditions, air flow and heat transfer; fan efficiencies, test selection; measurements; cooling. Generation, transmission, use of power in mines, diesel, electric, hydraulic and compressed air power. Preparation of minerals; mineral separation; concentration processes; disposal of products, flow sheets, plant layout. Mine economics, cost of mining, mine valuations. Roads, pavement design, tracks, conveyors, cableways, chutes, haulages; winding systems, ropes, power and velocity calculation, vibrations. Seminars and project.

TE72 Electrical Engineering SC (T).

TK22 Mechanical Design I.

For syllabuses see Subject Index.

A General Studies Elective.

For syllabuses see below, after Pharmacy.

Applied Geology Field Camps II and III.

A ten-day field camp will be held during the May or August vacations and will be compulsory for all Applied Geology students at second- or third-year level. In some years the camps for second- and third-year students are combined, in others they are separated. Transportation and accommodation are provided, but bedding is the student's responsibility and a charge is made to cover the cost of meals provided. Each student must prepare an acceptable report based on geological field work carried out during the camp.

BACHELOR OF APPLIED SCIENCE (DATA PROCESSING).

THIRD YEAR*

TM73 Systems Analysis. (3–2–3)

Origin and nature of system analysis; problem definition; project control systems; corporate analysis, system modelling; simulation and planning, information flow analysis; systems synthesis; data analysis; data control systems, diagnosis of financial and operations problems; interviewing techniques, personnel selection, operations planning and costing; data capture policy; conversion standard documentation and training; data base and interactive systems; systems audit and check points; computer aids to systems analysis, introduction of systems; monitoring and maintenance of production systems; human engineering; elements of computer management.

TM23 Programming III. (2–1–3)

Principles of assemblers—syntax analysis; directives; core organisation; structure; insertion and search of symbol tables; macros. Data structures—Storage of arrays; triangular and symmetric matrices; sparse arrays; linear queues and stacks; linked lists; insertion and deletion in lists; doubly-linked and circular lists; tree structures; arrays stored as trees; designs and implementation of logic circuitry; computer timing and control; peripheral devices; storage (discs, tapes) equipment; design of a simple computer system; introduction to analogue and hybrid computation. On-line computing principles—basic components; communications procedures; software consideration; sorting procedures—internal sorting (swapsort, sinksort, shellsort, treesort); external sorting (balanced merge, cascade, polyphase, oscillating, disc sorting); introduction to APL—monadic and dyadic operators; function definition; vectors; reduction of vectors; branching; arrays; dimensions; indexing; catenation; loops; principles of operating systems—purpose; job scheduling and logging; keeping statistical files; priority allocation; core swapping; compilers and loaders; job control language.

TM33 Numerical Mathematics. (3–1–2)

Solution of algebraic and transcendental equations.
Solution of linear systems, matrix inversion and algebraic eigenvalue problems.
Interpolation, numerical quadrature and differentiation.
Difference and differential equations and simple integral equations.
Use of analytic approximations.

TM63 Operations Research I. (3–1–0)

This subject assumes a knowledge of section 1, 2 and 4 of Mathematics IIA, and a familiarity with elementary probability concepts.

Linear Programming; the simplex method, duality, sensitivity analysis, parametric programming, transportation and assignment problems. Critical path methods. Queuing theory—steady state results. Simulation. Dynamic programming. Graph theory and network flows. Markov chains. Inventory control.

A General Studies Elective.

For syllabuses see below, after Pharmacy.

* For syllabuses of First- and Second-Year subjects: *see* Calendar for 1974.

OF THE DEGREE OF

BACHELOR OF PHARMACY

REGULATIONS

NOTE: This course is being discontinued. As provided in Regulation 10, no new enrolments have been accepted since 1969.

1. There shall be an Ordinary degree of Bachelor of Pharmacy.

2. Schedules defining the courses of study including lectures, laboratory and other practical work to be undertaken, the examinations to be passed, and the fees to be paid by candidates, shall be drawn up by the Faculty of Technology and Applied Science and submitted to the Councils of the University and the South Australian Institute of Technology. Such schedules shall become effective from the date of approval by both Councils or from such other date as the Councils may determine, and shall be published as soon as practicable after that approval has been given.

*3. To qualify for the degree a candidate must regularly attend such tutorials as may be prescribed and do written, laboratory and other practical work, where such is required, and pass examinations in the subjects prescribed in the schedules.

4. Except by permission of the Faculty a candidate shall not be admitted to the class in any subject for which he has not already completed the pre-requisite work as prescribed in the syllabus for that subject.

5. (a) Annual examinations shall be held towards the end of the academic year, except that practical examinations and the annual examination in a subject in which the course of instruction has been completed by the end of second term may be held at any convenient time fixed by the Faculty.

*(b) A candidate shall enter for examination on the form and by the date prescribed by the Council but shall not be eligible to present himself for examination unless he has regularly attended the prescribed tutorials and done the written and laboratory or other practical work, where required, to the satisfaction of the professors and lecturers concerned.

* Amended 24 December, 1969.

(c) The examiners may take into consideration, at the final examination in any subject, a candidate's written and practical work in that subject during the year and his results at terminal or other examinations in the subject.

(d) There shall be three classifications of pass at the annual examinations as follows: Pass with Distinction, Pass with Credit, Pass. The names of candidates who pass with distinction or with credit shall be arranged in order of merit within the classification and the names of other candidates who pass shall be arranged in alphabetical order; provided that a candidate who sits for a supplementary or special examination in any subject or group of subjects of any annual examination shall be not classified at that annual examination.

(e) A candidate will be permitted to take a supplementary examination only in special circumstances approved by the Faculty and then only if in the opinion of the examiner the candidate's previous work in the subject has been such as to indicate that he has a reasonable chance of passing the supplementary examination.

*(f) A candidate who fails to pass at an annual examination shall, unless exempted wholly or partially therefrom by the Faculty, again attend tutorials and laboratory and other practical work in the subjects of the examination before presenting himself again for the annual examination.

*6. Except in case of illness or other sufficient cause allowed by the Faculty, no candidate shall be credited in any year with attendance at tutorials or laboratory work in a subject unless he has attended at least three-fourths of the tutorials and laboratory work respectively in that subject.

7. A candidate who has twice failed to pass an examination in any subject may not present himself again for instruction or examination therein except with the approval of the Faculty.

For the purpose of this regulation a candidate who is refused permission to sit for examination in any subject or division of a subject shall be deemed to have failed to pass the examination, and the annual examination and the supplementary examination shall be deemed to be one examination.

8. A candidate who has passed examinations *in pari materia* within the University or at other approved universities or institutions and who desires that such examinations shall be counted *pro tanto* for the degree of Bachelor of Pharmacy shall, on written application to the Registrar, be granted such exemption from the requirements of these regulations as the Council shall determine.

9. These regulations shall come into force at a date to be determined by the Council.‡

* Allowed 24 December, 1969.

‡ These regulations came into force on 1 January, 1965.

†10. Only those candidates who had entered upon the course for the degree in or before the academic year 1969 will be permitted to enrol in the course for the degree after 31 December, 1969. Such students will be eligible to proceed to the degree under these regulations provided that they qualify for the degree not later than 31 March, 1976, unless the Council approve an extension of time in a particular case under clause 5 of Chapter XXV of the Statutes.

Regulations allowed 12 December, 1963.
† Amended 21 December, 1967.

SCHEDULES

(Made by the Council under Regulation 2.)

NOTE: Syllabuses of subjects for the degree of B.Pharm. are published below, immediately after the regulations and schedules of the degree. For syllabuses of subjects taught for other degrees and diplomas see the table of subjects at the end of the volume.

1. Completion of Subjects.

Except by permission of the Faculty, a candidate may not enrol for subjects in the second or third year of the course before he has passed the examinations in all the subjects prescribed in the schedules for the previous year of the course.

2. Approval of Subjects.

During the enrolment period, before the beginning of each academic year, each candidate must obtain the approval of the Director of Studies to enrol for the subjects he wishes to study.

3. Schedule of Subjects.

FIRST YEAR

Subject No. in Syllabus	Subject		Hours a week
TP01	Applied Physics I	Lectures ...	3
		Tutorial ...	1
		Practical ...	2
TZ71	Biology (T)	Lectures ...	2
		Tutorial ...	1
		Practical ...	3
TH01	Chemistry I(T)	Lectures ...	3
		Tutorial ...	1
		Practical ...	3
TM91	Mathematics IB	Lectures ...	3
		Tutorials ...	2
	A General Studies Elective (see Schedule 4)	Tutorials ...	2

SECOND YEAR

TH72	Chemistry IIA(T), Organic	Lectures ...	$2\frac{1}{2}$
		Practical ...	$4\frac{1}{2}$
TF02	Pharmaceutical Chemistry I	Lectures ...	3^2, 4^1
		Practical ...	6^2, 5^1
TF12	Pharmaceutics I	Lectures ...	4^2, 3^1
		Practical ...	6
	A General Studies Elective (see Schedule 4)	Tutorials ...	2

THIRD YEAR

TF03	Pharmaceutical Chemistry II	Lectures ... Practical ...	3^2, 2^1 6
TF13	Pharmaceutics II	Lectures ... Practical ...	3 7
TF73	Physiology and Pharmacology	Lectures ... Practical ...	2 3^2
TF83	Forensic Pharmacy and Pharmaceutical Practice	Lectures ...	2
	A General Studies Elective (see Schedule 4)	Tutorials ...	2

4. General Studies Elective.

In addition to passing in all of the subjects prescribed for each year of the course, each student must complete three of the following General Studies courses:

Subject No. in Syllabus	Subject
TG91	Social and Technological History
TG81	Literature and Society
TG71	Social and Technological History (C.E.)
TG61	Social and Technological History (S)
TG51	Science and Modern Society
TG41	German Life and Literature
TG31	Political Science
TG21	International Affairs – Asia
TG92	Music
TG82	Philosophy
TG72	The Development of Economic Society.
TG62	Psychology and Human Organisation
TG52	Design and Invention
TG42	Japanese Language and Culture

OF THE DEGREE OF

BACHELOR OF PHARMACY

SYLLABUSES

Text-books:

Students are expected to procure the latest edition of all text-books prescribed. Lists of books are not given. Such lists are supplied to students early in the academic year by the lecturers concerned.

Examinations:

For each subject students may obtain from the department concerned details of the examination in that subject including the relative weights given to the components (e.g. such of the following as are relevant: assessments, term or mid-year tests, essays or other written or practical work, final written examinations, *viva voce* examinations).

Syllabus Numbers:

The first letter identifies the Faculty of Technology and Applied Science: T.

The second letter identifies the School (of the S.A. Institute of Technology) teaching the subjects, as follows:

Chemical Technology - - -	H	Mathematics - - - - - - -	M
General Studies - - - - -	G	Physics - - - - - - - -	P

The first digit—

0–3: Indicates (except in Mathematics: 0–2) that the subject is in sequence with another subject.

4–9: Indicates (except in Mathematics 3–9) that the subject is not in sequence with another subject.

The second digit—

1–4: Indicates year of subject, e.g. first, second, third or fourth.

Syllabuses:

Hours a week—

The figures at the right-hand side of the syllabus number and title indicate, respectively:

Number of lectures a week—number of hours of tutorial work a week—number of hours of practical work a week, throughout the three terms of the academic year.

A figure with a suffix, such as 2^2, means two hours a week for two terms.

Thus $2–2^2–1$ indicates a subject having two lectures and one hour of practical work a week throughout the year, and two hours a week of tutorial work for two terms.

DEGREE OF BACHELOR OF PHARMACY.

THIRD YEAR*

TF03 Pharmaceutical Chemistry II. (3^2 2^1–0–6)

Photochemistry, terpenes and steroids, alkaloids, chemical carcinogenesis and selected topics in natural product chemistry. The relationship between physical and chemical structure and biological activity. Toxicology and the factors influencing the metabolism of foreign compounds in animals. Biological control, and the biochemical basis of cancer. The functions of vitamins.

TF13 Pharmaceutics II. (3–0–7)

The effect of formulation on drug availability. Complexation and protein binding of drugs. Kinetics of absorption, distribution and elimination of drugs. Drug-plastic interactions. Spray drying, freeze drying, tabletting, micromeritics, use of ternary diagrams in formulation of emulsified and solubilized systems. Radio-active materials. Methods of sterilisation and their pharmaceutical applications; the kinetics of disinfection and evaluation of bactericidal agents. Antibiotics. Industrial implications of pharmaceutical technology.

Preparation of sterile medicaments. Dispensing and formulation exercises. Physical pharmacy exercises illustrative of the lecture material.

TF73 Physiology and Pharmacology. (2–0–3^2)

Pre-requisite subject: Pharmaceutical Chemistry I.

Fifty-four lectures; practical three hours a week for two terms. The course will comprise approximately half physiology and half pharmacology.

Physiology will comprise the function of the principal mammalian tissues together with the hormonal and neural integration of the organism. The practical is based on mammalian material and illustrates basic physiological principles.

In pharmacology, emphasis will be placed on the following topics: biological variation in response to drugs and principles of biological assay; physico-chemical factors in drug action; mechanisms of actions of drugs in common clinical use. Practical work will illustrate aspects of these topics.

TH83 Forensic Pharmacy and Pharmaceutical Practice. (2–0–0)

Forensic Pharmacy; National Health Act; pharmaceutical practice; commercial pharmacy and book-keeping; veterinary pharmacy; public health; International, British and Australian pharmacy.

A General Studies Elective.

For syllabuses see below.

* For syllabuses of First- and Second-Year subjects: *see* Calendar for 1974.

DEGREES OF BACHELOR OF TECHNOLOGY, BACHELOR OF APPLIED SCIENCE AND BACHELOR OF PHARMACY.

GENERAL STUDIES ELECTIVES.

TG91 Social and Technological History. (0–2–0)

A selection of historical topics arranged chronologically to illustrate the processes of change, innovation, creativity, and the place of technology in history; what is history?; ancient technology, pyramids and power sources; ancient trade and mining; salt and society; the renaissance; printing, painting and gunpowder; shipping technology and discovery; the slave trade; was there an industrial revolution?; Bessemer steel; technology and 19th century war; Ironclad to Dreadnought; political implications of technology; new sources of power and materials; bureaucracy; utopia and dystopia.

TG71 Social and Technological History C.E.

The influence which technological progress has exerted upon society and vice versa. The changes which have occurred in Engineering Technology from the time of stone-age man to the modern era; special emphasis on developments in the field of Civil Engineering; the background of social, economic and political events.

TG61 Social and Technological History S. (0–2–0)

The history of man's attempts to represent his world by means of astronomy, surveying and cartography is related to the prevailing social order and its philosophy.

TG81 Literature and Society. (0–2–0)

A thematic approach to certain aspects of the human situation as depicted in literature. The course is designed to encourage discussion of some important social issues and of the ways in which different authors have thought about them.

Students will be required to select, each term, one from a number of suggested themes.

TG51 Science and Society.

Study of a select group of scientific theories that have revolutionised science, technology and social institutions in modern times, through case studies that illustrate the process of discovery and the nature of theories; scientific methods of inquiry and validation; the emergence and institutionalization of scientific institutions; the role and responsibilities of scientists; science, technology and the economy; science policy and the relation of science to government; contemporary social change due to science and technology; some scientific ideas of seminal value in other disciplines.

TG41 German Life and Literature. (0–2–0)

A study of German life and culture embracing German achievement especially in the fields of music, literature and art. The language may be taught at an elementary level. At least half of the course will be devoted to a study of modern German literature.

TG21 International Affairs—Asia. (0–2–0)

An introduction to Asian history and current affairs. Asian civilisations, the impact of the West and the emergence of new nations. Topics for study include the industrialisation of Japan; the attainment of communist power in China; Indo-China; recent developments on the Indian subcontinent; Australia's relation-

ship with Asia; and Asia in the world economy. Students will be expected to make use of reference books, newspapers and weeklies; also to prepare a project based on this material. Classes are organised as small groups meeting for two hour sessions.

TG82 Philosophy. (0–2–0)

An introduction to the philosophical ideas and methods which describe, analyse and justify nature, man and society.

The approach will be through discussion and reading around particular traditional philosophical problems, and contemporary social issues. Emphasis will be on relevance to the contemporary society and individual.

TG92 Music. (0–2–0)

Technical knowledge of music is not a pre-requisite. One of the primary objectives is to provide students with some insight into the way music has functioned as a mirror of society and social behaviour from primitive man and early civilizations through Greek, Roman, Mediaeval, Renaissance, Baroque, Classic, Romantic, Impressionistic to the twentieth century.

Other objectives are concerned with the structure of music—how it is and has been put together; the qualities of the gifted listener; the meaning of music; the creative and interpretive mind; tradition and innovation in modern music; the aesthetics and appreciation of music; technology and music; music in culture and counterculture.

TG72 The Development of Economic Society. (0–2–0)

Pre-market economy; emergence of a market economy; commercial revolution; competition; supply and demand forces; the consumer; removal of market rigidities; laissez-faire; pace of technical change; mass market for consumer products; the entrepreneur/engineer inventor; rise of factory as centre of social and economic life; role of government; the automated state; management economy; creation of wants; the problems of affluence; negative taxes; monopoly power; socialism; the paramount position of production; planned obsolescence; inflation; the problem of leisure; the Soviet solution; the capitalist solution; the cybernetic revolution; the international corporation.

TG62 Psychology and Human Organisation. (0–2–0)

The aim of this course is to acquaint the student with some of the basic concepts of psychology in the areas of motivation, perception, learning, personality and social psychology, with the main emphasis being on social psychology. These basic concepts will be illustrated by references to the structure and problems of industrial society, and, where possible, by practical demonstrations.

The applications of psychology to current social problems and issues such as censorship, drug abuse, and alienation will be considered, and students will be encouraged to establish the relevance of psychological concepts to topics of their own interest.

Text-books will be specified at the commencement of First Term.

TG52 Creativity, Design and Invention.

Research, invention and design. The application of knowledge, mind and skill, through creativity in arts, crafts and vocations. Research and development through all forms of media from fine arts to product design. The reintegration of art, technology and science.

Studies in self-knowledge, adaptability, fundamentals of perception, discrimination, design and creation. Appreciation of natural forms and man-made products in the human environment. Studio work in various skills, orthodox and unorthodox, for expression, communication and interaction.

TG42 Japanese Language and Culture.

This course aims to provide students with a knowledge of the Japanese language through an audio-visual method. An introduction to the culture, religions, modern and ancient literature and art of the Japanese people, an essential part of studying the language, will also be incorporated.

TG32 Greek Life and Literature.

This course involves the study of everyday life in Greece, its music and general culture, and includes an elementary course in colloquial Greek.

Greek literature will be studied through the reading and discussion of set texts.

Students intending to take this course should acquaint themselves with ancient and modern Greek Literature, particularly classic Greek drama and the modern Greek novel, preferably with works by Sophocles and N. Kazantzakis.

It is the aim of this course that students should be able to assess the Greek people and their culture objectively, and the contribution of Greek migrants to Australian society. The language will be taught through conversation models drilled in group work and in the language laboratory.

TG22 Drama.

The basis of this course is a concern with communication, and as such Drama is regarded as an instrument to analyze and speculate about the human condition. Both through a study of Drama per se and workshops, one's knowledge of oneself and of other people is extended by studying or creating situations in which actions and reactions (and the reasons for them) occur. Obviously workshops are largely exercises in communications and exchanges of ideas through a releasing of creative potential in improvisation. A solid technical background will be built up and an erosion of self-consciouness will take place in order to give maximum support to the imaginative ideas.

Students with a practical involvement and technical aptitudes are expected to develop an informed analytical interest in their chosen medium and those who start with an interest more historical or theoretical (or textual) are expected to develop practical interests and to work on specific projects in any of a variety of media and performance situations. The problems of rehearsal are regarded as the problems of clarification of intention through recognisable and communicative forms and the problems of performance are regarded as the problems of establishing contact with the audience. Hence this course contains an approach to Theatre, Film, Television and Radio which is both theoretical and practical.

BOARD OF ENVIRONMENTAL STUDIES

REGULATIONS OF THE DEGREE

Master of Environmental Studies - - - - - 1106

OF THE DEGREE OF

MASTER OF ENVIRONMENTAL STUDIES

REGULATIONS

NOTE: This course will not be available in 1975.

1. There shall be a degree of Master of Environmental Studies and a Board of Environmental Studies.

THE BOARD

2. The Board shall consist of:

(a) the Chancellor, the Vice-Chancellor, the Chairman of the Education Committee, the Director of Environmental Studies, the South Australian Director of Environment and Conservation, *ex officio*;

(b) one member of the academic staff nominated annually by each Faculty of the University;

(c) three members elected annually from amongst themselves by the candidates currently enrolled as candidates for the degree;

(d) up to ten members, the majority of whom shall be teachers of the course, appointed annually by the Council on the recommendation of the Board;

(e) two members appointed by the Council.

3. (a) The Board shall be responsible for the acceptance as candidates for the degree of applicants for admission to the course of study for the degree.

(b) Subject to availability of accommodation and facilities (and in the case of a candidate for some other higher degree to the concurrence of the Faculty concerned also) the Board may admit to any of the courses of study other persons who are qualified for admission to the course or courses and whose work or studies are relevant to environmental studies.

4. The Board shall annually elect one of its members to be Chairman.

5. The Chairman of the Board shall:

(a) at his own discretion, or on the request of the Chancellor or the Vice-Chancellor, or on the written request of two other members of the Board, convene meetings of the Board;

(b) preside at meetings of the Board;

(c) subject to the control of the Board, exercise a general control over its administrative business; and

(d) perform such other duties as the Council may from time to time prescribe.

6. Whenever the Chairman is absent from a meeting, the Board shall elect another member to preside during the Chairman's absence.

The Degree

7. (a) An applicant for admission to the course of study for the degree must be a graduate of the University of Adelaide or hold qualifications from another university or institution acceptable for the purpose by the University of Adelaide.

(b) Admission to the course of study for the degree shall be subject to approval by the Board of Environmental Studies.

(c) The Board, if it sees fit to do so, may require the applicant to complete such additional preliminary work as it may prescribe before being accepted as a candidate for the degree.

(d) Applications for admission shall be addressed to the Academic Registrar.

8. To qualify for the degree a candidate shall:

(a) satisfy examiners in courses of study as prescribed in the schedules; and

(b) as prescribed in the schedules, carry out research work and present a satisfactory dissertation on a subject approved by the Board of Environmental Studies.

9. Schedules defining the courses of study for the degree and the fees to be paid by candidates shall be drawn up from time to time by the Board of Environmental Studies and approved by the Council.

10. The maximum number of candidates which may be enrolled in any course for the degree shall be determined from time to time by the Council on the recommendation of the Board of Environmental Studies; and nothing in these regulations shall be held to bind the Council to provide any or all the courses in any year if for any reason the Council decides to suspend it or them.

11. If in the opinion of the Board of Environmental Studies a candidate for the degree is not making satisfactory progress the Board may with the consent of the Council withdraw its approval of his candidature and the candidate shall thereupon cease to be enrolled for the degree.

12. On completion of his work the candidate shall lodge with the Academic Registrar three copies of his dissertation prepared in accordance with directions given to candidates from time to time.

13. The Board of Environmental Studies shall appoint the examiners required under regulation 8, both for the courses of study and for the dissertation.

14. A candidate who fulfils the requirements of those regulations and satisfies the examiners appointed under regulation 13 may on the recommendation of the Board of Environmental Studies be admitted to the degree.

15. These regulations shall come into force at a date to be determined by the Council.*

Regulations allowed 21 December, 1972.

* That date has not, at the time of printing, been determined.

BOARD OF RESEARCH STUDIES

REGULATIONS AND SCHEDULES OF THE DEGREE

Doctor of Philosophy (Ph.D.) - - - - - - 1110

OF THE DEGREE OF

DOCTOR OF PHILOSOPHY

REGULATIONS

I. General

1. There shall be a degree of Doctor of Philosophy and a Board of Research Studies.

*2. (a)(i) The Board shall comprise three members of the Faculty of Science, two members of the Faculty of Agricultural Science, two members of the Faculty of Engineering, two members of the Faculty of Arts, two members of the Faculty of Medicine, one member of the Faculty of Architecture and Town Planning, one member of the Faculty of Dentistry, one member of the Faculty of Economics, one member of the Faculty of Law, one member of the Faculty of Music, one member of the Faculty of Mathematical Sciences and three persons enrolled as full-time students for the degree of Ph.D. elected from among themselves in accordance with election procedures drawn up and approved by the Board of Research Studies.

(ii) The members of the Board shall be elected by the appropriate faculties for a term of three years with the exception of the post-graduate student members whose maximum period of membership shall be two years.

(iii) The Board shall annually elect one of its members as Chairman.

(b) The Board shall carry out those functions laid upon it by these regulations.

3. Schedules specifying the academic standing required for candidature, the nature and extent of the work to be completed and the fees to be paid by candidates shall be drawn up from time to time by the Board and submitted to the Council. Such schedules shall become effective from the first day of January following their approval by the Council or from such other date as the Council may determine and shall be published in the University Calendar.

* Amended 21 December, 1972.

II. Enrolments

4. A person seeking enrolment as a candidate for the degree shall apply to the Registrar in such form as the Board shall prescribe and shall submit as part of his application a statement of his academic standing, accompanied in the case of a person who is a graduate of a University or Institution other than the University of Adelaide by proof thereof acceptable to the Board, and an outline of the course of study and research which he proposes to pursue.

5. (a) A person shall not be enrolled as a candidate for the degree unless the Board is satisfied:

(i) that his proposed course of study and research can be adequately supervised; and

(ii) that he is personally qualified to undertake the particular course of study and research which he proposes.

(b) The Head of the appropriate department and the appropriate faculty shall have the power to make recommendations to the Board on the matters set out in sub-clause (a) of this clause.

(c) The appropriate faculty or the Board may require a candidate who is not a graduate of the University to pass at a time which it specifies such examination of Honours standard, whether special or annual, as it may deem necessary or desirable. The candidate must be notified of this requirement not later than six months after his acceptance.

6. (a) When it approves an enrolment the Board shall specify the month from which the candidature shall date, which shall normally be the one in which the candidate begins his course of study and research for the degree.

(b) When a candidate is required under regulation 5(c) to undergo an examination the Board shall determine, after he has passed the examination, the month from which his candidature will date.

III. Work for the Degree

7. (a) A candidate shall pursue, to the satisfaction of the Board, and in accordance with any special conditions that may be specified in his case, an approved course of study and research in the University under a supervisor or supervisors appointed by the appropriate Faculty and approved by the Board. At least one supervisor shall be internal to the University.

(b) At the end of each year of candidature a supervisor shall submit to the Board a written report on the work of each candidate in his charge. He shall report to the Board at any time if in his opinion a candidate is not making satisfactory progress in his work or is otherwise not fulfilling the conditions laid down for him, or appears unlikely to reach the standard of the degree.

8. A candidate for the degree shall devote his whole time to the pursuit of his approved course of study and research; provided that full-time members of the academic staff of the University and full-time members of the academic staff of the South Australian Institute of Technology who are engaged in teaching courses prescribed for a degree of the University may be permitted to proceed to the degree on such conditions as the Board may prescribe.

*9. (a) Subject to the provisions of this regulation, a candidate for the degree shall pursue his approved course of study and research within the University for a period of not less than two years and not more than four years from the date of his enrolment.

(b) In special circumstances the Board may accept as an internal half-time candidate for the degree a person who, in its opinion, is a fully qualified person, is free to pursue his research programme within the University and is able to devote at least half of his time to his research. In such a case the Board shall prescribe for the duration of his programme minimum and maximum periods which in its opinion, having regard to the proportion of his time which he is able to devote to the programme in the appropriate departments, are respectively equivalent to the periods of two or four years ordinarily required.

(c) The Board may permit a candidate to pursue at another university or institution part of his approved course under such conditions as it thinks fit. Normally, candidates will be required to work for at least two years within the University, but in exceptional circumstances the Board may approve a reduced period on such conditions as it may determine in each case.

(d) A candidate's supervisor, who shall report to the Board, may permit a candidate to spend three months in any one year of his candidature away from the University on work connected with his research. A period of such absence in excess of three months must be approved in advance by the Board.

(e) Because of the specific responsibility of the South Australian Institute of Technology in the conduct of certain University courses, notwithstanding the provisions of regulations 5(a) and 7(a) and sub-clause (a) of this regulation, the Board may, on the recommendation of the Faculty of Engineering or the Faculty of Science, permit a candidate to carry out his work in a department of the South Australian Institute of Technology; provided that:

(i) the candidate is a full-time member of the academic staff of the Institute;

(ii) the candidate is able to devote at least half of his time to his research; and

(iii) the Board is satisfied that facilities for the proposed course of study are available only in the Institute.

* Amended 16 December, 1971.

10. (a) A candidate shall submit for approval by the appropriate faculty the proposed title of the thesis required under sub-clause (b) of this regulation approximately three months before he expects to submit the thesis. On submission of the proposed title the appropriate faculty may also require a candidate to submit a summary of the thesis.

(b) At the end of his approved course of study and research, or by the end of the fourth year from his enrolment, a candidate shall present to the Registrar, in such form as the Board prescribes, not fewer than three copies of a thesis embodying the results of his study and research. He may submit also, in support of the thesis, other relevant material provided that no material presented for any other degree within this or any other university shall be so submitted.*

(c) Only in exceptional circumstances and by special permission of the Board on the recommendation of the relevant faculty may an extension of time after the fourth year be allowed for submission of the thesis.

(d) On submission of the thesis or an acceptable summary thereof the appropriate faculty shall nominate two external examiners and may nominate one or more internal examiners. The examiners may recommend that the candidate be examined orally or otherwise on the subject of his thesis and the general field of knowledge within which it falls. Such an examination will be conducted by examiners nominated by the appropriate faculty.

11. To qualify for the degree the thesis shall contain a significant contribution to knowledge within the scope of its subject.

12. The Faculty shall consider the reports of the examiners and report, with recommendations, to the Board. The Board, after considering these reports, may recommend that the candidate:

(i) be awarded the degree subject to such minor amendments of the thesis as the examiners may have suggested;

(ii) be not awarded the degree, but be allowed to revise and resubmit his thesis within such period as the Board may allow;

(iii) be not awarded the degree and be not allowed to resubmit his thesis; or

(iv) be awarded an appropriate degree of Master subject to the concurrence of the appropriate faculty.

13. Two copies of a thesis and other material on which the degree is awarded shall be deposited in the Library.

Regulations allowed 21 December, 1967.

* These directions are published below, immediately after these regulations and schedules.

SCHEDULES

I. Academic Standing

1. The academic standing required for acceptance (subject to section (a) of regulation 5) as a candidate for the degree is normally an Honours degree of Bachelor (with first or second class Honours) or a degree of Master of the University of Adelaide.

2. The Board may accept as a candidate for the degree a graduate who does not qualify under clause 1 but (a) has completed to the satisfaction of the Board at least one year of full-time postgraduate study and research and (b) passes a qualifying examination prescribed by the appropriate faculty and approved by the Board.

3. Provided that it is satisfied in each case, on the recommendation of the Head of the department and the faculty concerned, that the course of study undertaken and the academic standard reached are equivalent to those required of a candidate who is a graduate of the University of Adelaide, the Board may accept as a candidate for the degree a person who holds a degree of another university or a qualification acceptable to the University from an institution of tertiary education recognised for the purpose by the University.

4. A person who proposes to proceed to the degree by undertaking a course of study and research in education shall also hold the Diploma in Education of the University or a qualification accepted by the University as equivalent, and shall have at least three years' experience in teaching or in some other educational work approved by the University before enrolling for the degree.

The attention of intending candidates is specially drawn to regulation 5.

NOTES AND INSTRUCTIONS TO CANDIDATES FOR HIGHER DEGREES (BY THESIS)

1115

NOTES AND INSTRUCTIONS TO CANDIDATES FOR HIGHER DEGREES (BY THESIS)

I. General

1. The degrees of Master and of Doctor (except the degree of Doctor of Philosophy) are administered by the Faculty concerned. However the degree of Doctor of Philosophy is common to all Faculties (except Technology and Applied Science), and accordingly responsibility for the administration of that degree is vested in a Board of Research Studies.

The attention of all candidates is drawn to the regulations and schedules of the degree to which they are proceeding, and to clause 2B of Chapter XXV of the Statutes.

2. A candidate's field of study must be approved by the appropriate faculty and, in the case of the degree of Doctor of Philosophy, by the Board of Research Studies. It may not be changed without similar approval.

3. A candidate for the degree of Master in the Faculties of Agricultural Science, Architecture, Arts, Dentistry, Economics (degree of M.Ec. only), Engineering (under regulation 3 of the degree of M.E.), Medicine and Science and a candidate for the degree of Doctor of Philosophy pursues a course of research under the direction of a supervisor, who will report formally each year on the candidate's work and progress. In the case of a candidate for a master's degree, such report will be to the appropriate faculty; of a candidate for the Doctor of Philosophy degree, to the Board of Research Studies. The supervisor will also report whenever in his opinion the student is not making satisfactory progress in his work, is otherwise not fulfilling the conditions laid down for him, or appears unlikely to be able to submit a thesis, embodying the results of his research, of the required standard.

4. The supervisor will maintain fairly close contact with the student, who should regard it as his duty to keep his supervisor fully informed of the progress of his research, and to consult him about proposed future work and about the general planning of his thesis. If not consulted fairly frequently, the supervisor will satisfy himself that the research student is working satisfactorily.

5. The function of the supervisor is not to plan at all directly the work that the research student should do, rather to provide a trained mind upon which the student may test his ideas and so be led to develop his own critical faculties. The thesis itself should represent largely the student's own work, assisted only by the general aid obtained by discussion with the supervisor as to the most satisfactory method of developing and presenting his material. For a candidate whose mother tongue is not English some help with the syntax may be given with the approval of the supervisor. The thesis must conform with the specifications given below.

6. If more than one supervisor is appointed, the candidate shall consult all such supervisors on all matters of general concern to his work and thesis.

II. Specifications for Theses

1. *Preparation.*

(a) The responsibility for the layout of the thesis and selection of the title rests with the candidate after discussion with his supervisor, and the completed thesis should be shown to the supervisor before submission. In order to save delay in the appointment of examiners a candidate is advised to give three months' notice in writing to the Academic Registrar of intention to submit a thesis, and to give its proposed title. He should also forward to the Academic Registrar three copies of a summary of the thesis when the thesis is ready for binding.

(b) The thesis of a candidate for the degree of Doctor of Philosophy should be written and submitted before the candidate leaves the University. In exceptional circumstances the Board of Research Studies may give permission for the thesis to be completed elsewhere.

(c) Candidates may find the following publications useful for consultation before writing theses:

Scientific Theses

Australia, C.S.I.R.O., *Guide to authors* (C.S.I.R.O., 1953).

Barned, J. R., and Petrie, C. M., *Guide to report writing,* revised edition (C.S.I.R.O. Division of Building Research, 1955).

Conference of Biological Editors, Committee on Form and Style, *Style manual for biological journals* (American Institute of Biological Sciences, 1960).

Emberger, M. R., and Hall, M. R., *Scientific writing* (Harcourt, Brace, 1955).

Royal Society of London, *General notes on the preparation of scientific papers,* 2nd edition (The Society, 1965).

"Suggestions to authors", *Journal of Physiology,* v. 182, 1966: 1-33.

Trelease, S. F., *How to write scientific and technical papers* (Williams and Wilkins, 1958).

Other Theses

Clark, G. K., *Guide for research students working on historical subjects* (Cambridge University Press, 1959).

Crutchley, B., *Preparation of manuscripts and correction of proofs,* 3rd edition (Cambridge University Press, 1965).

Hook, L., and Gaver, M. V., *The research paper,* 3rd edition (Prentice-Hall, 1962).

La Nauze, J. A., *Presentation of historical theses* (Melbourne University Press, 1966).

Parker, W. R., *The MLA style sheet,* revised edition (Modern Language Association of America, 1964).

Seeber, E. D., *A style manual for students, based on the MLA style sheet* (Indiana University Press, 1964).

Turabian, K. L., *A manual for writers of term papers, theses and dissertations,* 3rd edition (University of Chicago Press, 1967).

Wiles, R. M., *Scholarly reporting in the humanities,* 3rd edition (University of Toronto Press, 1961).

2. *Typing.*

(a) A thesis should normally be typed on size A4 or quarto paper on one side of the paper only with double spacing. The top typewritten copy should be prepared on bond paper using a good black inked ribbon. Quotations and footnotes may be typed in single spacing. Footnotes should be clearly separated from the text by a black line.

Work previously published, if submitted, may be in printed form.

Other forms of presentation may be allowed, if the Librarian approves. In such cases bond paper should be used. If copies are produced by xerography the original typewritten copy should still be one of the copies submitted. If copies are produced from wax stencils or litho-offset plates great care should be taken to ensure a clear black image with no smudging. Those copying processes which use chemically coated paper are unsuitable for the reproduction of theses.

(b) Margins should not be less than 3·5 cm on the left-hand side and 1·5 cm on the other three sides to allow for binding and trimming of an acceptable standard.

(c) The thesis should incorporate in the following order (i) a title page giving the title of the thesis in full, the names and degrees of the candidate, the name of the department of the University associated with the work and the date when submitted for the degree; (ii) a table of contents; (iii) a summary in not more than 500 words; (iv) a signed statement to the effect that the thesis contains no material which has been accepted for the award of any other degree or diploma in any university and that, to the best of the candidate's knowledge and belief, the thesis contains no material previously published or written by another person, except when due reference is made in the text of the thesis; (v) An acknowledgment of any help given or work carried out by another person or organisation; (vi) the main text; (vii) appendices, if any; (viii) bibliography.

Additional pages or other material not suitable for binding should be placed last and treated as indicated below.

3. *Diagrams and Figures.*

The following are general suggestions for normal practice, but they may be varied in special cases with the approval of the Librarian:

(a) Diagrams and figures, etc., should preferably be drawn or photographed on size A4 or quarto paper and bound in the appropriate place in the text. If it is necessary to mount photographs the mounting should be on paper somewhat heavier than that of the other pages, and great care should be taken to avoid wrinkling the paper or distorting the shape of the volume.

(b) Figures should form a right-hand page, with the top of the figure at the top or the inside edge of the page. The legend should be placed at the bottom or the right-hand edge of the page or, if necessary, on the page facing the figure.

(c) Tables should be inserted in the appropriate place in the text, except that lengthy or bulky tables should appear as an appendix.

(d) Diagrams, maps, tables, etc., exceeding quarto size, should be folded so as to read as a right-hand page when open.

4. *Binding.*

(a) The thesis must be sewn and bound with dark cloth on stiff covers. (A spring-type or screw-type binder is unacceptable. Stapling and plastic or "perfect" binding without sewing are also unacceptable.)

(b) During binding the edges should be trimmed.

(c) On the spine of the thesis should be given, in gold lettering of suitable size, normally reading from the bottom to the top, the candidate's surname and the title of the thesis, abbreviated if necessary. Where the width of the spine allows, the lettering may be placed horizontally, with the title of the thesis near the top of the spine and the candidate's surname near the middle.

(d) When published papers are submitted as evidence they should normally be bound near the back of the thesis as an appendix. In the case of published papers of unusual size it may be desirable to bind them in a separate volume. If they have been bound by the publisher it is desirable to keep them in a special case made and lettered to simulate a bound volume of a thesis.

Supplementary material such as folded maps and other large folded sheets may be placed in a pocket inside the back cover of the bound thesis.

Supplementary material such as reels of magnetic tape or microfilm which cannot readily be kept in a pocket should be placed in a special case made and lettered to simulate a bound volume of the thesis.

A supplementary case or additional volume of a thesis should be distinguished by a volume number but should otherwise be uniform with the first part of the thesis in respect to colour, lettering and, as far as possible, size.

5. *Availability.*

(a) Three bound copies of the thesis, including the top typewritten copy (or approved alternative), and two additional loose copies of the summary should be lodged with the Academic Registrar. If the thesis is accepted for the award of the degree the Academic Registrar will distribute two copies, including the top copy, to the University Library, and one copy to the Head/Chairman of the appropriate University department.

(b) Subject to the author's consent, one copy of the thesis deposited in the Library will be available for loan.

(c) Subject to the author's consent, the thesis will be available for photo-copying.

(d) The author will be asked after the award of the degree to give his consent to (b) and (c) in writing. Such notice of consent will be inserted by the Academic Registrar in the copies deposited in the Library.

(e) If the author's consent is not given to section (b) the thesis will in any case become available for loan two years after the award of the degree.

RULES

Rules for the University Library - - - - - 1122

Laboratory Rules and Rules Applicable to Students on University Premises - - - - - - 1128

Rules for Students using the Economics Statistics Laboratory - - - - - - - - - - 1130

Rules for Students using the Napier Birks Room - 1131

Rules of the Computing Annexes - - - - - 1132

Rules for the Conduct of Examinations - - - 1133

RULES FOR THE UNIVERSITY LIBRARY

I. Opening and Closing of the Library

1. Except on Saturdays, Sundays, public holidays and such other occasions as the Council may direct that it be closed, the Library shall be open from 9 a.m. to 5 p.m. During the academic year it shall also be open from 10 a.m. to 1 p.m. on Saturdays, from 1.30 p.m. to 5.30 p.m. on Sundays, and to 10 p.m. on such days as the Library Committee may direct; and during certain periods of the academic year it shall be open from 10 a.m. to 6 p.m. on Saturdays, from 1.30 p.m. to 5.30 p.m. on Sundays and public holidays, and to 11 p.m. on such days as the Library Committee may direct.

II. Persons Entitled to use the Library

2. The following persons are entitled to read in the Library:

Members and past members of the Council.

Graduates of the University or of universities recognised by the University.

Members, full-time or part-time, of the academic staff of the University, and members of any Faculty or Board of Studies of the University.

Officers of the administrative staff.

Heads and Deputy Heads of affiliated colleges.

Professional officers, laboratory managers and senior laboratory technicians.

Students enrolled for courses of study in the University.

3. Members of the ancillary staff of the University who are not listed in clause 2 may be permitted to read in the Library.

4. Other persons who wish to study in the Library may, after application to the Librarian, be permitted by the Library Committee to do so for specified periods.

5. Every person entitled to use the Library may be required to identify himself as such.

III. Conduct of Readers

6. Books and periodicals are not to be removed from the Library, except in accordance with the provisions of section IV.

7. (a) Readers who interfere with the comfort of other readers, or cause damage in the Library, or disfigure a book or periodical in any way, may be excluded by the Librarian or officer in charge, and shall make good any damage caused; they may also be deprived of the use of the Library for such times as the Council may determine. The Librarian may report any misconduct or offence to the Board of Discipline for such action as the Board may think fit.

(b) Bags or cases may not be taken into the Library.

(c) A person may not reserve a reading place during his absence from the Library.

(d) Smoking in the Library is not permitted, except in the rooms prescribed by the Committee.

IV. Borrowing of Books

8. The following persons are entitled to borrow books, periodicals and other items approved for borrowing:

Members and past members of the Council.

Professors, readers, senior lecturers, lecturers, senior research fellows, research fellows, post-doctoral fellows, senior tutors, senior demonstrators, tutors, demonstrators, and other persons of equivalent status holding full-time or part-time teaching or research appointments in the University.

The Registrar, Academic Registrar and Bursar.

Heads and Deputy Heads of affiliated colleges.

Professional officers, laboratory managers and senior laboratory technicians.

Such other persons as the Chairman of the Library Committee and the Librarian may from time to time approve.

9. Every borrower may be required to identify himself as such at the loan desk.

10. Persons who are listed in clause 8 may have on loan at any time up to forty items, but with allowance for more at the Librarian's discretion. Loans of books from the open collection in the Research Services Wing shall normally be for a period of four weeks in the first instance, with the option of a ten-week loan on request, or a fifty-two week loan at the Librarian's discretion. A loan may be renewed for a further period at the Librarian's discretion if in the meantime there has been no other application for the item.

11. Short-term visitors to departments may borrow books and periodicals. They may have on loan at any time up to twenty items, but with allowance for more at the Librarian's discretion. Loans of books shall be limited to a period of four weeks in the first instance. A loan may be renewed for a further period of four weeks at the Librarian's discretion if in the meantime there has been no other application for the item.

12. Members of the ancillary staff of the University who are not listed in clause 8 and who make written application to the Librarian, and the spouses of persons who are listed in clause 8, may borrow books from the open shelves but not the reserve and multiple-copy collections. They may not borrow periodicals. They may have on loan at any time up to eight items, but with allowance for more at the Librarian's discretion. Loans shall be limited to a period of fourteen days in the first instance. A loan may be renewed once only for a further period of fourteen days at the Librarian's discretion if in the meantime there has been no other application for the item.

13. For the duration of the trial period of non-monetary sanctions such sanctions shall be applied to all borrowers.

14. (a) Research scholars and students enrolled as candidates for higher degrees may borrow books (and periodicals in accordance with clause 15). They may have on loan at any time up to twenty items, but with allowance for more at the Librarian's discretion. Loans of books shall be limited to a period of four weeks in the first instance. A loan may be renewed once only for a further period of four weeks at the discretion of the Librarian if in the meantime there has been no other application for the item.

(b) Enrolled undergraduates, and students proceeding to diplomas in the University, may borrow books, but not periodicals, except in accordance with clause 15 in the case of certain categories of undergraduate.

(c) Graduates of the University or of other universities approved by the University, and such other persons as the Chairman of the Library Committee and the Librarian may from time to time approve, may borrow books from the Barr Smith Library, the Law Library and the Medical Library, on lodging a deposit of $5 and on paying in addition an annual fee of $3.50. They may not borrow periodicals.

(d) The deposit required of borrowers named in section (c) of this clause will, subject to any deductions incurred in accordance with these rules, be returned to the borrower after application to the Librarian. The application shall include a statement that the borrower no longer wishes to borrow.

(e) Borrowing under clause 14 shall be subject to the following conditions except by special arrangement:

(i) A borrower, other than one mentioned in 14(a), may have on loan at any time up to eight volumes only, but with allowance for more at the Librarian's discretion.

(ii) Loans of books to a borrower, other than one mentioned in 14(a), shall be for no longer than fourteen days in the first instance. A loan may be renewed once only for a further period of fourteen days at the Librarian's discretion if in the meantime there has been no other application for the item. A volume which has been on loan for the specified period must be returned within four days of the date of a notice recalling it. A borrower who fails to return a recalled item within this four-day period shall be awarded two demerit points for each day by which the four-day period is exceeded.

(iii) Books placed on reserve and available for loan for a period of two days or less may be borrowed in the period beginning one hour before and ending fifteen minutes before the Library is closed, and must be returned to the Library no later than fifteen minutes after the Library is next opened. A borrower who fails to return any such item by the specified time, if late return prevents another reader from using it when he has a right to it, or if it is recalled, shall be awarded two demerit points for each hour (to a total of ten hours in any day) by which the time specified for return of the item is exceeded.

(iv) Any item borrowed from the open shelves in the multiple-copy collection must be returned to the Library by the specified time. A borrower who fails to return any such item by the specified time shall be awarded one demerit point for each hour (to a total of ten hours in any day) by which the time specified for return of the item is exceeded.

(v) No item is recognised as having been returned to the Library until it is received at one of the official book-return points. It is the responsibility of the borrower to ensure that any item which he borrows from the Library is returned to an official book-return point.

15. Members of the teaching and research staff not listed in clause 8, and postgraduate students enrolled as candidates for higher degrees, may borrow bound and unbound periodicals from the Barr Smith Library on production of their library passes suitably endorsed or coded. Students who are enrolled in the fourth or a later year of a course for a degree may borrow from the Barr Smith Library bound volumes of periodicals related to their courses on production of their library passes suitably endorsed or coded. (Special provisions may apply to the Medical Library and the libraries within the Faculties of Agricultural Science, Law and Music.)

16. No periodical shall be borrowed until it has been in the Library seven days. Every bound or unbound periodical then borrowed for departmental circulation or for personal use must be returned within seven days. The loan of a bound periodical may be renewed for a further period of seven days at the discretion of the Librarian if in the meantime there has been no other application for it.

17. For each item borrowed a voucher must be filled in and deposited with the Librarian. No item approved for borrowing may, in any circumstances, be taken out of the Library until a borrowing voucher has been given for it. Any infringement of this rule renders the borrower liable to one hundred and twenty demerit points.

18. The Librarian may recall an item at any time, and thereupon it must be returned within four days of the date of the notice. A borrower who fails to return any such item within this four-day period shall be awarded two demerit points for each day by which the four-day period is exceeded.

19. (a) For every four demerit points awarded to him a borrower shall be liable to the suspension for one day of his right to borrow from the open collection of the Library.

(b) The suspension of a borrower's right to borrow from the open collection shall take effect from the date on which the Librarian issues a notification to him that the demerit points awarded to him during the current calendar year have reached a total of sixty.

(c) If possible, the Librarian shall warn a borrower when the demerit points awarded to him during the current calendar year reach a total of forty.

20. The Library Committee, during the period until the introduction of the computerised circulation system, shall have power to vary the details of the points demerit system. Any rules operating during this interim period shall be prominently displayed in the Library.

21. All items on loan from the Library shall be returned on a date to be fixed each year by the Chairman of the Library Committee and the Librarian for the annual check.

22. A borrower of an item shall be held responsible for any loss, injury or mutilation of it or disfigurement of it by writing or other marks, which occurs while the item is on loan to him, and shall be required to pay the full cost of replacing or repairing such an item and may also, at the discretion of the Council, be deprived of the use of the Library.

23. Appeals by borrowers against suspension of their borrowing rights, and complaints by the Librarian against library users who seriously or persistently infringe library rules shall be referred to a Library Tribunal of six members comprising the Chairman of the Library Committee, two student members (an undergraduate and a postgraduate student who is not a member of the academic staff), two members of the academic staff and one member of the library staff. The Library Tribunal, acting within such powers as the Council may delegate to it, shall decide, or recommend to the Council, on the appeals and complaints that are referred to it.

24. No book shall be borrowed until it has been in the Library seven days. Otherwise, any book except those specially reserved may be borrowed. Specially reserved books may be borrowed only by permission of the Library Committee.

25. Except as provided in clause 14(e)(iii) books and periodicals may be borrowed until thirty minutes before closing time on weekdays and until fifteen minutes before closing time on Saturdays and Sundays.

26. No items lodged in departments of the University by permission of the Library Committee may be borrowed for use outside the departments except through the Barr Smith Library.

27. The number of items issued on interlibrary loan to another institution shall normally be limited to twenty at a time, but with allowance for more at the Librarian's discretion.

28. The Council may vary any of the foregoing rules at any time either in specific cases or generally.

V. Rules for the Music Library

29. Teachers in the Elder Conservatorium are entitled to borrow books or music from the Library. Students may borrow music on the written recommendation of a teacher, but must not have in their possession more than two copies at the same time.

30. Subject to the approval of the Council the rules relating to the suspension of borrowing privileges may be varied in the case of the Music Library.

31. In all other respects the foregoing rules of the University Library shall apply to the Music Library.

VI. Rules for the Medical and Law Libraries

32. Medical graduates who are members of the Australian Medical Association (S.A. Branch), dental graduates who are members of the Australian Dental Association (S.A. Branch) and members of the Australian Physiotherapy Association (S.A. Branch) shall be entitled to use the Medical Library in accordance with the terms of the agreements between the Branches and the University. The agreements may be seen in the Medical Library.

33. Subject to the approval of the Council the rules relating to the suspension of borrowing privileges may be varied in the case of the Medical and Law Libraries.

34. In all other respects the foregoing rules of the University Library shall apply to the Medical and Law Libraries.

LABORATORY RULES AND RULES APPLICABLE TO STUDENTS ON UNIVERSITY PREMISES

A. General

1. The attention of all students is drawn to the by-laws made under the University of Adelaide Act Amendment Act, which are published in the University Calendar and are exhibited on notice boards throughout the University.

2. The Head of a Department may exclude any student from any class in that Department for any cause he shall deem sufficient; and he shall report every such exclusion, and the grounds for it, to the Council through the Chairman of the Board of Discipline. The Council may reverse, vary or confirm the exclusion upon such terms as it shall think fit. The fees paid by any student so excluded shall not be refunded to him unless the Council shall otherwise determine.

3. The possession of fireworks, home-made explosives or explosive material of any kind on the University grounds or in any University building is forbidden.

B. Laboratories

1. For students taking regular courses involving laboratory work in the University an appropriate laboratory will be open daily during term time (Saturdays and holidays excepted) at such hours as shall be considered necessary by the Head of the Department concerned. Persons engaged in advanced work or original research may work at such additional times as the Head of the Department may arrange.

2. The facilities of a laboratory will also be made available for original research carried on by students or graduates not proceeding to a degree in the University at such times and under such conditions as the Head of the Department may determine; the fee for use of a laboratory and its facilities, and the charges for materials, to be determined in each case.

3. Whenever necessary and possible, each student will have a definite working place and locker or drawer assigned to him, which he may not change without permission. To avoid congestion, students should not move about the laboratories unnecessarily.

4. Paper and refuse of any kind must be placed in the receptacles provided for the purpose. No solid material of any kind shall be thrown into sinks.

5. Students are responsible for the cleanliness of their apparatus and work places or benches, which must be left clean and tidy after each practical session.

6. All preparations and equipment made from materials supplied by the University shall remain the property of the University.

7. Large or expensive pieces of apparatus will be supplied for use by students only on condition that any damage or breakage is to be made good by the student causing the damage or breakage, on such basis as the Head of the Department may determine.

8. No experiments of a dangerous nature may be performed without the express sanction of the Head of the Department concerned.

9. Any accident must be reported at once to the person currently in charge of the laboratory.

10. The Head of a Department may impose a fine not exceeding $10 for any breach of discipline, misconduct, misuse of apparatus or reagents, or waste of gas, water or electricity. He shall report in writing to the Registrar the amount of such fine, and the reason for it; and the fine shall be paid to the Registrar within seven days of the time of its imposition.

Rules approved by the Council, April, 1958.

RULES FOR STUDENTS USING THE ECONOMICS STATISTICS LABORATORY

1. *Conduct of users*

The Laboratory is to be used only by Economics or Commerce students doing calculations, audio-visual carrel or computer augmented courses. Users must refrain from conduct which will prevent the effective use of the Laboratory by others.

2. *Times of use*

During the academic year the room will be open between 9 a.m. and 10 p.m. on Mondays to Fridays, and from 9 a.m. to 12 noon on Saturdays. At all other times the room will be open during such hours as the Dean of the Faculty of Economics may determine. The computer facility will be available between 9 a.m. and 5 p.m., Monday to Friday; evening hours will be arranged and will be notified in the Laboratory each term.

3. *Use of electronic calculators, carrels and computer*

The calculators may be used at any time that the room is open except for the calculators in the Teaching Room, which may only be used if a class is not in progress. Carrels may be used only by students doing courses that involve audio-visual carrel instruction. The computer may only be used by authorised users and at all times its use is subject to the control of the Laboratory Supervisor.

Under no circumstances may any equipment be removed from the Laboratory.

4. *General*

Any student not observing the above rules shall be subject to disciplinary action.

RULES FOR STUDENTS USING THE NAPIER BIRKS ROOM

1. *Conduct of users*

The room is to be used for purposes of study only. Users must refrain from conduct which will prevent the effective use of the room by others.

2. *Persons entitled to use the room*

The room is available for use by students enrolled for second-year or subsequent subjects in the Departments of Economics and Commerce.

3. *Times of use*

During the academic year the room will be open between 9 a.m. and 10 p.m. on Mondays to Fridays, and from 9 a.m. to 12 noon on Saturdays. At all other times the room will be open during such hours as the Dean of the Faculty of Economics may determine.

4. *Use of books, periodicals, statistical material*

All such material must be returned to the desk of the Librarian after use.

In no circumstances may such material be removed from the room.

5. *Use of electronic calculators*

Electronic calculators may only be used for short calculations. All other calculations should be done in the Statistics Laboratory.

6. *General*

Any student not observing the above rules shall be subject to disciplinary action.

RULES OF THE COMPUTING ANNEXES

1. These rules shall apply to any area housing equipment connected to the central computer, or used for collection and dissemination of computer material, which areas are hereby defined as Computing Annexes, and to such other areas as may be declared by the Council to be Computing Annexes.

In these rules the term 'supervisor' means the person appointed in consultation with the Director of the Computing Centre by the Chairmen of Departments controlling the Annexe, or by the Director of the Computing Centre. A supervisor may appoint a deputy.

2. These rules are subservient to any statutes, regulations or rules relating to discipline within the University generally.

3. A Computing Annexe will be available for use by such persons as may be approved by the supervisor, who shall keep adequate records of such approvals.

4. The supervisor shall open the Annexe during normal working hours, and during such extended periods as may in his judgement be desirable and can be adequately supported.

5. Users of Annexes shall not conduct themselves in a way which will interfere with other users, either directly, by interference with equipment, or otherwise.

In particular, users must—

(a) obey directions by the supervisor designed to maintain safe, clean and tidy working conditions;

(b) not remove materials supplied or produced, except insofar as they may be supplied or produced for the benefit of the individual user;

(c) not operate any item of equipment specified by the supervisor unless authorised to do so by the supervisor;

(d) immediately report any machine failure to the supervisor;

(e) conform to rules made by the supervisor regarding logging, documenting or otherwise controlling the use made of the equipment; and

(f) not cause unauthorised work to be carried out by or through the equipment.

6. A supervisor may exclude any person from the Annexe, for a period not exceeding 24 hours, if that person fails to observe the rules of the Annexe. Written notice of such exclusion shall, within 24 hours, be given to the Director of the Computing Centre.

RULES FOR THE CONDUCT OF EXAMINATIONS

1. No candidate will be allowed to enter the examination room during any examination more than half-an-hour after the time fixed for the beginning of the written or practical work in that examination.

2. No candidate will be allowed to leave the examination room during any examination before half-an-hour has elapsed from the time fixed for the beginning of the written or practical work in that examination, nor during the last quarter of an hour.

3. Any candidate who shall leave the examination room shall be allowed to return to it during that examination only at the absolute discretion of the Officer-in-Charge. A candidate who wishes to leave the room temporarily *must therefore obtain the consent of a Supervisor before doing so.*

4. The attention of candidates is drawn to the following statute:

"A candidate must not during any examination whatever:

(a) have in his or her possession any book or notes or any other means whereby he or she may improperly obtain assistance in his or her work; or

(b) directly or indirectly give assistance to any other candidate; or

(c) permit any other candidate to copy from or otherwise use his or her papers; or

(d) directly or indirectly accept assistance from any other candidate; or

(e) use any papers of any other candidate; or

(f) by any other improper means whatever obtain or endeavour to obtain, directly or indirectly, assistance in his work, or give or endeavour to give, directly or indirectly, assistance to any other candidate; or

(g) be guilty of any breach of good order or propriety.

Any candidate who shall be guilty of a breach of any of the provisions of this regulation shall lose that examination; and, if detected at the time, shall be summarily dismissed from the examination room; and shall be liable to such further punishment, whether by exclusion from future examination or otherwise, as the Council may determine."

5. When the five-minute warning before the end is given, all *candidates must remain seated* until their books have been collected. No candidate may leave his or her seat until all answers have been collected and the announcement is made that candidates may leave the room.

Instructions to Candidates

1. Read carefully the directions printed on the front of the examination answer book and any directions that may be printed at the head of the examination paper.

2. Communicating with Examiners prior to the publication of the examination results is forbidden. Candidates who feel that they have a genuine claim for enquiry should state their cases in writing to the Academic Registrar.

FEES AND CHARGES

(a) **General.**

As from 1 January, 1974 the Australian Government abolished all tuition fees and associated charges (such as examination and graduation fees) at universities and other approved institutions of tertiary education. This decision applies to all students whether full-time, part-time or external, and includes overseas students; it does not apply to students taking courses in the Department of Adult Education, nor to Elder Conservatorium students taking studies not forming part of a Music degree course.

Accordingly, apart from the exceptions noted above, no student enrolled in the University is now required to pay any tuition or associated fee.

Every student is, however, required to pay the prescribed Union fees [see (b) below]; and he may also, in some circumstances, incur a liability to pay certain University charges [see (c) below]. In some subjects attendance at excursions or camps forms a compulsory part of the practical work and certain costs are thereby incurred [see (d) below].

(b) **Union Fees.**

Every student taking a course for a Bachelor's or higher degree or for a diploma must, unless exempted by the Union Council, pay a Union Entrance Fee and a Union Annual Fee.

Payment of these fees entitles students to be members of the University Union (the club to which all members of the University may belong) with the use of the Union buildings, facilities and services. It also entitles them to take full part in the activities of the Students' Association, Postgraduate Students' Association, Clubs and Societies Council and the Sports Association.

The Union fees in 1974 comprised:

(i) a *Union Entrance Fee* of $20, payable upon first enrolment; and

(ii) a *Union Annual Fee* of $66 for full-time students, and $33 for part-time and postgraduate students, or students enrolled both in the University and in a College of Advanced Education (former Teachers College), payable upon enrolment each year.

These fees have been under review; but exactly what the Union fees will be in 1975 is not known at the time of printing.

(c) **University Charges.**

The following charges will be made by the University in appropriate cases:

Late enrolment	$15
Late submission of entry for examination	$10

In addition, charges may be made to students who do not comply with University rules. Such charges are set out in the rules concerned. All rules are printed in this volume from pages 1122 to 1133.

Students in the third year of the dental course are required to pay a returnable deposit of $20 in connection with the use of hospital equipment during the clinical years of the course.

Students in the fourth and fifth years of the medical course are required to pay hospitals residence charges of $34.50 a year.

Students who arrange to take their examinations externally are responsible for the payment of charges for supervision.

(d) **Compulsory Excursions and Camps.**

In some subjects or courses attendance at excursions or at camps (usually during vacation) forms a compulsory part of the associated practical work. The University will meet the *travel* costs; however students are required themselves to meet whatever *living* costs (accommodation, meals, etc.) may be involved.

The subjects or courses where living costs are involved in attendance at compulsory excursions or camps are listed below with an estimate of those costs:

	$
Architecture and Town Planning:	
B.Arch (Fourth Year)	75
M.T.P. (Course Work)	75
Arts:	
Geography (Second Year)	25
Geography (Third Year)	30
Science:	
Geology II	45†
Geology III	45†
Honours Geology, Economic Geology, Geophysics: each	220†
Botany II	9
Botany III	15*
Agricultural Science:	
Fourth-year field trip	100
Engineering:	
Civil Engineering I, Survey Camp	30
Chemical Engineering (Final Year)	60
Mechanical Engineering (Final Year)	30

This list is published only for the information and guidance of students and in no way restricts the University in determining each year the nature, duration and cost of the excursions or camps associated with particular subjects or courses, or the list of subjects and courses in which such attendance may be required.

* $15 for each Botany III unit that involves fieldwork.

† In addition students should allow up to $75 for equipment and field clothing (full details from Department of Geology).

TIME-TABLES FOR 1975

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-tables.

All lectures are of fifty minutes duration.

FACULTY OF AGRICULTURAL SCIENCE:
B.Ag.Sc. - - - - - - - - - - - - 1138

FACULTY OF ARCHITECTURE AND TOWN PLANNING:
B.Arch. - - - - - - - - - - - - 1162

FACULTY OF ARTS:
B.A. - - - - - - - - - - - - 1140
Dip.App.Psych. - - - - - - - - - - - 1144
Dip.Ed. - - - - - - - - - - - - 1145
Adv.Dip.Ed. (and M.Ed. Course Work) - - - - - 1145
Late Afternoon and Evening Lectures - - - - - - 1163

FACULTY OF DENTISTRY:
B.D.S. - - - - - - - - - - - - 1146

FACULTY OF ECONOMICS:
B.Ec. (For 1975) - - - - - - - - - 1147
(Tentative for 1976) - - - - - - - - - 1149
Dip.B.M. (and M.B.M. Course Work) (For 1975) - - - 1148
(Tentative for 1976) - - - - - - - - - 1150
Late Afternoon and Evening Lectures - - - - - - 1163

FACULTY OF ENGINEERING:
B.E. - - - - - - - - - - - - - 1151

FACULTY OF LAW:
LL.B. - - - - - - - - - - - - - 1162

FACULTY OF MATHEMATICAL SCIENCES:
B.Sc. - - - - - - - - - - - - - 1155

FACULTY OF MEDICINE:
M.B., B.S. - - - - - - - - - - - - 1146

FACULTY OF MUSIC:
B.Mus. - - - - - - - - - - - - - 1161

FACULTY OF SCIENCE:
B.Sc. - - - - - - - - - - - - - 1155

FACULTY OF TECHNOLOGY AND APPLIED SCIENCE:
B.Tech. - - - - - - - - - - - - 1162
B.App.Sc. - - - - - - - - - - - - 1162
B.Pharm. - - - - - - - - - - - - 1162

FACULTY OF AGRICULTURAL SCIENCE

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF AGRICULTURAL SCIENCE

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	FIRST- AND SECOND-YEAR SUBJECTS See under the Faculties of Economics Mathematical Sciences and Science respectively.					
	THIRD-YEAR SUBJECTS*					
WB03	Agricultural Biochemistry I—					
	Lectures	2	9	—	—	—
	Practicals	—	10-4	—	—	—
WP03	Agricultural Microbiology—					
	Lectures	—	—	4	—	—
	Practicals	—	—	—	4-6	—
WA03	Agriculture III—					
	Lectures	—	—	9	2	—
	Practicals	—	—	10-1	—	—
WN03	Animal Physiology & Production I—					
	Lectures	—	—	3	—	9
	Practicals	—	—	—	—	10-1
WY73	Biometry—					
	Lectures	3	—	2	—	—
	Tutorials	4 or 5	—	—	—	—
WF03	Crop Physiology—					
	Lectures	9	—	—	3	—
	Practicals	—	—	—	10-1	—
WE03	Entomology-Pathology—					
	Lectures	—	—	5	9	—
	Practicals	10-1	—	—	—	—
EE43	Economics of Natural Resource Use—					
	Lectures	12	4, 5	—	—	—
EE63	Farm Prices and Policy**					
	Lectures	—	2, 3	—	—	—
QT02	Mathematical Statistics II— (See B.Sc. in Faculty of Mathematical Sciences)					
WB13	Soil Science I—					
	Lectures	4	—	—	—	2
	Practicals	—	—	—	—	3-6
	FOURTH-YEAR SUBJECTS*					
WB04	Agricultural Biochemistry II—					
	Lectures	11	—	—	11	11
	Practicals	2-6	—	2-6	—	—
WA04	Agriculture IV—					
	Lectures	10	—	9	—	—
	Practicals	—	—	10-1	—	—
WA74	Agronomy—					
	Lectures	11	—	—	11	11
	Practicals	2-6	—	2-6	—	—

NOTE: Lectures in all subjects taken at the Waite Agricultural Research Institute will commence at ten minutes past the hour shown in the time-tables.

*Any student who is apparently unable to pursue a combination of subjects due to a clash in the hours set aside in this time-table for work in that subject should consult an Assistant to the Dean before making a final decision.

**Farm Prices and Policy—one further tutorial hour to be decided on at a later date.

FACULTY OF AGRICULTURAL SCIENCE—Continued

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF AGRICULTURAL SCIENCE

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
WN04	Animal Physiology & Production II—					
	Lectures	9	—	—	12	12
	Practicals	—	—	—	2-6	2-6
EE03	Economics III—					
	(See B.Ec. in Faculty of Economics)					
WE04	Entomology II—					
	Lectures	9	9	—	—	9
	Practicals	2-6	—	2-6	—	—
SJ03	Genetics III—					
	Lectures	—	10, 12	—	9, 10	—
	Practicals	—	2-5	—	2-5	—
	Tutorial	—	9	—	—	—
WF04	Horticultural Science—					
	Lectures	—	11, 12	—	12	12
	Practicals	—	—	—	—	2-6
QT03	Mathematical Statistics III—					
	(See B.Sc. in Faculty of Mathematical Sciences)					
WA84	Plant Breeding—					
	Lectures	9, 12	—	—	—	9
	Practicals	2-6	—	2-6	—	—
WP04	Plant Pathology II—					
	Lectures	—	10	—	10	10
	Practicals	—	2-6	—	2-6	—
WB14	Soil Science II—					
	Lectures	9, 12	9	—	—	—
	Practicals	—	2-6	—	2-6	—

NOTE: Lectures in all subjects taken at the Waite Agricultural Research Institute will commence at ten minutes past the hour shown in the time-tables.

*Any student who is apparently unable to pursue a combination of subjects due to a clash in the hours set aside in this time-table for work in that subject should consult an Assistant to the Dean before making a final decision.

FACULTY OF ARTS

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF ARTS

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	FIRST-YEAR SUBJECTS AND HALF-SUBJECTS (GROUP A)					
AA01	Anthropology I	—	—	2.15(A)	—	2.15(A)
		—	—	4.15(B)	—	4.15(B)
AQ01	Chinese I	4.15	4.15	4.15	4.15	4.15
AC31	Classical Studies I	—	9	—	9	—
UA11	Drama I	—	3.15	—	3.15-6.15	—
AJ71	Economic Geography I	—	—	5.15	—	5.15
AE01	English I	—	12(A)	—	12(A)	—
		—	5.15(B)	—	5.15(B)	—
AF01	French I	10	—	10	—	10
AF11	French IA	2.15	2.15	2.15	2.15	2.15
AG01	German I	—	—	11(A)	3.15(A)	—
		—	—	3.15(A)	—	—
		6.15(B)	—	—	5.15-7.15(B)	—
	Tutorial	—	10(A), 11(B)	—	—	—
AG11	German IA	9	10	9	10	9
AC11	Greek I	—	≠	—	—	≠
AC71	Greek IA	9	—	9	10	9
AH01	History IA	—	2.15	—	2.15	—
AH31	History IB	—	—	9	—	9
AH41	History IC	5.15	—	5.15	—	—
AJ2H	Human Geography IH (Second half of year)	—	5.15	—	5.15	—
AQ21	Japanese I	12	—	3.15	—	12
AQ31	Japanese IA	9	9	9	9	9
AC01	Latin I	12	—	—	—	12
AL2H	Logic IH	6.15(B)	—	—	—	3.15(A)
EE1G	Macroeconomics IH	—	10(A)	12(B)	—	5.15(C)
EE2G	Microeconomics IH	—	—	5.15(A)	10(B)	11(C)
UA51 / UA61	Music I / Music IA	4.15-6.15	—	4.15-6.15	—	—
AL1H	Philosophy IH (A)	—	11(A) 6.15(B)	—	—	—
AL3H	Philosophy IH (B)	—	—	—	11(A) 6.15(B)	—
AJ1H	Physical Geography IH (First half of year)	—	5.15	—	5.15	—
SP9H	Physics, Man and Society IH	11	—	—	—	—
AP01	Politics I	—	10	—	10	—
AY01	Psychology I	10(A)	—	10(A)	—	10(A)
		5.15(B)	—	5.15(B)	—	5.15(B)
EE71	Social Economics I	—	12	—	12	—

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-tables.

For time-tables of subjects taught by other faculties see the appropriate Faculty Time-table.

FACULTY OF ARTS—Continued

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF ARTS

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	SECOND-YEAR SUBJECTS AND HALF-SUBJECTS (GROUP B)					
AE82	American Literature II	5.15	—	5.15	—	—
AC72	Ancient History II	2.15	—	2.15	—	—
AA4H	Anthropological Studies in Social Inequality and Change IIH ..	—	—	—	10	—
AQ12	Asian Development II	11	—	11	—	—
AE72	Australian Literary Studies II ..	—	9	—	9	—
AJ3H	Biogeography and Climatology IIH	—	—	10	—	—
AC32	Classical Studies II	—	12	—	12	—
AA2H	Communication, Interaction and Culture IIH	—	—	—	2.15	—
SB4H	Ecology and Taxonomy IIH (*see* Botany II in Faculty of Science ..					
AJ5H	Economic Geography IIH	—	—	—	10	—
AA1H	Economic and Political Anthropology IIH	—	—	—	4.15	—
EE12	Economic History II	—	10	—	10	—
AE02	English II	—	5.15	—	5.15	—
AA3H	Ethnological Studies in Ritual and Religion IIH	—	—	—	—	—
AF02	French II	—	11	—	11	3.15
AF12	French IIA	10	—	10	11	10
AF72	French IIB	—	2.15	11	—	11
AJ4H	Geomorphology IIH	—	—	—	—	10
AG02	German II	12	—	12	2.15	—
AG12	German IIA	11,12	—	12	3.15	9
AG87	German IIB	2.15	—	4.15	4.15	—
	Honours Seminar	—	3.15-4.45	—	—	—
AC12	Greek II	2.15[a]	≠	2.15[a]	≠	≠
AC77	Greek IIS	9	—	9	10	9
AH02	History II—					
	A. South Asian History	—	6.15	—	6.15	—
	B. East Asian History	—	—	10	—	10
	C. South-East Asian History ..	—	4.15	—	4.15	—
	D. Medieval History	—	—	5.15	—	5.15
	E. Modern Russian History ..	—	2.15	—	2.15	—
	F. Material Foundations of the Modern World	6.15	—	—	—	6.15
	G. Culture in Victorian England	2.15	—	2.15	—	—
	J. African History	10	—	—	10	—
	K. Australian History	12	—	12	—	—
AC02	Latin II	≠ 2.15[b]	≠	≠ 2.15[b]	≠	≠
AE92	Linguistics II	—	≠	—	≠	—
AL22	Logic II (*see* Philosophy II)					
EE3G	Macroeconomics IIH	—	—	—	—	5.15
EE4G	Microeconomics IIH	—	—	5.15	—	—
UA52	Music II	4.15-6.15	—	4.15-6.15	—	—
AE87	Old and Middle English II ..	≠	—	≠	—	≠

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-tables.

For time-tables of subjects taught by other faculties see the appropriate Faculty Time-table.

FACULTY OF ARTS—Continued

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF ARTS

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
AL02	Philosophy II—					
	L201 Logic	4.15	—	4.15	—	—
	L202 Freewill & Determinism ..	—	—	11	—	11
	L203 Philosophy of Religion ..	11	—	—	—	12
	L204 Ethics: Ancient & Modern ..	—	—	6	—	6
	L205 Modal Logic	11	—	—	—	12
	L206 Philosophy of Mind ..	—	—	11	—	11
	L207 Epistemology	4.15	—	4.15	—	—
	L208 Advanced Logic	4.15	—	4.15	—	—
	L209 Philosophy of Science ..	—	—	11	—	11
	L210 Political Philosophy & Philosophy of Social Science ..	11	—	—	—	12
	L211 Moral Philosophy	—	—	6	—	6
	L212 Sartre's Philosophical Development	—	≠	—	≠	—
AP32	Politics IIA } —					
AP42	Politics IIB }					
	A. Asian Political Anthropology ..	—	9	—	9	—
	B. Australian Politics	—	—	2.15	—	2.15
	D. Chinese Politics	—	11	—	11	—
	E. Contemporary Social Theory ..	—	6.15	—	6.15	—
	F. International Politics	—	12	—	12	—
	G. Marxism-Leninism	—	3.15	—	3.15	—
	J. Political Sociology	—	10	—	10	—
	K. Political Theory and American Politics	—	5.15	—	5.15	—
	L. Problems of Political Philosophy	—	2.15	—	2.15	—
	M. Problems of Social Change ..	5.15	—	5.15	—	—
AY02	Psychology II	3.15	—	3.15	—	2.15
AJ6H	Social Geography IIH	10	—	—	—	—
	THIRD-YEAR SUBJECTS AND HALF-SUBJECTS (GROUP C)					
AE73	Australian Literary Studies III ..	—	5.15	—	5.15	—
AC33	Classical Studies III	9	—	—	—	9
	Comparative Literature ..	—	—	—	4.15	—
EE73	Economic Development Studies III (*see* under B.Ec., Faculty of Economics)					
EE03	Economics III (*see* under B.Ec. Faculty of Economics)					
AE03	English III	11	—	11	—	11
AF03	French III	—	9	—	9	3.15
AF88	French IIIA	—	≠	—	≠	≠
AJ13	Geography IIIA } —					
AJ23	Geography IIIB }					
	J320 Agricultural Geography ..	≠ [ab]	—	—	—	—
	J321 Biogeography	4.15 [bc]	—	—	—	—
	J322 Cartography	—	≠ [bc]	—	—	—

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-tables.

For time-tables of subjects taught by other faculties see the appropriate Faculty Time-table.

FACULTY OF ARTS—Continued

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF ARTS

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	Geography IIIA & IIIB—Continued					
	J323 Climatology	—	—	—	4.15[ab]	—
	J324 Cultural Geography	—	4.15[ab]	—	—	—
	J332 Geographic Thought	—	4.15[c]	—	—	—
	J325 Historical Geography	—	—	≠[bc]	—	—
	J326 Process Geomorphology	—	—	—	—	4.15[bc]
	J327 Rural Settlement & Society	—	—	—	≠[ab]	—
	J328 South East Asia	—	—	4.15[ab]	—	—
	J329 Spatial Analysis	—	—	—	—	≠[bc]
	J331 Techniques	—	—	—	—	4.15[a]
	J330 Urban Geography	—	≠[ab]	—	—	—
AG03	German III	—	11	9	11	—
AG88	German IIIB	—	10	10, 4.15	4.15	—
	Honours Seminar	—	3.15-4.15	—	—	—
AC13	Greek III	≠	≠	≠	≠	≠
AC78	Greek IIIS	≠	≠	≠	≠	≠
AH03	History IIIA } (*see* History II above)					
AH13	History IIIB }					
AH89	History IIIS	—	—	—	11, 12	—
AC03	Latin III	2.15[c]	—	2.15[c]	—	—
AE93	Linguistics III	—	≠	—	≠	—
AL23	Logic III (*see* Philosophy II)					
UA53	Music III	—	9.30-4.30[d]	—	9.30-4.30[d]	—
UA68	Music IIIS	—	9.30-4.30[e]	—	9.30-4.30[e]	1-3
AE88	Old and Middle English III	≠	≠	≠	≠	≠
AL03	Philosophy IIIA } (*see* Philosophy II					
AL13	Philosophy IIIB }					
AP03	Politics IIIA } (*see* Politics IIA					
AP13	Politics IIIB } and IIB					
AY23	Psychology III	5.15	3.15	5.15	3.15	5.15
SB3H	Social Biology IIIH	≠	≠	≠	≠	≠

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-table.

For time-tables of subjects taught by other faculties see the appropriate Faculty Time-table.

Times for tutorials and/or practical work will be arranged at the commencement of lectures.

Alternatives are indicated by A, B, C, etc.

≠ Time to be arranged.

Greek II:

Geography IIIA and IIIB:
a — First term only.

Latin II:

Geography IIIA and IIIB:
b — Second term only.

Latin III:

Geography IIIA and IIIB:
c — Third term only.

Music III:
d — First four weeks, two terms only.

Music IIIS:
e — First four weeks, one term only.

FACULTY OF ARTS—Continued

TIME-TABLE OF SUBJECTS FOR THE

DIPLOMA IN APPLIED PSYCHOLOGY

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	The times stated may be modified for particular weeks, with the agreement of enrolled students, should circumstances warrant.					
	Courses normally taken in the "first year":					
AY04	Developmental Psychology (2 hours)	—	—	—	3[a]	—
AY14	Human Skills (2 hours)	—	—	—	—	3[b]
AY34	Personality and Social Relations (2 hours)	—	—	—	—	3[c]
AY44	Psychopathology (2 hours)	—	—	—	3[d]	—
AY24	Occupational Psychology (2 hours)..	—	—	—	3[e]	—
	Practical Work and Seminars (1½ hrs.)	—	—	—	5.25	3[f]
	Courses normally taken in the "second year":					
AY54	Statistics and Methodology (2 hours)	—	3	—	—	—
AY64	Practical Work and Seminars (1½ hrs.)	—	5.25	—	—	—

Times for tutorials and/or practical work will be arranged at the commencement of lectures.

Developmental Psychology:
a — First term only.

Human Skills:
b — First term only.

Personality and Social Relations:
c — Second term only.

Psychopathology:
d — Second term only.

Occupational Psychology:
e — Third term only.

Seminars:
f — Third term only.

FACULTY OF ARTS—Continued

TIME-TABLE OF SUBJECTS FOR THE

DIPLOMA IN EDUCATION ADVANCED DIPLOMA IN EDUCATION, AND MASTER OF EDUCATION (COURSE WORK)

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	Full-time students—times for all subjects will be arranged at the commencement of lectures.					
	Part-time students—times for subjects available as under:					
AD34	Educational Psychology I	—	—	—	—	Sat. 10.30
AD24	Sociology of Education I	—	—	—	—	Sat. 9
AD40	Comparative Education	5.10	—	—	—	—
AD30	Educational Psychology II	—	—	—	—	5.10
AD10	History of Education II	5.10	—	—	—	—
AD50	History and Theory of Science ..	5.10	—	—	—	—

FACULTIES OF DENTISTRY AND MEDICINE

TIME-TABLE OF SUBJECTS FOR THE DEGREES OF

BACHELOR OF DENTAL SURGERY
BACHELOR OF MEDICINE AND
BACHELOR OF SURGERY

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	FIRST-YEAR SUBJECTS					
SC71	Chemistry IM—					
	Lectures	10	—	10	—	10
	Tutorial	—	—	11, 12	—	—
	Practical (3 hours)	—	2.10-5	—	2.10-5	2.10-5
SP7H	Physics IM—					
	Lectures	—	10	—	—	12
	Tutorial (1 hour)	12	12	—	—	—
	Practical (3 hours fortnightly)	—	—	2.10-5	—	—
SJ8H	Genetics IM—					
	Lectures	—	—	—	12	—
	Practical (3 hours fortnightly) ..	—	—	—	10-12(A)	—
		—	—	—	3.10-5(B)	—
	Tutorial	≠	≠	≠	≠	≠
SZ71	Biology I—					
	Lectures	—	5.15	—	5.15	—
	Tutorial	≠	≠	—	≠	≠
	Practical (4 hours)[a]					
MH71	Behavioural Science—					
	Lectures	11	11	—	—	11
	Tutorial	—	—	≠	≠	≠
	Practical	2-5	—	—	—	—

SECOND- AND LATER-YEAR SUBJECTS

Dentistry: Dental School Office.

Medicine:

Pre-clinical subjects—Departments of Anatomy, Biochemistry and Human Physiology.
Clinical and Para-clinical subjects—Medical School Office.

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).
Afternoon and evening lectures will commence at the time shown in the time-tables.

Alternatives are indicated by A and B.

Biology I:

[a] — The laboratories are open during the following hours:
9 a.m.-6 p.m. Monday, Wednesday and Friday.
9 a.m.-10 p.m. Tuesday and Thursday.

≠ 1 hour to be arranged.

FACULTY OF ECONOMICS

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF ECONOMICS

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	FIRST-YEAR SUBJECTS AND HALF-SUBJECTS					
AJ71	Economic Geography I	—	9	—	9	—
EC01	Elements of Accounting I	—	12(A)	—	12(A)	—
		—	5.15(B)	—	5.15(B)	—
EE1G	Macroeconomics IH	—	10(A)	12(B)	—	5.15(C)
EE41	Mathematics (Economics) I ..	10	—	10	—	10
EE2G	Microeconomics IH	—	—	5.15(A)	10(B)	11(C)
	SECOND-YEAR SUBJECTS AND HALF-SUBJECTS					
EC13	Commercial Law II	—	—	5.15	—	5.15
EE12	Economic History II	—	10	—	10	—
EE22	Economic Statistics II	—	5.15	—	5.15	—
EE32	Economic Statistics IIA	—	5.15	—	5.15	—
EE3G	Macroeconomics IIH	—	—	—	—	5.15
EC02	Management Accounting II ..	—	12	—	12	—
EE4G	Microeconomics IIH..	—	—	5.15	—	—
	THIRD-YEAR SUBJECTS AND HALF-SUBJECTS					
EC2H	Accounting Theory IIIH	—	—	—	5.15	—
EE4H	Agricultural Economics IIIH ..	—	—	—	10	—
EC4H	Business Finance IIIH	—	—	11	—	—
EE8H	*Econometrics IIIH	—	12	—	—	—
EE13	Economic Development III ..	5.15-7.15	—	5.15-7.15	—	—
EE8G	Economic Problems in Historical Perspective IIIH	—	5.15	—	—	—
EE68	*Economic Theory	—	2.15	—	2.15	—
EE3H	Economics of Labour IIIH	—	11	—	—	—
EE5H	*History of Economic Thought IIIH	—	—	11	—	—
EC23	Industrial Sociology III	—	—	5.15	—	5.15
EC3H	*Information Systems and Data Processing IIIH	—	—	—	3.15	—
EE7G	International Economics IIIH ..	—	—	—	—	10
EC2H	*Introduction to Operations Research IIIH	—	—	3.15	—	—
EE5G	Macroeconomics IIIH	—	—	10	—	—
EC6H	Management Information Systems IIIH	—	5.15	—	—	—
EE7H	Managerial Economics IIIH ..	—	—	—	6.15	—
EC5H	Marketing IIIH	—	—	6.15	—	—
EE6G	Microeconomics IIIH	—	—	2.15	—	—
EE2H	*Public Finance IIIH	—	4.15	—	—	—
EE6H	Russian Economic History IIIH ..	—	—	—	3.15	—

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-tables.

It is expected that those subjects and half-subjects (except those marked *) which are given as day classes in 1975 will be given as evening classes in 1976 and vice versa.

Macroeconomics IH, Microeconomics IH and Elements of Accounting I will continue to be offered both as day and evening classes.

FACULTY OF ECONOMICS—Continued

TIME-TABLE OF SUBJECTS FOR THE

DIPLOMA IN BUSINESS MANAGEMENT AND FOR THE DEGREE OF MASTER OF BUSINESS MANAGEMENT (COURSE WORK)

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
EC00	Accounting (Business Management)	—	11-1	—	12	—
EC30	Economic Institutions and Policy ..	≠	≠	≠	≠	≠
EC50	Economic and Accounting Analysis	—	—	9-11	—	—
EC60	Business Statistics	—	—	—	—	8.30-11
EC70	Decision Making	8.30-11	—	—	—	—
EC80	Organisation Theory and Behaviour	—	—	—	3-5.30	—

≠ Time to be arranged.

FACULTY OF ECONOMICS—Continued

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF ECONOMICS

TENTATIVE TIME-TABLE FOR 1976

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	FIRST-YEAR SUBJECTS AND HALF-SUBJECTS					
AJ71	Economic Geography I	—	9	—	9	—
EC01	Elements of Accounting I	—	12(A)	—	12(A)	—
		—	5.15(B)	—	5.15(B)	—
EE1G	Macroeconomics IH	—	10(A)	12(B)	—	5.15(C)
EE41	Mathematics (Economics) I ..	5.15	—	5.15	—	5.15
EE2G	Microeconomics IH	—	—	5.15(A)	(10B)	11(C)
	SECOND-YEAR SUBJECTS AND HALF-SUBJECTS					
EC13	Commercial Law II	—	—	2.15	—	2.15
EE12	Economic History II	—	—	6.15	6.15	—
EE22	Economic Statistics II	—	—	12	—	12
EE32	Economic Statistics IIA	—	—	12	—	12
EE3G	Macroeconomics IIH	—	—	—	—	10
EC02	Management Accounting II ..	—	5.15	—	5.15	—
EE4G	Microeconomics IIH..	—	—	10	—	—
	THIRD-YEAR SUBJECTS AND HALF-SUBJECTS					
EC2H	Accounting Theory IIIH	—	—	—	—	12
EE4H	Agricultural Economics IIIH ..	—	5.15	—	—	—
EC4H	Business Finance IIIH	—	—	6.15	—	—
EE8H	*Econometrics IIIH	—	10	—	—	—
EE13	Economic Development III ..	—	11-1	—	11-1	—
EE8G	Economic Problems in Historical Perspective IIIH	—	—	11	—	—
EE68	*Economic Theory	—	2.15	2.15	—	—
EE3H	Economics of Labour IIIH	6.15	—	—	—	—
EE5H	*History of Economic Thought IIIH	—	—	10	—	—
EC23	Industrial Sociology III	—	—	10	—	10
EC3H	*Information Systems and Data Processing IIIH	—	—	—	3.15	—
EE7G	International Economics IIIH ..	—	—	—	—	5.15
EC2H	*Introduction to Operations Research IIIH	—	—	3.15	—	—
EE5G	Macroeconomics IIIH	—	—	5.15	—	—
EC6H	Management Information Systems IIIH	—	—	12	—	—
EE7H	Managerial Economics IIIH ..	—	—	—	9	—
EC5H	Marketing IIIH	—	—	11	—	—
EE6G	Microeconomics IIIH	—	—	—	5.15	—
EE2H	*Public Finance IIIH	—	4.15	—	—	—
EE6H	Russian Economic History IIIH ..	—	5.15	—	—	—

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-tables.

It is expected that those subjects and half-subjects (except those marked *) which are given as day classes in 1976 will be given as evening classes in 1977 and vice versa.

Macroeconomics IH, Microeconomics IH and Elements of Accounting I will continue to be offered both as day and evening classes.

FACULTY OF ECONOMICS—Continued

TIME-TABLE OF SUBJECTS FOR THE

DIPLOMA IN BUSINESS MANAGEMENT AND FOR THE DEGREE OF MASTER OF BUSINESS MANAGEMENT (COURSE WORK)

TENTATIVE TIME-TABLE FOR 1976

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
EC00	Accounting (Business Management)	—	5.15	—	5.15-7.15	—
EC30	Economic Institutions and Policy ..	≠	≠	≠	≠	≠
EC50	Economic and Accounting Analysis	9-11	—	—	—	—
EC60	Business Statistics	—	—	—	—	8.30-11
EC70	Decision Making	8.30-11	—	—	—	—
EC80	Organisational Theory and Behaviour	—	—	—	3-5.30	—

≠ Time to be arranged.

FACULTY OF ENGINEERING

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF ENGINEERING

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	FIRST YEAR SUBJECTS					
SC01	Chemistry I—					
	Lectures	9(A,B)	—	9(A,B)	—	9(A,B)
		5.15(C)	—	5.15(C)	—	5.15(C)
	Tutorial (1 hour)	—	—	11	—	—
		—	—	12[a]	—	—
		—	—	2.15	—	—
	Practical (3 hours)	—	2.10-5	—	2.10-5	2.10-5
NE01	Economics I (Engineering)—					
	Lectures	—	—	5.15	—	5.15
	Tutorial (1 hour)	≠	≠	≠	≠	≠
NX01	Engineering I—					
	Lectures	11	—	11	—	11
	Tutorial	—	—	—	12	—
	Practical (3 hours)	—	10-1	—	2.10-5	2.10-5
SG01	Geology I—					
	Lectures	—	9(A)	3.15(A,B)	9(A)	—
		—	5.15(B)	5.15(A,B)	5.15(B)	—
	Tutorial (1 hour)	≠	≠	≠	≠	≠
	Practical (3 hours)	2.10-5	10-1	—	2.10-5[b]	—
		—	2.10-5	—	—	—
QM01	Mathematics I—					
	Lectures	10	—	10	10	10
	Tutorial (2 hours)	2.15-4.05	—	2.15-4.05	—	2.15-4.05
SP01	Physics I—					
	Lectures	9(A)	—	9(A)	—	9(A)
		5.15(B)	—	5.15(B)	—	5.15(B)
	Tutorial (1 hour)	—	—	≠	—	—
	Practical (3 hours)	2.10-5	10-1	—	2.10-5	2.10-5
		—	2.10-5	—	—	—
AY01	Psychology I—					
	Lectures	5.15	—	5.15	—	5.15
	Practical (2 hours)	≠	≠	≠	≠	≠
	SECOND YEAR SUBJECTS					
QN22	Applied Mathematics IIB—					
	Lectures	9	9	9	9	—
	Tutorial (1 hour)	—	—	—	12	9, 11, 12
NH12	Chemical Engineering I—					
	Lectures	10	10	10	—	—
	Tutorial (3 hours)	2.10-5	—	11	—	—
	Practical	—	2.10-4	—	—	—
NC02	Civil Engineering I—					
	Lectures	—	10	10	10	10
	Practical	10-1	—	2.10-5	2.10-5	—
NE03	Electrical Engineering I—					
	Lectures	11	—	11	—	11
	Tutorial	12(B)	—	12(A)	—	12
	Practical	—	10-1(B)	—	10-1(A)	—

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-tables.

FACULTY OF ENGINEERING—Continued

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF ENGINEERING

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
NX12	Engineering IIC—					
	Electrical Circuits and Machines					
	Lecture	—	11	—	—	—
	Practical[c]	2.10-5	2.10-5	—	—	—
	Electronics					
	Lecture	—	—	11	—	—
	Practical[c]	2.10-5	2.10-5	—	—	—
	Engineering Materials					
	Lecture	—	—	—	11	—
	Practical[c]	2.10-5	—	—	—	2.10-5
NX42	Engineering IIM—					
	Stress Analysis					
	Lecture	—	—	12	—	—
	Practical[c]	—	2.10-5	—	—	—
	Structural Engineering					
	Lecture	—	11	—	—	—
	Practical	—	—	2.10-5	—	—
	Engineering Materials					
	Lecture	—	—	—	11	—
	Practical[c]	2.10-5	—	—	—	—
	Workshop Practice	—	—	—	—	2.10-5
NM02	Mechanical Engineering I—					
	Lectures	—	12	10	12	—
	Tutorial/Practical	10-1	—	—	2.10-5	—
SC02	Physical and Inorganic Chemistry II—					
	Lectures	12	—	12	—	12
	Tutorials	—	—	4.15	—	—
	Practical (6 hours)	—	—	—	10-5(B)	9-6(C)
SP02	Physics II—					
	Lectures	10	—	10	—	10
	Tutorial	—	—	2.15-3.05	—	—
	Practical	2.10-5(A)	10-1(A)	—	10-1(C)[d]	2.10-5(B)
		—	2.10-5(C)[d]	—	2.10-5(B)	—
	THIRD YEAR SUBJECTS					
NH13	Chemical Engineering IIA—					
	Lectures	9	9	—	9	—
	Tutorial	—	—	9-11	—	9-11
	Practical	2.10-5	—	—	—	—
NH23	Chemical Engineering IIB—					
	Lectures	12	—	—	12	12
	Tutorial	—	—	—	10-12	—
		—	—	—	2.10-5	—
	Practical	—	—	—	—	2.10-5
NC03	Civil Engineering IIA—					
	Lectures	—	11	11	11	—
	Tutorial/Practical	10-1	—	—	2.10-5	—
NC13	Civil Engineering IIB—					
	Lectures	—	10	10	10	—
	Tutorial/Practical	2.10-5(B)	—	2.10-5(A)	—	2.10-5(A,B)

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-tables.

FACULTY OF ENGINEERING—Continued

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF ENGINEERING

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
NE13	Electrical Engineering II—					
	Lectures	12	9	10	12	—
	Tutorial	10	10(B)	—	10(A)	—
	Practical (6 hours)	—	—	2.10-5(B)	2.10-5(B)	9-5(A)
NX53, NX63	Engineering IIIC—					
	Theory of Machines					
	Lecture	—	—	—	12	—
	Practical[c]	—	—	—	—	9-1
	Machine Design					
	Lectures	—	12	—	—	—
	Practical	—	2.10-5(A)	2.10-5(B)	—	—
	Mathematics III (Engineering)					
	Lectures	—	—	9	—	9
	Tutorial	9	—	—	—	—
	Economics (Engineering)					
	Lectures	—	—	12	—	11
	Tutorial (1 hour)	≠	≠	≠	≠	≠
NX23	Engineering IIE—					
	Stress Analysis					
	Lecture	—	—	12	—	—
	Practical[c]	2.10-5	2.10-5	—	—	—
	Machine Design					
	Lecture	—	12	—	—	—
	Practical	—	2.10-5(A)	2.10-5(B)	—	—
NX52	Engineering IIH—					
	Electrical Circuits and Machines					
	Lecture	—	11	—	—	—
	Practical[c]	—	2.10-5	—	—	—
NX93	Engineering IIIH—					
	Stress Analysis					
	Lecture	—	—	12	—	—
	Practical[c]	—	2.10-5	—	—	—
	Machine Design					
	Lecture	—	12	—	—	—
	Practical	—	—	2.10-5	—	—
	Electrical Circuits and Machines					
	Lecture	—	11	—	—	—
	Practical[c]	—	2.10-5	—	—	—
NX73, NX83, NX43	Engineering IIIM—					
	Electrical Circuits and Machines					
	Lecture	—	11	—	—	—
	Practical[c]	2.10-5	2.10-5	—	—	—
	Electronics					
	Lecture	—	—	11	—	—
	Practical[c]	2.10-5	2.10-5	—	—	—
	Materials Engineering					
	Lectures	—	—	12	—	11
	Practical[c]	—	—	2.10-5	—	—
	Mathematics III (Engineering)					
	Lectures	—	—	9	—	9
	Tutorial	9	—	—	—	—

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).
Afternoon and evening lectures will commence at the time shown in the time-tables.

FACULTY OF ENGINEERING—Continued

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF ENGINEERING

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
NX73 NX83 NX43	Engineering IIIM (cont'd) Economics (Engineering) Lectures	—	—	12	—	11
	Tutorial (1 hour)	≠	≠	≠	≠	≠
QT02	Mathematical Statistics II—					
	Lectures	11	11[e]	11	11	11
	Tutorial	—	—	—	2.15-4.05	—
NM03	Mechanical Engineering IIA—					
	Lectures	11	12	—	11	—
	Tutorial	—	—	—	—	12
	Practical	—	—	—	—	2.10-5
NM13	Mechanical Engineering IIB—					
	Lectures	10	9	—	9	—
	Tutorial	—	—	—	—	10
	Tutorial/Practical	—	2.10-5	—	2.10-5	—
QM02	Pure Mathematics II—					
	Lectures	9	—	9	9	9
	Tutorial (1 hour)	—	10	—	10	—
		—	11	—	—	—
	FOURTH YEAR SUBJECTS Time-table to be arranged by the Departments.					

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-tables.

A, B, C and D indicate alternatives.

≠ Time to be arranged.

Chemistry I:
a — Only if numbers warrant.

Geology I:
b — Only if numbers warrant.

Engineering IIC:

Engineering IIE:

Engineering IIH:

Engineering IIM:

Engineering IIIC:

Engineering IIIH:

Engineering IIIM:
c — Nine three-hour practica sessions.

Physics II:
d — Only if numbers warrant.

Mathematical Statistics II:
e — First term only.

FACULTIES OF MATHEMATICAL SCIENCES AND SCIENCE

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF SCIENCE

1975

N.B.—Students will be allocated to appropriate classes for which more than one session is provided. These allocations will be displayed on departmental noticeboards during orientation week.

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	FIRST-YEAR SUBJECTS					
SP8H	Astronomy IH—					
	Lectures/Tutorials	—	—	12	—	2.15
	Practical (3 hours fortnightly)					
	1st term	6.15-9.15(A)	6.15-9.15(B)	6.15-9.15(C)	6.15-9.15(D)	6.15-9.15(E)
	2nd and 3rd terms	≠	≠	≠	≠	≠
SZ71	Biology I—					
	Lectures	—	9(A)	—	9(A)	—
		—	5.15(B)	—	5.15(B)	—
	Tutorial (1 hour)	≠	≠	—	≠	≠
	Practical (4 hours)[a]	≠	≠	≠	≠	≠
SB1H	General Biology IH (half-subject)—					
	Lecture	—	9	—	—	—
	Tutorial (1 hour fortnightly)[b]	—	≠	—	—	—
	Practical (2 hours)	—	10-1	—	—	—
SB2H	Plant Biology IH (half-subject)—					
	Lecture	—	—	—	9	—
	Tutorial (1 hour fortnightly)[b]	—	≠	—	—	—
	Practical (2 hours)	—	—	—	10-12	—
SC01	Chemistry I—					
	Lectures	9(A,B)	—	9(A,B)	—	9(A,B)
		5.15(C)	—	5.15(C)	—	5.15(C)
	Tutorial (1 hour)	—	—	11, 12[f]	—	—
		—	—	2.15	—	—
	Practical (3 hours)	—	2.10-5	—	10-1	10-1
		—	—	—	2.10-5	2.10-5
QA7H	Computing IH (half-subject)—					
	Lectures	11(A)	11(B)	—	11(B)	11(A)
	Tutorial (1 hour)	2.15	—	—	—	2.15
		3.15	—	—	—	3.15
NX01	Engineering I—					
	Lectures	11	—	11	—	11
	Tutorial	—	—	—	12	—
	Practical (3 hours)	—	10-1	—	2.10-5	2.10-5
SJ7H	Genetics and Human Variation IH (half-subject)—					
	Lecture	—	—	—	12	—
	Practical (fortnightly) (3 hours)	—	—	—	9-12	—
		—	—	—	2.10-5	—
SG01	Geology I—					
	Lectures	—	9(A)	3.15(A,B)	9(A)	—
		—	5.15(B)	5.15(A,B)	5.15(B)	—
	Practical	2.10-5	10-1	—	—	—
		—	2.10-5	—	2.10-5	—
		—	6.15-8.15[e]	—	6.15-8.15[e]	
	Tutorial (1 hour)	≠	≠	≠	≠	≠
SG7H	Geology IH—					
	Lectures	—	9(A)	3.15(A,B)	—	—
		—	5.15(B)	5.15(A,B)	—	—
	Tutorial (1 hour)	≠	≠	≠	≠	—

FACULTIES OF MATHEMATICAL SCIENCES AND SCIENCE—Continued

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF SCIENCE

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	FIRST-YEAR SUBJECTS (Contd.)					
QM01	Mathematics I—					
	Lectures	10(A)	—	10(A)	10(A)	10(A)
		4.15(B)	—	4.15(B)	4.15(B)	4.15(B)
	Tutorial (2 hours)	11-1	11-1	—	11-1	11-1
		2.15-4.05	—	2.15-4.05	—	2.15-4.05
QM11	Mathematics IM—					
	Lectures	4.15(A,B)[d]	—	2.15(A)	4.15(B)[d]	4.15(A,B)[d]
		—	—	4.15(A,B)[d]	—	—
	Tutorial (2 hours)	—	—	—	11-1	11-1[e]
		—	—	—	—	2.15-4.05
QM7H	Mathematics IH (half-subject)—					
	Lectures	4.15	—	4.15	—	—
	Tutorial (1 hour)	—	—	—	11	11[f]
		—	—	2.15	—	2.15[f]
SP01	Physics I—					
	Lectures	9(A)	—	9(A)	—	9(A)
		12(B)	—	12(B)	—	12(B)
		5.15(C)	—	5.15(C)	—	5.15(C)
	Tutorial (1 hour)	—	—	≠	—	—
	Practical (3 hours)	10-1	10-1	—	10-1	10-1
		2.10-5	2.10-5	6.15-9.15	2.10-5	2.10-5
AY01	Psychology I—					
	Lectures	10(A)	—	10(A)	—	10(A)
		5.15(B)	—	5.15(B)	—	5.15(B)
	Practical (2 hours)	≠	≠	≠	≠	≠
QT7H	Statistics IH (half-subject)—					
	Lectures	12	—	—	—	12
	Tutorial (1 hour)	2.15	—	—	—	2.15
SZ01	Zoology I—					
	Lectures	—	2.15	—	2.15	—
	Practical (5 hours)[h]	—	10-12.30 (A)	—	10-12.30[g] (A)	—
		—	3.15-5.30 (B)	—	3.15-5.30[g] (B)	—

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).
Afternoon and evening lectures will commence at the time shown in the time-tables.
Alternatives are indicated by A, B and C.
≠ Time to be arranged.
Biology:
a — The laboratories are open during the following hours:
10.10 a.m.-6 p.m. Monday.
9.10 a.m.-6 p.m. Wednesday.
9.10 a.m.-10 p.m. Tuesday and Thursday.
9.10 a.m.-4 p.m. Friday.
Students may make their own arrangements to complete an average of 4 hours a week.
General Biology IH and Plant Biology IH:
b — Tutorials are given on alternate Tuesdays in the time allotted for practical work.
Geology:
c — Evening practical fourth hour may be used for tutorial or private study.
Mathematics IM:
d — Lecture class B only if numbers warrant.
e — Only if numbers warrant.
Chemistry I and Mathematics IH:
f — Only if numbers warrant.
Zoology:
g — Tutorials are given on alternate Thursdays in the time allotted for practical work.
h — Additional practical times will be available on Wednesday and Friday afternoon if numbers warrant.

FACULTIES OF MATHEMATICAL SCIENCES AND SCIENCE—Continued

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF SCIENCE

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	SECOND-YEAR SUBJECTS					
WA02	Agriculture II (B.Ag.Sc. students only)					
	Lectures (3 hours)	11	—	11	—	11
	Tutorial (1 hour)	≠	≠	≠	≠	≠
	Practical (3 hours)	—	—	—	—	2.10-5
QN22	Applied Mathematics IIA—					
	Lectures	12	12	12	12	—
	Tutorial (1 hour)	—	9,10	—	9,10	12
QN12	Applied Mathematics IIB[f]—					
	Lectures	9	9	9	9	—
	Tutorial (1 hour)	—	—	—	12	9,11,12
SY02	Biochemistry II—					
	Lectures	9	9	—	—	9
	Tutorial	≠	≠	≠	≠	≠
	Practical (6 hours)	—	10-5(A)	10-5(B)	—	—
SB02	Botany II—					
	Lectures	—	12	—	12	—
	Practical (6 hours)	2.10-5[a]	2.10-5	—	2.10-5[b]	2.10-5[b]
NH12	Chemical Engineering I—					
	Lectures	10	10	10	—	—
	Tutorial (3 hours)	2.10-5	—	11	—	—
	Practical	—	2.10-5	—	—	—
SC12	Chemistry II—					
	Lectures	12	—	12	—	12
	Practical (6 hours)	—	—	9-5	—	—
SJ02	Genetics II—					
	Lectures	10	—	10	—	10
	Tutorial (1½ hours)	—	—	2.15-3.35 (A,C)	—	3.15-4.35 (B,D)
	Practical (3 hours)	2.10-5 (A,B)	2.10-5 (C,D)	—	—	—
SG02	Geology II—					
	Lectures	9	9	—	—	9
	Tutorial (1 hour)	10(A) 5.15(B)	≠	≠	≠	≠
	Practical (6 hours)	2.10-5	—	2.10-5[c]	9-12[c]	2.10-5
	Monday and Wednesday are alternatives. Thursday and Friday are alternatives.					
QT02	Mathematical Statistics II—					
	Lectures	11	11[d]	11	11	11
	Tutorial (2 hours)	—	10-12 (C)	2.15-4.05 (B)	2.15.4.05 (A)	—
	B or C at discretion of Department					
QM22	Mathematics IIM—					
	Lectures	—	12	9	9, 12	—
	Tutorial (1 hour)	≠	≠	≠	≠	≠
SO02	Organic Chemistry II—					
	Lectures	11	—	11	—	11
	Practical (6 hours)	—	10-5(A)	—	10-5(B)	—

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-tables.

FACULTIES OF MATHEMATICAL SCIENCES AND SCIENCE—Continued

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF SCIENCE

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	SECOND-YEAR SUBJECTS (Contd.)					
SC02	Physical and Inorganic Chemistry II—					
	Lectures	12	—	12	—	12
	Tutorial (1 hour)	4.15(A)	—	4.15(B)	—	—
	Practical (6 hours)	—	10-5(A)	—	10-5(B)	9-6(C) [e]
SP02	Physics II—					
	Lectures	10	—	10	—	10
	Tutorial (1 hour)	—	—	2.15-3.05	—	—
	Practical (6 hours)	2.10-5(A)	10-1(A)	—	10-1(C)	2.10-5(B)
	C at discretion of Department ..	—	2.10-5(C)	—	2.10-5(B)	—
SS02	Physiology II—					
	Lectures	12	—	12	—	12
	Practical (6 hours)	—	—	9-5	—	—
AY02	Psychology II—					
	Lectures	3.15	—	3.15	—	2.15
	Tutorial (1 hour)	≠	≠	≠	≠	≠
	Practical (4 hours)	≠	≠	≠	≠	≠
QM02	Pure Mathematics II [f]—					
	Lectures	9(A)	—	9(A)	9(A)	9(A)
	Tutorial (1 hour)	—	9, 10	—	10	9,11
SZ02	Zoology II—					
	Lectures	—	10	—	9	—
	Practical	—	11-6(A)	—	10-5(B)	10-5(C)

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-tables.

Alternatives are indicated by A, B, C, etc.

≠ Time to be arranged.

Botany:

a — Practical class to be held only if numbers warrant.

b — Practical classes on Thursday and Friday are alternatives, but most students are expected to attend on Thursday.

Geology:

c — Practical classes to be held only if numbers warrant.

Mathematical Statistics:

d — Lecture in first term only.

Physical and Inorganic Chemistry:

e — Due to several lecture commitments during this period, these hours have been extended to provide a full six-hour practical period.

Applied Mathematics IIB:

Pure Mathematics II:

f — Special arrangements will be made for students wishing to take Applied Mathematics IIB and Pure Mathematics II concurrently.

FACULTIES OF MATHEMATICAL SCIENCES AND SCIENCE—Continued

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF SCIENCE

1975

THIRD-YEAR SUBJECTS

Any student who is unable to pursue a combination of subjects due to an apparent clash in the hours set aside for practical work in these subjects should consult the appropriate departments before making a final decision.

NOTE:

These time-tables show the hours set aside for work in each department. Students taking a particular modification of a subject, e.g. Zoology IIIM instead of Zoology III, should consult the time-table in the department.

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
QN03, QN83, QN13	Applied Mathematics—					
	Lectures (6 hours)	9,2.15	9	9,10	9	9,10
						2.15
	Tutorial (1 hour)	≠	≠	≠	≠	≠
SY03, SY83	Biochemistry—					
	Lectures	12	—	12	12	—
	Tutorial (1 hour)	≠	≠	≠	≠	≠
	Practical (8 hours)	all day	—	—	—	all day[a]
SB03, SB83	Botany—					
	Lectures	10	—	10	9[c]	10
		11[b]	—	11[b]	—	11[b]
		5.15[c]	—	2.15[c]	—	—
	Practical (12 hours)	2.10-5[b]	all day	—	all day	all day[b]
QA03, QA13, QA83	Computing Science—					
	Lectures	4.15	4.15	2.15,4.15	4.15	4.15
	Tutorial	≠	≠	≠	≠	≠
SJ03	Genetics—					
	Lectures (3 hours)	—	10,12	—	9,10	—
	Tutorial	—	9	—	—	—
	Practical (8 hours)	≠	2.10-5[d]	≠	2.10-5[d]	≠
SG03, SG23, SG83	Geology—					
	Lectures	9,5.15	9, 10, 5.15	9, 5.15	9, 10, 5.15	9,5.15
	Practical (6 hours per unit)[e]	all day	all day	all day	all day	all day
SG73	Geophysics—					
	Lectures	—	5.15[f]	—	5.15[f]	—
	Practical	≠	≠	≠	≠	≠
MA13, MA43	Histology and Cell Biology —					
	Lectures	—	9	—	9	12
	Practical (10 hours)	all day	—	all day	—	—
QF03, QF13	Mathematical Physics					
	Theoretical Physics—					
	Lectures	—	2.15	2.15,3.15	2.15	—
	Tutorial	≠	3.15	≠	3.15	≠
QT03	Mathematical Statistics—					
	Lectures (5 hours)	11	11	11	11	11
	Tutorial (2 hours)	≠	≠	≠	≠	≠
SK03	Microbiology—					
	Lectures	—	9	11	9	—
	Tutorial	≠	≠	≠	≠	≠
	Practical (10 hours)	—	9-1	—	9-1	—
		—	2.10-5	—	2.10-5	—

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-tables.

FACULTIES OF MATHEMATICAL SCIENCES AND SCIENCE—Continued

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF SCIENCE

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	THIRD-YEAR SUBJECTS (Contd.)					
SO03, SO83	Organic Chemistry—					
	Lectures	9,4.15	5.15	9	—	9,4.15
	Tutorial	≠	≠	≠	≠	≠
	Practical (12 hours)	all day[g]	all day (A)	all day (A)	all day (B)	all day (B)
SG13	Palaeontology—					
	Lectures	≠	≠	≠	≠	≠
	Practical	≠	≠	≠	≠	≠
SC03, SC13, SC83	Physical and Inorganic Chemistry—					
	Lectures	5.15[h]	9,4.15	4.15,5.15	9,4.15	5.15[h]
	Practical (12 hours)	—	all day(A)	all day(A)	all day(B)	all day(B)
SP03, SP83	Physics—					
	Lectures	11,12	11,12	11,12	11,12	11,12
	Practical (9 hours)	all day	—	all day	all day	all day
SS03, SS33, SS43, SS83	Physiology—					
	Lectures	11	—	11	—	11
	Practical (9 hours)	—	—	all day[j]	all day	2.10-5[k]
AY23	Psychology—					
	Lectures	5.15	—	5.15	—	3.15
	Tutorial (1 hour)	≠	≠	≠	≠	≠
	Practical (6 hours)	≠	≠	≠	≠	≠
QM03, QM13, QM83	Pure Mathematics—					
	Lectures (5 hours)	10,12	10,12	12	10,12	12
	Tutorial (1 hour)	≠	≠	≠	≠	≠
SZ03, SZ83	Zoology—					
	Lectures	9,5.15	—	9,2.15	9	9
	Practical (9 hours)	2.10-5 (A)	2.10-5 (B)	all day (B)	—	all day (A)

NOTE: Morning lectures in all subjects will commence at ten minutes past the hour shown in the time-tables (including those shown as 12 noon).

Afternoon and evening lectures will commence at the time shown in the time-tables.

Alternatives are indicated by A, B, C, etc.

≠ Time to be arranged.

Biochemistry:
a — Special arrangements will be made for students taking both Physiology and Biochemistry.

Botany:
b — One Botany unit may be held at these times. Alternative practical times may be arranged.
c — For students taking Cells and Embryos.

Genetics:
d — Two additional hours practical to be arranged.

Geology:
e — Students taking subject SG03 are required to attend both Monday and Friday practical classes in Geology.

Geophysics:
f — Second and third terms only.

Organic Chemistry:
g — Available only for those students who obtain prior permission from the Head of Department.

Physical and Inorganic Chemistry:
h — First term only.

Physiology:
j — Alternative class to be held only in some units if numbers exceed laboratory capacity.
k — Special arrangements will be made for students taking both Physiology and Biochemistry.

FACULTY OF MUSIC

TIME-TABLE OF SUBJECTS FOR THE DEGREE OF

BACHELOR OF MUSIC

1975

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
UM31	Theoretical and Historical Studies I	11-1 2.15-4.15	— —	— —	— —	2-4 —
UM41	Tutorials and Practical Work I ..	—	—	9.30-1	—	—
	Projects	—	9.30-4.30[a]	—	9.30-4.30[a]	—
	Other subjects (as arranged by the Department of Music)					

Projects:

a — Intensive group work for projects is held at these times during weeks 1 to 4 (or 5) of each term.

TIME-TABLES FOR ARCHITECTURE, LAW, TECHNOLOGY AND APPLIED SCIENCE

1975

Particulars of time-tables for subjects in these courses may, after enrolments are completed, be obtained as follows:

Course	*Particulars from*
ARCHITECTURE	Architecture General Office.
LAW	Law School Office.
TECHNOLOGY AND APPLIED SCIENCE including PHARMACY (Degree)	The Academic Secretary, South Australian Institute of Technology.

LATE AFTERNOON AND EVENING LECTURES, 1975

FACULTIES OF ARTS AND ECONOMICS

This table does not include subjects for which lectures are available at or after 4.15 p.m. but for which practical classes and tutorials are available only at earlier times.

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	FIRST-YEAR SUBJECTS AND HALF-SUBJECTS					
AA01	Anthropology I	—	—	4.15	—	4.15
SZ71	Biology I	—	5.15	—	5.15	—
AQ01	Chinese I	4.15	4.15	4.15	4.15	4.15
AJ71	Economic Geography I	—	—	5.15	—	5.15
EC01	Elements of Accounting I	—	5.15	—	5.15	—
AE01	English I	—	5.15	—	5.15	—
AH41	History IC	5.15	—	5.15	—	—
AJ2H	Human Geography IH (second half of year)	—	5.15	—	5.15	—
AL2H	Logic IH	6.15	—	—	—	—
EE1G	Macroeconomics IH	—	—	—	—	5.15
EE2G	Microeconomics IH	—	—	5.15	—	—
UA51 UA61	Music I Music IA	4.15-6.15	—	4.15-6.15	—	—
AL1H	Philosophy IH(A)	—	6.15	—	—	—
AL3H	Philosophy IH(B)	—	—	—	6.15	—
AJ1H	Physical Geography IH	—	5.15	—	5.15	—
AY01	Psychology I	5.15	—	5.15	—	5.15
	SECOND-YEAR SUBJECTS AND HALF-SUBJECTS					
AE82	American Literature II	5.15	—	5.15	—	—
EC13	Commercial Law II	—	—	5.15	—	5.15
EE22 EE32	Economic Statistics II Economic Statistics IIA	—	5.15	—	5.15	—
AE02	English II	—	5.15	—	5.15	—
AA1H	Economic and Political Anthropology IIH	—	—	—	4.15	—
AH02	History II—					
	A. South Asian History	—	6.15	—	6.15	—
	C. South-East Asian History	—	4.15	—	4.15	—
	D. Medieval History	—	—	5.15	—	5.15
	F. Material Foundations of the Modern World	6.15	—	—	—	6.15
EE3G	Macroeconomics IIH	—	—	—	—	5.15
EE4G	Microeconomics IIH	—	—	5.15	—	—
UA52	Music II	4.15-6.15	—	4.15-6.15	—	—
AL02	Philosophy II—					
	L201 Logic	4.15	—	4.15	—	—
	L204 Ethics: Ancient and Modern	—	—	6.00	—	6.00
	L207 Epistemology	4.15	—	4.15	—	—
	L208 Advanced Logic	4.15	—	4.15	—	—
	L211 Moral Philosophy	—	—	6.00	—	6.00
AP32 AP42	Politics IIA — Politics IIB					
	E. Contemporary Social Theory	—	6.15	—	6.15	—
	K. Political Theory and American Politics	—	5.15	—	5.15	—
	M. Problems of Social Change	5.15	—	5.15	—	—

LATE AFTERNOON AND EVENING LECTURES, 1975

FACULTIES OF ARTS AND ECONOMICS—Continued

Syllabus No.	Subject	Monday	Tuesday	Wednesday	Thursday	Friday
	THIRD-YEAR SUBJECTS AND HALF-SUBJECTS					
EC2H	Accounting Theory IIIH	—	—	—	5.15	—
AE73	Australian Literary Studies III ..	—	5.15	—	5.15	—
EE13	Economic Development III ..	5.15-7.15	—	5.15-7.15	—	—
EE8G	Economic Problems in Historical Perspective IIIH	—	5.15	—	—	—
AJ13 / AJ23	Geography IIIA / Geography IIIB —					
	J321 Biogeography	4.15[a]	—	—	—	—
	J323 Climatology	—	—	4.15[b]	—	—
	J324 Cultural Geography ..	—	4.15[b]	—	—	—
	J332 Geographic Thought ..	—	4.15[c]	—	—	—
	J326 Process Geomorphology ..	—	—	—	4.15[a]	—
	J328 South East Asia	—	—	4.15[b]	—	—
	J331 Techniques	—	—	—	—	4.15[d]
EC23	Industrial Sociology III	—	—	5.15	—	5.15
EC6H	Management Information Systems IIIH	—	5.15	—	—	—
EE7H	Managerial Economics IIIH ..	—	—	—	6.15	—
EC5H	Marketing IIIH	—	—	6.15	—	—
EE2H	Public Finance IIIH	—	4.15	—	—	—

Geography IIIA and IIIB

a — Second and Third terms only
b — First and Second terms only
c — Third term only
d — First term only

TABLES

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* School of the South Australian Institute of Technology.

SYLLABUS NUMBERS—DESCRIPTION

SYSTEM

Each number comprises two letters followed by two digits, e.g. AE12 except in the case of half-subjects where the letters H or G replace the second digit, e.g. SB1H.

The first letter identifies the faculty controlling the subject.

The second letter (except in Engineering and Technology: q.v.) identifies the department teaching the subject.

The two digits have meanings which vary according to the faculty concerned, and which are explained in the syllabuses for each degree and diploma.

CODE LETTERS

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For list of departments within a faculty, with their departmental code letters, see list at head of each group of syllabuses.

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