



THE HEAD  
DEPT. OF ORGANIC CHEMISTRY

111

**THE UNIVERSITY OF ADELAIDE  
SOUTH AUSTRALIA**

**1982**

**HANDBOOK  
OF  
COURSES**

# APPLICATIONS FOR ADMISSION TO UNDERGRADUATE COURSES IN 1982

EVERY PERSON SEEKING ADMISSION IN 1982  
TO

any of the undergraduate (Bachelor degree) courses described  
in this Handbook

IS REQUIRED TO APPLY FOR SUCH ADMISSION  
through the South Australian Tertiary Admissions Centre  
(SATAC), on the prescribed form, as follows:

- Full-time students enrolled in Year 12 in a South Australian Secondary School in 1981:

**Form S**

- All other applicants:

**Form R**

The completed form must be sent or delivered to:

SATAC,  
Red Cross House,  
228 North Terrace,  
ADELAIDE, S.A. 5000.

The closing date for receipt of all applications is  
**31 OCTOBER, 1981.**

Late applications, if accompanied by the prescribed late fee, will be accepted by SATAC up to 2 January, 1982 and considered with those received by 31 October. The late fee is \$10 for late applications received by 30 November, and \$20 for applications received after 30 November. The late fee is not refundable.

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## Postgraduate Courses

Persons seeking admission to postgraduate degree or diploma courses in 1982 are advised to read the appropriate section in the leaflet 'General Information for 1982' obtainable on request at the Office of the Academic Registrar.

# FURTHER INFORMATION

This handbook is intended to provide in brief and readable form most of the information required by a student who is considering the possibility of entering a course at the University. It is hoped that it will be useful particularly to students in their fourth and fifth years of secondary school study, to their parents, and to their teachers.

More detailed information about the requirements of the various courses may be found in Volume II of the University Calendar which contains:

Regulations, schedules and syllabuses of degree and diploma courses.

Rules.

Timetables.

Volume II of the Calendar for 1982 will be available in late December from the University Office. Price \$1.50 (plus postage).

A leaflet of general information is also available from the University Office; it contains basic general information about the University in a condensed form and is particularly suitable for persons making a preliminary enquiry about courses, admission conditions and so on.

Forms of Application for Admission in 1982 are available, free of charge, from the University Office or from the South Australian Tertiary Admissions Centre (SATAC). See page 1.

Persons who have read the various publications and wish to obtain further information or advice are invited to write to the Academic Registrar.

All correspondence should be addressed to:

The Academic Registrar,  
The University of Adelaide,  
Box 498, G.P.O.,  
Adelaide, S.A., 5001.

The University's telephone number is 223 4333 (Area Code: 08), and its Telex number is UNIVAD AA89141. (From 1 November, 1981, the telephone number will be 228 5333.)

F. J. O'NEILL,

*Academic Registrar and Registrar Designate.*

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# Foreword

BY THE VICE-CHANCELLOR

If you have now completed your Matriculation requirements (or will do so soon), and have reached a decision about your need for further education, you will be in a position to consider the courses of study this University offers you.

This Handbook is intended to give information on these courses and to help you decide on your likely future career. It also includes information on procedures for admission, details of Matriculation requirements for admission, an outline of the history of the University and a brief description of the way in which the University is managed.

As you think about what life at the University would be like, it is important that you keep in mind its size. There are around 11,000 members of the University—a population greater than all but three or four towns in South Australia, and almost certainly larger than any institution you will previously have encountered. Hence the views and experiences represented on campus cover a wide range, and as much of your education in the University will come through discussion with people as through formal lectures, tutorials and laboratory sessions.

Many of the academic staff of the University have been widely recruited on an international basis and most of those who are Australian born have significant experience in overseas universities. Staff members therefore offer a wide diversity of experience from many major areas of knowledge around the world and this will add to the richness of your educational experience. Moreover, staff members in this University are actively involved in combining their teaching with research. This is the major feature which distinguishes a University from other tertiary institutions. The combination of teaching with research ensures that undergraduates learn from people who are actively involved in creating new knowledge and who are aware of the manner in which their subject is developing on an international front. The University of Adelaide is justifiably proud of its research which brings widespread community benefits in the areas of agriculture, architecture, the arts and humanities, economics, engineering, the health services, the natural sciences, and the law.

Your reasons for considering the University as the place in which to continue your education are no doubt varied. Whatever your reasons, it is important that you remain continually aware of the fact that your years at University can, and should, provide you with a solid basis for the rest of your life. They will provide you with a grounding not only in the professional sphere that particularly interests you, but also in a wider sense through social contact and activity. The University's radio station 5UV, which is operated by the Department of Continuing Education, brings many aspects of University life to the attention of the community. It also has a significant Student Radio component which provides opportunities for student script writers, producers and announcers. The University also has a large number of clubs and societies centred in the Union which enable students to meet with one another and exchange ideas in a social environment. Winston Churchill once remarked that "the most important thing about education is appetite". The facilities of the Union provide an avenue which can be used to excite your imagination, cultivate your mind and thus stimulate that appetite. In addition, the University offers a wealth of cultural activity on campus, and opportunities to attend or take part in drama and music are many and varied. Finally, for those who are athletically inclined, the University is renowned for its sporting activities.

The University aims at not only the intellectual but the total development of all members of its community. If this is what you want, the University of Adelaide will extend you a warm welcome.

D. R. STRANKS,  
*Vice-Chancellor.*

# GENERAL INFORMATION

## Introduction to the University

### 1. HISTORY

In 1874, thirty-eight years after the proclamation of South Australia as a Province, the University of Adelaide was established by Act of Parliament in a city of only 30,000; it was the third University to be established in Australia.

The Act of Incorporation provided, amongst other things, for a grant of five acres in the City of Adelaide "on the parklands opposite Pulteney Street", as a site for the University buildings.

The academic work of the University began in March, 1876, with sixty students attending classes in Arts and Science subjects.

Since those early days the University has developed so that it now has almost 9,000 students, and its buildings on North Terrace occupy a site of about 13½ hectares. In addition, the Waite Agricultural Research Institute (established 1924) occupies some 160 hectares at Glen Osmond. As a result of generous bequests, the Waite Institute has developed the Mortlock Experiment Station (1966) near Mintaro, comprising 275 hectares of first class land, and the Claude S. Charlick Experiment Station (1978) near Strathalbyn which provides 112 hectares of arable land for cereal breeding programmes. The University also has 18 hectares of playing fields in the parklands north of the River Torrens, with further areas of playing fields at the Waite Institute and at West Beach.

### 2. FUNCTIONS OF THE UNIVERSITY

Stated as simply as possible, the functions of the University are two: teaching and research.

Put in another way, the University exists:

- to provide the best possible facilities for higher education and advanced study;
- to foster learning and scholarship;
- to provide trained men and women for the various professions;
- to undertake fundamental and developmental research.

### 3. MANAGEMENT OF THE UNIVERSITY

#### The Council

The governing body of the University is the Council, which under Section 9 of the University Act "shall have the entire management and superintendence over the affairs, concerns and property" of the University, subject to the Statutes and Regulations of the University.

The Council comprises 35 members including the Chancellor and Vice-Chancellor, *ex officio*; 8 members of the academic staff, 1 member of the ancillary staff, 1 member of staff other than academic or ancillary, 1 postgraduate student and 13 persons not employed by the University, all these 24 being elected by the Convocation of Electors (comprising all graduates and post-graduate students of the University and all full-time staff); 4 members elected by the undergraduates; and 5 members of Parliament elected by the Parliament of South Australia.

The Council operates through a system of committees, and with the help of its executive and administrative officers. The two principal committees which advise it are the Education Committee and the Finance Committee.

#### Academic Bodies

In the academic area, the committees which from the students' point of view are the most important are the eleven faculties (which control the degree and diploma courses). Subject to the approval of the Council on advice from the Education Committee, the faculties are responsible for the structure, scope and content of University courses.

## **The Union**

In the extra-curricular area, the management of most of the facilities available to students on the North Terrace campus is entrusted to the Adelaide University Union whose buildings form a social and cultural centre designed to provide a common meeting ground for staff, graduates and students. Its affairs are conducted by the Union Council, which operates through its four standing committees: Activities, Planning and Development, Finance, and Welfare.

The Union also operates the Union Bookshop and provides catering facilities, including a licensed bar area, for all members.

## **The Sports Association**

The Association, with over fifty affiliated sporting clubs, receives substantial financial support from the Union Council, but otherwise manages its own affairs. The playing fields are maintained by the University Council.

## **The Students' Association**

The Students' Association is the co-ordinating body for student activities. Its Executive is elected annually by the student body during the second term. Its functions are to foster a full and vigorous student life, to represent students in any matter that affects their interests, and to act as a liaison body between students, the Union and University authorities. The maintenance and progress of student affairs in any year depend very much on the activity of the Students' Association and its leaders.

## **The Clubs and Societies Council**

This body co-ordinates over sixty student clubs and societies and represents them in negotiations with the Union and the University.

# **4. THE BARR SMITH LIBRARY**

The Barr Smith Library is the centre of the University, both physically and academically. Its main building was completed in 1932 as the result of a generous gift from Mr. T. E. Barr Smith. It now contains over 1,100,000 volumes; and about 18,500 periodicals are currently received.

All students attending lectures at the University are entitled to use the Library for reading and reference purposes. Students who are enrolled in a degree or diploma course in the University are entitled to borrow books from the Library.

# **5. THE WAITE AGRICULTURAL RESEARCH INSTITUTE**

The University's Waite Agricultural Research Institute is situated in the foothills at Glen Osmond some six kilometres from the University site at North Terrace. Its scientific work, which is world famous, is centred on the study of the principles of crop, pasture and animal production, and the scientific disciplines associated with these aspects of agriculture.

# **6. THE ELDER CONSERVATORIUM OF MUSIC**

The Elder Conservatorium of Music was established in 1898 and provides tuition in a wide range of musical studies in the areas of Performance, Composition, Theory, History, Musicology, Ethnomusicology, Electronic Music and Music in Education. Courses leading to the degrees of Bachelor of Music, Master of Music, Doctor of Philosophy, Bachelor of Arts and Master of Arts are available. Students of high musical aptitude may enrol for Single Studies in instrumental, vocal, composition and some class subjects.

Opportunities are provided for all students to participate in over 200 solo, orchestral, ensemble, chamber music, choral and operatic public performances presented each year.

Further information about studies may be obtained from the Director of the Elder Conservatorium of Music.



The staff and students of the Conservatorium regularly hold concerts during term-time; and the concerts held every day during the Festival of Arts are enthusiastically received. The contribution by the Conservatorium to the musical life of Adelaide is well recognised. There are two orchestras and several other ensembles providing instrumental and vocal training and experience for a large number of students. Advanced students are members of the Adelaide Symphony Orchestra and of the State Opera orchestra.

Some 500 students are enrolled in the Conservatorium which aims to provide for all its students a balanced form of musical education.

## 7. RESIDENCE

There are five residential colleges affiliated with the University. Aquinas, Lincoln, St. Ann's and St. Mark's are primarily for undergraduate students, both men and women, and Kathleen Lumley is for post-graduate and mature age students. Each of the four undergraduate colleges provides single study-bedrooms for all students, meals seven days a week, recreational and sporting facilities, a library, television and common rooms, music practice facilities and a chapel or oratory. The colleges offer some additional tuition especially for first-year students, by resident and non-resident tutors and the students' clubs encourage sporting, dramatic and social activities. For particulars of admission application should be made direct to:

The Rector, Aquinas College, 19 Palmer Place, North Adelaide, S.A., 5006.

The Master, Lincoln College, 45 Brougham Place, North Adelaide, S.A., 5006.

The Master, Kathleen Lumley College, 51 Finnis Street, North Adelaide, S.A., 5006.

The Principal, St. Ann's College, 187 Brougham Place, North Adelaide, S.A., 5006.

The Master, St. Mark's College, 46 Pennington Terrace, North Adelaide, S.A., 5006.

Students who wish to live in lodgings are usually able to secure reasonably satisfactory living accommodation. Alternatively students may seek accommodation in one of the houses owned by the University in lower North Adelaide. These houses are administered by the Board of Non-Collegiate Housing. The Union Welfare Co-ordinator will supply details of the non-collegiate housing and will assist all students in obtaining suitable accommodation.

The Accommodation Officer of the Council for the Welfare of Overseas Students in South Australia, 10th Floor, Sun Alliance House, 45 Grenfell Street, Adelaide, S.A. 5000 (Telephone: 51 3651) will, on application, help all overseas students seeking living accommodation. The Australian Development Assistance Bureau, at the same address, employs a social worker who is able to assist with any personal problems that may be encountered by overseas students.

In view of current living costs in South Australia (July, 1981), single overseas students are advised to allow at least \$Aust. 5,000 a year to meet the cost of board and lodging, clothing and daily travel.

## 8. THE MACKINNON PARADE CHILD CARE CENTRE

Students with children between the ages of three months and five years may wish to avail themselves of the facilities offered by the Mackinnon Parade Child Care Centre where there are special concessions for student-parents. Enquiries should be addressed to the Director, The Mackinnon Parade Child Care Centre, 148 Mackinnon Parade, North Adelaide, 5006. (Telephone 223 4333 extension 2930).

# Admission

## 1. RESTRICTIONS

After careful consideration of the teaching facilities available, the University has been obliged to impose restrictions on the number of new students that may be admitted to first degree courses and some postgraduate diploma and other courses.

The University, in conjunction with The Flinders University of South Australia and the six Colleges of Advanced Education in South Australia, has established the South Australian Tertiary Admissions Centre (SATAC) to receive and process applications for admission in 1982 to courses other than certain postgraduate diploma and higher degree courses. Selection of those to be offered admission will be based as far as practicable on academic merit within the student's preference as to institution and course.

## 2. APPLICATIONS

All persons seeking admission for the first time in 1982 to first degree courses, are required to apply for such admission on the prescribed SATAC form. [For details, see page 1.]

Persons seeking admission to postgraduate degree or diploma courses in 1982 are advised to read section 20 in the leaflet 'General Information, 1982' obtainable on request at the Office of the Academic Registrar.

Persons seeking admission under the Special Entry Scheme should in the first instance write to the Academic Registrar. They will then be advised as to the need to complete applications as described on page 1.

The completed form must be sent to:

SATAC,  
Red Cross House,  
228 North Terrace, Adelaide, S.A., 5000.

Closing date for receipt of all applications: 31 October, 1981.

Application forms may be obtained from SATAC, at the University Office, or on request to the Academic Registrar.

## 3. SPECIAL ENTRY SCHEME

Each year the University of Adelaide will admit to selected first degree courses under its Special Entry Scheme a limited number of students who have not qualified for matriculation. Applicants must be **permanent residents of South Australia** who can satisfy the University that they have the potential to succeed in university study.

The courses concerned in 1982 are: Agricultural Science, Architectural Studies, Arts, Dentistry, Economics, Engineering, Law, Mathematical Sciences, Music and Science, and possibly Medicine; the number of participating courses may be amended from time to time.

The total number of admissions to all the above courses under the Special Entry Scheme in any one year will be limited by a quota imposed by the Council on the recommendation of the Education Committee (in 1982 this quota is limited to not more than 85). Accordingly, only applicants assessed as being able to obtain a degree will be accepted.

With the exception of *Arts, Economics, Law* and *Music*, it is essential for applicants to have a prior knowledge of Chemistry, Mathematics and Physics to an appropriate level. Applicants for admission into *Music* must also have theoretical knowledge and practical ability to an appropriate level.

### Applications and information

Applications for admission under the Special Entry Scheme in 1982 closed on 31 July, 1981, and prospective applicants for admission in 1983 should, in the first instance, write to the Academic Registrar.

**NOTE:** The remainder of this chapter applies only to candidates for admission to undergraduate courses.

## 4. ELIGIBILITY

### 4.1 South Australian and Interstate candidates (not including overseas students)

#### 4.1.1. South Australian candidates with South Australian Matriculation qualifications

South Australian candidates who have already qualified for matriculation at a South Australian matriculation examination, or who expect to become so qualified after publication of the results of the South Australian matriculation examination, are eligible to be considered for admission to all courses if they submit applications, on the prescribed form, to SATAC by **31 October**.

#### 4.1.2. South Australian candidates with matriculation qualifications obtained outside South Australia

South Australian candidates who have already qualified for matriculation in the University of Adelaide at examinations conducted outside South Australia are eligible to be considered for admission to all courses if they submit applications on the prescribed form to SATAC by **31 October**. All such applicants are advised to read carefully section 4. **Matriculation**, in the leaflet "General Information", and if they are in doubt about their qualifications they should obtain from the Academic Registrar a Form of Preliminary Application (Form PF10) which must be completed and returned by **30 September** asking that their position be determined.

#### 4.1.3. Interstate candidates with matriculation qualifications obtained outside South Australia

Interstate candidates (not including overseas students) who have qualified for matriculation outside South Australia or who expect to become so qualified after the publication of the results of their qualifying examination and who have not been precluded from continuing their studies in the same or a similar course in another university or tertiary institution are eligible to be considered for admission to all courses **EXCEPT DENTISTRY, LAW (including Law/Arts and Law/Economics) AND MEDICINE** if they submit applications on the prescribed form to SATAC by **31 October**.

A person who is in doubt about his educational qualifications or who has been precluded from continuing his studies elsewhere should obtain from the Academic Registrar a Form of Preliminary Application (Form PF10) which must be completed and returned by **30 September** asking that his position be determined.

A candidate whose qualifications were obtained otherwise than at Public Examinations in South Australia, will only be considered as a candidate for admission to the Dentistry,\* Law (including Law/Arts and Law/Economics) and Medicine courses if:

1. he has lived in South Australia, for a reason other than for the sole purpose of tertiary education, for the period of twelve months immediately preceding the academic year in which entry is sought; *or*
2. there are no courses provided in Dentistry,\* Law or Medicine in the State or Territory in which he is residing; *or*
3. he provides evidence acceptable to the University that he is living in South Australia for reasons other than tertiary education. (For example, the son or daughter of a parent transferred to South Australia by his employers might be in this category); *or*
4. his parents are *bona fide* residents of South Australia; *or*
5. he has his home in the Northern Territory, Broken Hill, Mildura or some other district close to the South Australian border and he has completed his secondary education in his home area.

A candidate who believes that he can satisfy one or more of the above criteria should obtain from the Academic Registrar a Form of Preliminary Application (Form PF10) which must be completed and returned by **30 September** together with a statement setting out, as fully as possible, his reasons for asking that he be declared eligible to be considered for admission to dentistry, law or medicine.

\* There is a sub-quota of 3 places in dentistry for candidates resident in Tasmania, but applications from candidates resident in the A.C.T. will not normally be considered for admission to dentistry.

Applications in this category require special processing, for which adequate time is needed. Accordingly, any such application received after **30 September** will not be considered unless the University is satisfied that special circumstances, which account for the late application, exist.

Every candidate declared both eligible to be considered and qualified to matriculate (or who, having been declared so eligible, expects to qualify for matriculation before the beginning of the next academic year) will then compete for selection within the normal quota, provided that he submits his application on the prescribed form to SATAC by **31 October**.

## 4.2 Overseas students

An overseas student is defined as a person who is in, or who hopes to come to, Australia for study purposes only.

**NOTE:** There are quotas on the number of overseas students who may be admitted to most courses and applications for admission to the **DENTISTRY** course will not be considered from overseas students whose permanent home is in a country where there is an established dental school.

### 4.2.1. Overseas students with South Australian Matriculation Qualifications

Overseas students attending South Australian schools and taking the South Australian Matriculation examination are eligible to be considered for admission to all courses (with the possible exception of **Dentistry**) if they submit applications, on the prescribed form, to SATAC by **31 October**. (Read carefully the relevant paragraphs in the section entitled "Overseas Students" in the leaflet "General Information").

### 4.2.2. Overseas students not in Australia

Persons who hope to come to Australia for study purposes only, to whom special conditions apply, should read carefully the relevant paragraphs in the section entitled "Overseas Students" in the leaflet "General Information".

The closing date for initial enquiry, including the submission of the form, Application for Enrolment in other than a Secondary School (Form M146) is **30 September**.

Every overseas student who has submitted an original Form M146 before **30 September** and who has been informed by the University that an application from him will be considered, must complete the prescribed application form and lodge it with SATAC by **31 October**. Selection of those to be offered admission is made as early as possible in January; and in general the students to be admitted are required to be in Adelaide by the first week of March.

### 4.2.3. Overseas students in another Australian State or Territory

An overseas student in another Australian State or Territory **will NOT be considered as a candidate for admission to ANY course that is provided in the State or Territory in which he is staying**. An overseas student will not be considered for admission to medicine or dentistry on the grounds of quota restrictions in other Australian States.

An overseas student who wishes to apply for admission to a course not provided in the Australian State or Territory in which he is staying must first be declared eligible to be considered. For this purpose he should obtain from the Academic Registrar a Form of Preliminary Application (Form PF10) which must be completed and returned by **30 September** together with a statement setting out, as fully as possible, his reasons for asking that he be declared eligible to be considered for admission to that course. (Read carefully the relevant paragraphs in the section entitled "Overseas Students" in the leaflet "General Information").

The University will not normally consider for admission to a course an applicant who has previously been precluded from continuing his studies in a similar course in another university or tertiary institution.

Every candidate declared eligible to be considered will then compete for selection within the course quota for overseas students, provided that he submits his application on the prescribed form to SATAC by **31 October**.

### 4.3 Migrants and prospective migrants to South Australia

The University receives many enquiries from students in America, Europe and elsewhere who say they wish to live permanently in South Australia. Such students are advised that the University will not normally regard them as eligible to be considered for admission until after they have lived in South Australia for the period of twelve months immediately preceding the academic year into which entry is sought and can satisfy the University that they are *bona fide* migrants. However, where the University is satisfied that the applicant is genuinely coming to South Australia for purposes other than education, such as, for example, a student member of a family which is migrating to South Australia, the qualifying period of twelve months may be reduced.

## 5. SELECTION

### 5.1 Introduction

Selection will be based as far as practicable on academic merit, within the applicant's preference as to institution and course, and will not depend on whether he or she proposes to undertake full-time or part-time studies. Selection committees will give consideration to any special factors such as additional qualifications, genuine interruptions to formal education or handicaps to education (e.g. illness, financial problems, limited school facilities, etc.).

### 5.2 South Australian Matriculation Examination

In the case of applicants who have attempted five or more subjects at the one South Australian Matriculation Examination, academic merit will normally be assessed on the applicant's aggregate score in his best five subjects; but other relevant factors, e.g. the results of any post-secondary studies, or special circumstances, may be taken into account.

Claims for consideration of special factors should be substantiated by certificates or written statements from appropriate persons, e.g. school principals, and be attached to the application form.

Applicants who have had more than one attempt at the Matriculation Examination, or who have repeated the matriculation year are advised that their **complete** academic record will be considered. They are invited to submit a statement of any special circumstances they would wish to have taken into account. (Merely to say, for instance, "I repeated the Matriculation Examination in order to do better" may not be helpful.) There will be **no fixed deduction** from the aggregate score of such applicants; but a Selection Committee may, after considering all the information available to it, make an adjustment to an applicant's aggregate score. Any such adjustment is made to ensure that there is no injustice either to the applicant or to those who have obtained the same or a similar score after spending only one year in the matriculation class. Applicants for the Dental and Medical courses are advised that the Selection Committee concerned will review each case individually and in the absence of special circumstances a downwards adjustment of **up to five percent** will be imposed upon the best aggregate score.

Where candidates have qualified at an earlier Matriculation examination an equivalent 1981 aggregate score will be calculated for selection purposes.

### 5.3. Other qualifications

In the case of applicants presenting qualifications obtained at matriculation level in another Australian State or Territory an equivalent score at the South Australian Matriculation Examination will be calculated.

Applicants presenting other qualifications will be assessed by the Selection Committees concerned, and ranked for selection purposes.

## 6. QUOTAS AND ADMISSION STANDARDS

It is not possible to predict precisely what the minimum standard (i.e. cut-off mark) for entry to each of the various courses in 1982 will be, as in each case that will depend on factors such as the number of places available, the number of qualified applicants seeking admission, how well the applicant has performed at the matriculation or other qualifying examination, the nature of their preferences—and so on. Because of these variables, the minimum standard required for admission to any particular course may change from year to year. In some years, indeed, for some courses the variation from the previous year has been considerable.

**As a matter of principle, every applicant's aim should be to choose the course most suited to his or her abilities, aptitudes and interests.**

In general there are no admission quotas for students who have qualified to enter the second or a later year of a course by virtue of appropriate studies in another faculty or institution. However, where the pressure on the facilities and capabilities of a department and/or a faculty are excessive, the University reserves the right to introduce specific second (or later) year course and/or subject quotas.

Students who are not successful in gaining admission to the course of their first preference should carefully consider their position before embarking on studies in another faculty specifically with the view to gaining second or later year entry to the preferred course. In this context, students who are not successful in gaining admission to the Engineering Faculty in 1982 should note that second year entry to at least one engineering course in 1983 is likely to be restricted.

The following information is provided so that applicants may have as much information as possible and, having made their choice of course(s) in accordance with the principle stated above, may if necessary re-assess their choice(s) after their matriculation results are known and then, if they wish, submit to SATAC a request for a change of preference(s).

SATAC Course Code	Course	Quota for 1982 (per- sons)	Minimum entrance standard for the last three years (see notes below)					
			1979		1980		1981	
			aggre- gate score	per- centile ranking	aggre- gate score	per- centile ranking	aggre- gate score	per- centile ranking
ABAG	Agricultural Science	70	225	65	225	66	295	66
ABRC	Architectural Studies	60	255	47	253	49	321	51
ABAR	Arts	520	256	46	251	51	314	55
ABAM	Arts/Music		263	42			320	
ABDS	Dentistry	40	348	11	337	14	400	13
ABEC	Economics	190	273	37	281	34	355	32
ABEN	Engineering	180	260	43	272	39	390	16
ABLW	Law	150	322	17	332	15	392	16
ABLA	Law/Arts							
ABLE	Law/ Economics							

GENERAL INFORMATION  
ADMISSION

SATAC Course Code	Course	Quota for 1982 (per- sons)	Minimum entrance standard for the last three years (see notes below)					
			1979		1980		1981	
			aggre- gate score	per- centile ranking	aggre- gate score	per- centile ranking	aggre- gate score	per- centile ranking
ABMS	Mathematical Sciences <i>(see note 3)</i>	—	238	56	256	48	332	44
ABMD	Medicine	120	369	7	386	5	425	7
ABMU	Music	45	263	42	258	47	320	52
ABSC	Science <i>(see note 3)</i>	425	238	56	256	48	332	44

**Notes:**

1. For each year the minimum entrance standard is expressed in terms of the performance, at the preceding South Australian Matriculation Examination, of the **last candidate** admitted to the course. This is expressed in two ways:

the candidate's **aggregate score** in his (or her) best five subjects, and his (or her) **percentile ranking** (from the top downwards) amongst the total number of those who sat for a matriculating group of five subjects.

Thus, taking medicine in 1981 as an example, the last candidate to be admitted had a matriculation aggregate score of 425, and was within the top 7% of all those who sat for a matriculating group of five subjects at the 1980 Matriculation Examination.

2. The proportion of those who sat for a matriculating group of subjects at the South Australian Matriculation Examination in 1980 and who achieved the prescribed minimum aggregate score for matriculation was approximately 66%.

3. No separate quota for Mathematical Sciences applied in 1981 and previous years. Students were admitted through the Science course.

4. Changes in the scaling procedures were introduced for the 1980 Matriculation Examination. Aggregate scores for 1979 and 1980 are *not* comparable with 1981 scores, but comparisons may be made by using the percentile ranking.

## 7. EXEMPTION FROM PART OF A COURSE

A person who has lodged an application with SATAC and who has been (or appears likely to be) admitted to a course and who wishes to apply for status in part of the course on account of work completed in another tertiary educational institution should write to the Academic Registrar, submitting an official certificate of his or her academic record accompanied by an official publication of the institution showing the scope and content of the work which has been completed, and appropriately marked for the purpose.

## 8. DEFERMENT OF ADMISSION

With the exception of those who have applied under the Special Entry Scheme, deferment of admission for one year is available on request to candidates selected for admission. In some faculties a longer period of deferment may, on request, be granted.

To obtain a deferment a candidate is required to complete the appropriate section of his "Authority to Enrol" and return it to SATAC within the prescribed period. If deferment is sought for more than one year a candidate should, in addition to returning his "Authority to Enrol", write giving details of the period of deferment sought and the grounds for seeking it.

A candidate who is uncertain of his future studies and is contemplating seeking a deferment is advised to consult the appropriate Course Adviser.

## 9. EVENING CLASSES AND PART-TIME STUDENTS

Some courses (Dentistry, Medicine) can be taken only by full-time study. Other courses (e.g. Agricultural Science, Architectural Studies, Engineering, Law, Mathematical Sciences, Music, Science) may under certain circumstances be taken either wholly or in part by part-time study, but only by students able to attend during the day.

The Arts and Economics courses may be taken by either full-time or part-time study. In the Faculty of Arts, some subjects may be taken by attendance either at day classes or at evening classes. In a number of subjects, evening lectures are not given; however, it is possible for a student to complete an Ordinary B.A. degree, in a wide range of subjects, by evening study only.

In the Economics course the timetables of subjects are so arranged that it is possible for a part-time student to complete his whole course by attendance at evening classes only. Most evening classes are held between 5.15 and 7.15 p.m., with some continuing till 8.15 p.m.

The Science course may be taken on a part-time basis, but not by evening studies alone; indeed only some of the first-year subjects are taken at 5.15 p.m. or later. Second- and third-year subjects are given only during the day.

The University recognises that in certain circumstances there are advantages in part-time study; and it also recognises that for some students part-time study is all that is practicable. Nevertheless, in general the University would prefer its students to be full-time rather than part-time, to be able to study under the conditions most conducive to success, and to be in a position to enter fully into the life of the University.

Intending part-time students should not enrol until they have considered carefully the demands that part-time study will make upon them, and are confident that they will be in a position to devote the necessary time throughout the year to those demands.

Advice in the planning of courses may be obtained from the Course Advisers (see leaflet "Instructions for Enrolment").

## 10. STUDENTS WITH PHYSICAL DISABILITIES OR OTHER SPECIAL CIRCUMSTANCES

The University makes every effort to ensure that the special needs of students with physical disabilities (whether temporary or permanent) or of students with special circumstances, are catered for. Special arrangements may be made wherever possible to assist them in their studies or with their examinations. Some ramps for wheel-chairs are provided and a few parking places are reserved for paraplegic students who are able to drive a car. Any student who believes that there may be a need for him or her to have special arrangements made is invited to get in touch with the Academic Registrar either before enrolment or as soon as possible thereafter.

A student with a physical disability which may impair his or her ability to undertake a particular course should carefully consider all the consequences before applying for admission to that course. For example conditions such as dyslexia, muscular incoordination, epilepsy, sight or hearing problems, may impede both preparation for as well as the subsequent fulfilment of a particular career.

Students who may have any doubts about their physical capacity to undertake a particular course are strongly advised to consult the Student Health Service or their own doctor before applying for admission to that course. Such action may prevent subsequent disappointment, and could assist the University in helping such students.



# Matriculation

## 1. GENERAL

Before entering upon a course of study at the University, a student must matriculate. To become qualified to do so the student must:

- have satisfied the requirements of the current Matriculation Statute; *or*
- have satisfied, when they were operative, the requirements of any former Matriculation Statute; *or*
- be declared qualified for matriculation on account of his general educational qualifications, including any qualifications obtained outside South Australia; *or*
- be offered admission under the Special Entry Scheme.

A student who is qualified to matriculate and who has been authorised to enrol matriculates by signing his or her name, in the presence of an authorised officer, to the prescribed declaration in the Students' Roll. This is normally done as part of the enrolment procedure.

## 2. MATRICULATION STATUTE: EXTRACTS

### General

1. To become a matriculated student of the University a candidate shall:
  - (a) have satisfied the educational requirements specified below; and
  - (b) at an appointed time, in the presence of the Academic Registrar or other duly appointed person, sign the following declaration in the Students' Roll:

'I undertake to obey the statutes and regulations of the University of Adelaide and to comply with such rules as may from time to time lawfully have been made by or with the authority of the Council of the University.'

### The Matriculation Examination

2. A Matriculation Examination shall be held towards the end of each calendar year. The examination shall be designed, in general scope and standard, for candidates who have completed five years of academic secondary education (following seven years of primary education) in South Australia.

3. (a) The subjects available at the Matriculation Examination shall be:

**Group I:** American History, Ancient History, Art, Australian History, Chinese, Classical Studies, Dutch, Economics, English, French, Geography, German, Hungarian, Indonesian, Italian, Japanese, Latin, Latvian, Lithuanian, Malay, Medieval History, Modern European History, Modern World History, Modern Greek, Music (History and Literature), Music (Theory and Practice), Polish, Russian, Spanish, Ukrainian, Vietnamese and such other subjects as may be approved by the Council on the recommendation of the Joint Matriculation Committee.\*

**Group II:** Biology, Chemistry, Geology, Mathematics I, Mathematics II, Mathematics IS, Physics and such other subjects as may be approved by the Council on the recommendation of the Joint Matriculation Committee.

(b) Candidates' results in each subject shall be classified (not necessarily for publication) in such manner as may be approved by the Council on the recommendation of the Joint Matriculation Committee.

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\*The following subjects have been so approved: Ancient Greek and Hebrew at the Higher School Certificate Examination conducted by the Victorian Institute of Secondary Education, in accordance with the arrangements made by the Public Examinations Board of South Australia.

## Educational Requirements for Matriculation

4. To fulfil the educational requirements for matriculation a candidate shall:
- (a) present at one Matriculation Examination not less than five subjects which shall include at least one subject from each of Group I and Group II, provided
    - (i) that not more than two History subjects shall be counted; (ii) that Ancient History and Classical Studies shall not both be counted; and (iii) that Modern European History and Modern World History shall not both be counted; (iv) that a candidate presenting Malay shall not also present Indonesian; and (v) that a candidate presenting Mathematics IS shall not also present either Mathematics I or Mathematics II; and
  - \* (b) attain in five subjects so presented an aggregate of scaled marks not less than a figure determined from time to time by the Council, provided that if a candidate present more than five subjects the aggregate of marks shall be his highest five scaled marks in subjects which comply with the requirements of section (a) of this clause.

## Assessment

\*5. A candidate who produces evidence satisfactory to the Joint Matriculation Committee

- (a) that he was prevented by illness from attending or completing the Matriculation Examination in the subject or subjects concerned; or
- (b) that he satisfied such other grounds as may be approved by the Joint Matriculation Committee;

may have an assessment made of the results which he was likely to obtain in each subject concerned, or may be examined in any manner approved by the Joint Matriculation Committee. Such assessment or examination, if approved by the Public Examinations Board and the Joint Matriculation Committee, may be used for purposes of complying with the provisions of clause 4 of this statute.

## Syllabuses

6. The syllabus of any proposed new subject at the Matriculation Examination, and any substantial alteration to any existing syllabus shall be

- (a) drawn up by a subject committee of the Public Examinations Board, of which subject committee the Chairman shall be a member of the full-time academic staff of either the University of Adelaide or the Flinders University of South Australia;
- (b) after approval by the Public Examinations Board, submitted to the two Universities.

No new syllabus, or substantial alteration to any existing syllabus, shall be operative unless and until it has been approved for the purpose by both Universities.

For the purpose of this clause an alteration shall be regarded as substantial if declared to be so by the chairman of the relevant Public Examinations Board Subject Committee or by the Joint Matriculation Committee.

## The Matriculation Board

8. There shall be a Matriculation Board consisting of the Vice-Chancellor and three members appointed by the Council on the recommendation of the Education Committee.

9. (a) The Board shall advise the Council on all applications under this statute for status, for provisional matriculation, and for adult matriculation and on such other matters as the Council may refer to it.

(b) In the case of a candidate for matriculation who presents evidence satisfactory to the Matriculation Board that he is suffering severe and continuing physical or other disability the Council, on the advice of the Board, may vary the provisions of clauses 4 and 5.

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\*See footnotes on pages 18 to 19.

## **The Joint Matriculation Committee**

10. (a) There shall be a Joint Matriculation Committee of the University of Adelaide and the Flinders University of South Australia, consisting of eleven members.

(b) Each University Council shall appoint five members.

(c) The ten appointed members shall elect a chairman. If an appointed member be elected chairman he shall thereupon cease to be an appointed member, and the resultant vacancy shall be filled by the relevant University Council.

11. In addition to its powers under clauses 3 and 5, the Joint Matriculation Committee shall advise the Councils of the two Universities on any matters related to matriculation.

## **Status**

12. A candidate who submits satisfactory evidence of educational qualifications gained otherwise than at the Matriculation Examination may, on the recommendation of the Matriculation Board, be declared qualified for matriculation or be granted such status towards matriculation as shall be determined in each case.

13. A candidate who under clause 12 is granted status towards matriculation on account of educational qualifications obtained outside South Australia may be required to satisfy the Matriculation Board that his knowledge of English is sufficient for the purpose of undertaking University studies.

## **Adult Matriculation**

16. On the recommendation of the Matriculation Board the Council may make such modifications in the provisions of this statute as it deems fit for a person who has attained the age of twenty-one years or who for a continuous period of at least thirty-three months has ceased to undergo full-time secondary education.

## **Operative Date**

17. This Statute shall come into force on 1 April, 1969, when the matriculation statute in force on 31 March, 1969, shall be repealed.

## **Saving Clause**

18. (a) Notwithstanding the provisions of clause 1(a), a candidate who before 1 April, 1969, had fulfilled the educational requirements for matriculation under any former Matriculation Statute by passing in appropriate subjects at the matriculation examination prescribed in that statute shall remain qualified for matriculation.

(b) A candidate who, on or before 31 March, 1969, had partially fulfilled the educational requirements for matriculation under clause 9(a) of the Matriculation Statute in force on 31 March, 1969, may complete his qualifications for matriculation by attaining at any Matriculation Examination a grade of D or higher in any subject which is available at the Matriculation Examination and would have qualified him for matriculation under the former statute.

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## **FOOTNOTES (which do not form part of the Statute):**

### **1. Prerequisite knowledge**

The attention of intending candidates is drawn to the fact that in some first-year subjects at the University a knowledge of certain work at matriculation standard is assumed.

Details may be found in section 5: Preparation for University Studies, below.

### **2. Scaling of matriculation scores.**

The matriculation examination is intended to assess the level of achievement of candidates, in the various subjects. Thus one of the main concerns is to maintain comparability of standards both between subjects in the same year, and between years in the same subject. Allowance must also be made for variations in the quality of candidates from year to year, and in the apparent difficulty of examination papers. Due to subject selection and streaming factors, differences of quality between the groups of candidates taking different subjects can also arise, and compensation must be made for this.

In order to achieve the intentions of the examination the total raw score in each subject is suitably scaled. The aggregates of scaled scores so obtained are used for determining matriculation and, in appropriate cases, as a basis for admission to universities and other tertiary educational institutions.

### **3. Moderated school assessment component**

The Universities and the Public Examinations Board recognise the contribution to the overall assessment of candidates which can be made by the schools, and accordingly a school assessment component is included in the matriculation examination results. Teachers are asked to provide an assessment of achievement for each candidate in each subject, and this is moderated to compensate for differences between schools. The resulting score is combined with the examination mark to produce a total raw score, which is used as a basis for all other procedures.

Of the total raw score, the examination mark will have a weighting of 75% and the school assessment a weighting of 25%, except in cases where there is no school assessment or where it is considered that the school assessment cannot be adequately moderated: in such cases the examination mark constitutes 100% of the total raw score.

### **4. Prescribed aggregate score**

Students who obtain a total scaled score of at least 295 in five required subjects at the matriculation examination will qualify to matriculate at the University.

If a candidate presents more than five subjects the aggregate of his five highest scaled scores in subjects which comply with the statute will be used to determine whether the candidate has qualified to matriculate.

## **3. ADULT MATRICULATION**

### **3.1. Introduction**

Under clause 16 of the Matriculation Statute a person who has attained the age of twenty-one years or who for a continuous period of at least thirty-three months has ceased to undergo full-time secondary education may be considered for adult matriculation.

The Council has determined the normal provisions under which such a person may qualify for adult matriculation, and they are set out below. However, in any particular case the Council may vary these provisions, in such manner as it may decide.

### **3.2. Number of subjects**

(a) Candidates for adult matriculation will not be expected to comply with the requirements of clause 4 (a), namely, that they present at one annual examination not less than five subjects.

(b) In all other respects, however, and unless in any particular case the Council decides otherwise, candidates for adult matriculation must satisfy in full the provisions of the Matriculation Statute, including the educational requirements for matriculation; that is (unless they have attained the age of thirty years), they must qualify by presenting five matriculation subjects which satisfy the grouping and other provisions and by attaining the prescribed aggregate scaled score (295).

Candidates who have attained the age of thirty years, on or before the date of publication of the results of the fourth subject attempted, will not be required to present more than FOUR subjects which satisfy the grouping requirements. For such candidates the prescribed aggregate scaled score will be 240.

### **3.3. Number of examinations**

(a) The qualification shall be obtained at not more than three matriculation examinations which need not necessarily be consecutive.

(b) Subject to (a) above, the Council places no restriction on the number of times a candidate may present himself for a matriculation examination.

### **3.4. Previous qualifications**

(a) A candidate with other educational qualifications may under clause 12 of the Matriculation Statute be allowed to qualify for adult matriculation with less than five matriculation subjects; but for any such candidate the number of permitted annual examinations may be appropriately reduced.

(b) Candidates will not be granted any credit towards adult matriculation for studies completed in the final year of their normal, full-time secondary education.

(c) Candidates who, prior to 1 October, 1973, had been granted permission to proceed to adult matriculation may qualify under the policy then existing.

### **3.5. Confirmation of matriculation status**

On completion of the required programme of study an applicant should obtain from the Office of the Academic Registrar a form of application for adult matriculation. This should be completed and returned to the Academic Registrar who, if the requirements have been fully met, will provide the applicant with a statement certifying qualification for matriculation. This will be called a Certificate of Adult Matriculation.

It is important that a candidate who has applied for admission to the University should obtain this Certificate **as soon as possible** after the final matriculation results are known.

### **3.6. Matriculation status for work completed in another educational institution**

A person who, on account of educational qualifications obtained elsewhere, wishes to seek matriculation status or some reduction in the normal requirements should enquire at the Office of the Academic Registrar.

### **3.7. Preparation for the Matriculation Examination**

(a) A person able to study **full-time** is advised to apply to the Principal of a suitable College of Further Education (e.g. Elizabeth, Kensington Park, O'Halloran Hill or Port Adelaide or see (b) 1), a high school or a private college, for admission to day classes.

(b) A person able to study only **part-time** is advised either:

1. to enquire at the Information Centre of the Department of Further Education, 31 Flinders Street, Adelaide (telephone 227 4766) **after the middle of January** about day and evening classes held at metropolitan Colleges of Further Education, or elsewhere; or
2. to arrange for tuition from a private tutor, or from one of the institutions which prepare students for the Matriculation Examination; or
3. to enquire at the Open College of Further Education **after 1 January**, about correspondence courses. Address: Open College of Further Education, 208 Currie Street, Adelaide, S.A. 5000 (Telephone 212 3622).

## **4. FURTHER INFORMATION**

Intending students who are in doubt about their matriculation position are invited to apply in writing to the Academic Registrar or to call at his Office, for clarification of their position and (if necessary) advice as to what they need to do to qualify for matriculation.

## **5. PREPARATION FOR UNIVERSITY STUDIES**

In deciding which matriculation subjects to attempt or the course to which entry will be sought a student should bear in mind that, while there are no formal pre-requisites for admission, the nature of some university courses is such that a student who has not studied certain subjects at matriculation level is at a considerable disadvantage.

A number of first-year university subjects for example are taught on the assumption that students have studied certain specific subjects at matriculation level.

### **SUBJECTS**

#### **Biology, Botany, Geology (and Zoology in second year)**

It is advisable for every student taking any of these subjects to have a knowledge of matriculation Mathematics IS, Physics and Chemistry.

## Chemistry

The courses in Chemistry I, and Chemistry ID and IM (for dental and medical students), assume a knowledge of matriculation Chemistry and Physics, and *either* matriculation Mathematics I and II *or* matriculation Mathematics IS. Present experience shows that students who have not achieved at least a score of 70 in matriculation Chemistry may have difficulty with the University Chemistry course.

## Computing Science

The first-year half-subject Computing IH assumes a background in algebra such as may be obtained from matriculation Mathematics IS.

Present experience shows that students who have not achieved a scaled score of at least 70 in matriculation Mathematics IS may have difficulty with Computing IH. Students intending to proceed beyond first year should have achieved an aggregate score of at least 140 in matriculation Mathematics I and II.

## Languages

The courses in English I, French I, Greek I, Japanese I and Latin I assume a knowledge of the course in the corresponding matriculation subject; and the course in German I assumes a knowledge of German at fourth-year secondary school level.

No previous knowledge of the respective language is required for the courses in Chinese I, French IA, German IA, Greek IA, Japanese IA and Latin IA.

## Mathematics

There are two full first-year courses in University Mathematics, namely Mathematics IM and Mathematics I. Mathematics IM is intended for students who have studied only one Mathematics subject at matriculation (Mathematics IS), of which it assumes a knowledge; Mathematics I assumes a knowledge of matriculation Mathematics I and II.

There is also a first year half-subject, Mathematics IH, intended for students who do not wish to proceed to further courses in Mathematics. It assumes a knowledge of matriculation Mathematics IS.

Present experience shows that students who have not achieved the equivalent of a scaled score of about 70 in matriculation Mathematics IS, or an aggregate scaled score of about 130 in matriculation Mathematics I and II, may have difficulty with University Mathematics IM or IH.

## Physics

The courses in Physics I, and Medical Physics, assume a knowledge of the matriculation course in Physics and either Mathematics I and II or Mathematics IS.

## Statistics

The first-year half-subject Statistics IH assumes a knowledge of *either* matriculation Mathematics I and II *or* Mathematics IS.

## FACULTIES

In general the following may be of some help to students in selecting their matriculation subjects.

## Agricultural Science, Dentistry, Medicine

These are science-based courses and students proposing to seek entry are advised that a knowledge of the matriculation subjects Physics, Chemistry and Mathematics to at least Mathematics IS level is **assumed**.

## Architecture

Prospective Architectural Studies students are advised that a knowledge of matriculation Mathematics (to at least Mathematics IS level) is assumed; and students will be expected to have taken at least one science subject at matriculation level.

## **Arts**

The Faculty of Arts has not recommended the study of particular matriculation subjects although some language and literature subjects in the first year assume that students have taken the corresponding matriculation subject.

## **Economics, Law**

The Faculties of Economics and Law have not recommended the study of particular matriculation subjects and a prospective student should plan the course according to his or her particular interests and abilities. It is advisable, but not essential, for students intending to enrol for the degree of Bachelor of Economics, to study at least one mathematics subject to matriculation level.

## **Engineering**

For the Bachelor of Engineering course prospective students are strongly advised to study Physics, Chemistry, Mathematics I and II at matriculation level.

## **Mathematical Sciences**

It is essential that prospective students include Mathematics I and II in their matriculation subjects.

## **Music**

As one would expect, musical aptitude is necessary for this course and prospective students must satisfy the Faculty of Music that they have sufficient ability and preparation. A special entrance examination is required. Many of those who will seek entry to the Music course will study matriculation Music which is not essential but is strongly recommended.

## **Science**

The Faculty of Science recommends that prospective Science students should have a knowledge of the matriculation subjects Physics, Chemistry and Mathematics. Mathematics IS is sufficient for all subjects taught in the Faculty of Science. It is also sufficient for the subjects Mathematics IM, Mathematics IH, Statistics IH and Computing IH. However, for students who intend to take Mathematics I or higher level subjects taught in the Faculty of Mathematical Sciences, the combination of Mathematics I and II is strongly recommended.

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In planning their matriculation studies students will normally receive assistance from the Principal and staff of schools, from a variety of written information (such as this Handbook) and from other sources.

# Fees, Charges and Costs

## 1. GENERAL

No charges are at present made for University tuition, but the Australian Government has announced its intention to introduce tuition fees for some students enrolling for the first time in 1982 for a second or a higher degree. Students are required, however, to pay the prescribed Statutory Fees (see 2 below); and they may also, in some circumstances, incur a liability to pay certain University charges (see 3 below).

The attention of **overseas students** is drawn to section 7 below concerning the annual charges payable to the Australian Government at the time of issue or renewal of a student visa.

The Commonwealth Government has established a Tertiary Education Assistance Scheme which provides means-tested living and other allowances to all full-time non-bonded Australian students admitted to Bachelor degree courses, postgraduate diploma courses and Master's qualifying courses. (See p. 26 for further details.)

## 2. STATUTORY FEES

Payment of the prescribed Statutory Fees is compulsory for every student. Every student enrolled at the University for a Bachelor's or Higher degree or for a diploma must, unless exempted by the University Council from paying all or part of such Fees, pay:

- (i) an **Entrance Fee** of \$20 in March of the first year of enrolment; and
- (ii) an **Annual Fee** of \$140 for a student attempting 76-100% workload; \$105 for 51-75% workload; \$70 for 26-50% workload; or \$35 for 1-25% workload.

(These fees are those applicable to 1981 and are subject to possible increases in 1982.)

**All Statutory Fees should be paid in March of each year.**

A **late payment charge** for overdue fees will be made. The penalty will be applied at the rate of \$2 a month. The penalty will fall due on the first day of the month following the month in which the Statutory Annual Fee, or any agreed part thereof, falls due, until and including 1 December of each year. The maximum total penalty applicable to each Fee will be \$18.

All students who arrange for deferment of payment of the Statutory Fees will be exempt from the penalty charge for the period of deferment.

Payment of these fees entitles students to be members of the Adelaide University Union (the Club to which all members of the University community may belong) with the use of the Union buildings, facilities and services. Membership also entitles students and staff to take full part in the activities of the Students' Association, Postgraduate Students' Association, Clubs and Societies Council and the Sports Association.

## 3. UNIVERSITY CHARGES

A charge of \$15 will be made by the University in cases of late enrolment.

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 Volume II of the Calendar of the University.

Students in the third year of the dental course are required to pay to the Cashier, Royal Adelaide Hospital, 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. They may elect to pay the full amount of \$69 at the beginning of the fifth year. It is payable to the University which transmits it to the hospitals concerned.



Students who are granted permission to take their examinations externally are responsible for the payment of charges for supervision.

#### 4. 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. It is hoped that, in most cases, the University will be able to meet or at least contribute to the **travel** costs; however students are required themselves to meet whatever **living** costs (accommodation, meals, etc.) may be involved. A list of subjects involving excursions or camps, and estimated costs for each subject, is published in Volume II of the University Calendar (Details of Courses).

#### 5. BOOKS AND STATIONERY

The cost of books will vary according to the course, and the subjects, being studied; but in general a first-year student should allow at least \$350 for books and necessary stationery. In general students are expected to have their own copies of text-books; but books set for reference only need not be bought and may be consulted in the Library.

Sometimes second-hand books are available. However, only the prescribed edition of any text-book should be bought.

The Adelaide University Union runs the Union Bookshop which supplies all prescribed text-books, general books, stationery and calculators, at a 12% discount price to all students during March each year.

A sale of second-hand books is conducted annually by the Adelaide University Book Exchange, usually in the period from the middle of February to the middle of March. Enquiries, preferably in writing, may be made at the Students' Association Office in the Union Buildings.

#### 6. EQUIPMENT

Attention is drawn to the fact that in some courses, and in some subjects, students are required to provide themselves with certain equipment. In Medicine, for instance, each second-year student must possess a microscope of an approved pattern and a set of bones; and when entering upon the clinical section of the Medical Course a student must obtain his own set of clinical instruments. Again, in most subjects of a biological nature the associated practical work requires the use of dissecting and other instruments; in Architecture and Engineering, students require specialised equipment including drawing instruments; and so on.

Allowance for the costs of any necessary equipment must be made in any assessment of the overall costs of a University course.

#### 7. CHARGES PAYABLE BY OVERSEAS STUDENTS

In addition to other requirements, regulations made by the Australian Government under the Overseas Students Charge Act, 1979 and the Overseas Students Charge Collection Act, 1979, require overseas students enrolling in a course in an Australian educational institution to pay annual charges\* according to the following scale:

Course leading to a Master's degree or doctorate	\$2,500 a year
Course leading to a Bachelor's degree in Medicine, Veterinary Science or Dentistry	\$2,000 a year
Other courses	\$1,500 a year

\*These charges are correct at the time of printing.

GENERAL INFORMATION  
FEES, CHARGES AND COSTS

These charges are payable **either** to the local Australian Mission at the time of issue of a student visa **or** to the Department of Immigration and Ethnic Affairs at the time of renewal of a visa. There are certain exemptions from payment of the charge.

Full details concerning the overseas students charges may be obtained from the local Australian Overseas Mission or, for students already in Australia, from the Department of Immigration and Ethnic Affairs.

# Financial Assistance

## 1. COMMONWEALTH GOVERNMENT TERTIARY EDUCATION ASSISTANCE SCHEME

The information provided below is intended as a brief guide only and is correct as at July, 1981. All inquiries should be directed to the Commonwealth Department of Education, 228 North Terrace, Adelaide, S.A. 5000. (Telephone 228 2911.)

### General

The Tertiary Education Assistance Scheme is intended to assist Australian students in approved courses at universities, colleges of advanced education, technical colleges and other approved tertiary institutions. In general, assistance under the Scheme is available:

- (a) for full-time study only in approved courses;
- (b) subject to a means test;
- (c) on a non-competitive basis;
- (d) without age restriction;
- (e) subject to certain conditions of eligibility including satisfactory progress in an approved course.

A student's eligibility for assistance under the Scheme must be renewed each year.

### Eligibility

#### 1. On personal grounds

Assistance will be available to students whose parents are ordinarily permanent residents of Australia or who are themselves permanent residents or *bona fide* migrants.

Students who are party to a training agreement or who are bonded are not eligible for assistance. Such students may become eligible for assistance by arranging to meet their obligations under their training agreement to the satisfaction of the authorities concerned.

#### 2. On academic grounds

School leavers and students undertaking post secondary studies for the first time will be eligible to receive assistance if admitted to an approved course. Other students should consult the booklet "Information for Applicants" available from the Department of Education.

### Benefits

#### 1. Living allowance

**Ordinary students.** Students are classed as ordinary unless they meet one of criteria for independent status (see below). Ordinary students have the means test applied to parental income. The maximum rates of living allowance payable are \$1,402 a year for students living at home and \$2,310 for students eligible to receive living allowance at the away from parent rate. The latter rate is payable where students:

- (a) must live away from home to meet compulsory residence requirements of their course;
- (b) are under 21 years of age and must live away from home because of circumstances which would have an adverse effect on their studies;
- (c) must live away from home because of distance and time involved in daily travel.

(From 1 January 1982 students will not qualify for allowance at the living-away-from-home rate on the ground of being 21 years of age and choosing to live away from their parents' permanent home. The exception is students who have previously had an allowance determined on the basis that they were 21 years of age and chose to live away from home. Under phasing-out arrangements these students may continue to qualify on the same grounds after 1981 subject to continuing to comply with other normal requirements.)

An additional allowance of \$5.25 a week is also paid to students who receive living allowance at the ordinary rate. This is to compensate for the loss of Family Allowance, which is no longer paid to the parents of full-time students in receipt of Tertiary Assistance.

**Independent students.** The maximum rate of living allowance payable is \$2,583 a year and the means test is applied to the income of the student and where appropriate the income of his/her spouse. Students may be granted independent status where they:

- (a) have reached or will turn 25 years of age in the relevant year;
- (b) are orphans or wards of State;
- (c) are married; (From 1 January 1982 participation in a *de facto* relationship will no longer qualify applicants for independent status. Those granted independent status on this basis prior to 1982 will retain that status. It should be noted that payment of dependent spouse allowance and means testing of spouse income in *de facto* situations will not be affected.)
- (d) have been employed full-time in the work force or registered as unemployed and receiving unemployment benefits for a total period of two years in the last five years. (From 1 January 1982 periods of registration for employment which do not involve receipt of unemployment benefit may be taken into account in determining the two-year period for independent status, provided that students are unemployed and available for full-time work in Australia during the period. This includes the six weeks waiting period for school leavers to receive Unemployment Benefit. Note that under these requirements periods of registration in which applicants are still at school, in full-time study, or in employment which they may wish to change, will not be included.)

## 2. Incidentals allowance

Students qualifying for living allowance will also be granted an incidentals allowance which will assist them in meeting fees such as Union fees. This allowance is at the rate of:

- (a) \$100 a year for students in universities;
- (b) \$70 a year for students in colleges of advanced education, teachers colleges and other similar approved institutions;
- (c) \$30 a year for students in technical colleges.

## 3. Dependants' allowances

A student who qualifies for a living allowance may also receive an allowance of \$42.70 a week for a spouse who is wholly or substantially dependent. The allowance is a flat weekly rate and is not payable when the spouse has separate income in excess of \$30 in any week. A student who has a child wholly or substantially dependent on him/her may receive an allowance of \$10 a week for each dependent child.

## 4. Fares allowance

Students living away from their parents' or spouse's permanent home in order to undertake their courses of study may be reimbursed the cost of three return trips a year between their homes and the institutions.

# The Means Test

## 1. Ordinary students

The maximum rates of living allowance will be paid where the adjusted family income is equal to or less than \$10,312 a year. The adjusted family income is assessed by subtracting from the gross income of both parents business expenses and an amount of \$450 for each dependent child other than the student. When the adjusted family income exceeds \$10,312 a year the amount of living allowance will be reduced by \$2.50 for every \$10 of income in excess of \$10,312. The student's personal income may also be taken into account in determining his living allowance entitlement.

- (a) Income from all other sources in excess of \$2,000 a year will affect the allowance. Living allowance will be reduced by \$1 for every \$2 by which income exceeds \$2,000.
- (b) Within the limit of \$2,000 students may receive up to \$500 from another award. Income from another award in excess of \$500 will be deducted from living allowance on a \$1 for \$1 basis.

## **2. Independent students**

For independent students the means test is applied to the student's income only, or where married, to his income and that of his spouse for the previous financial year. For every \$2 by which the spouse's income exceeds \$10,312 the allowance will be reduced by \$1. Independent students are subject to the same provisions regarding personal income as are ordinary students.

Independent students who are widowed, divorced or separated for at least six months and who have one or more children wholly or substantially dependent upon them may have income up to \$5,100 without affecting living allowance entitlement. Above this level of income living allowance entitlement is subject to the same abatement rate as the personal income of an ordinary student.

## **How to Apply**

### **1. New students**

Application forms and information booklets will be available at enrolment centres at the time of enrolment.

### **2. Continuing students**

Students who received assistance in 1981 will be sent an application form and Information Booklet by the Commonwealth Department of Education. Other students may obtain application forms and information booklets from the Department of Education.

NOTE: The information given above is a brief guide only and is correct as at July, 1981. It has been provided by the Commonwealth Department of Education, 228 North Terrace, Adelaide. Requests for further information about the Tertiary Education Assistance Scheme should be directed to the Department, NOT to the University.

## **2. VACATION EMPLOYMENT**

Many University students work during the long vacation (approximately December-February inclusive), and thereby supplement their financial resources.

Assistance in finding vacation employment is given by the Commonwealth Employment Service, 99 Currie Street, Adelaide. The Union Welfare Coordinator may also be able to help in this respect through "Work Action".

## **3. CADETSHIPS AND STUDENTSHIPS FOR UNIVERSITY STUDY**

The Secretary of the Careers Advisory Board at the University has current information about a number of cadetships and other financial-assistance schemes offered to later-year undergraduates (virtually no cadetships are available to first-year students) and he will be pleased to answer enquiries.

## **4. SOLDIERS' CHILDREN EDUCATION SCHEME**

The children of ex-servicemen who, as a result of war service, have died or have been totally and permanently incapacitated or blinded, and the children of certain ex-servicemen who are suffering from tuberculosis, may be eligible to receive educational benefits including a living allowance. Particulars may be obtained from the Deputy Commissioner, Department of Veterans' Affairs, 186 Pulteney Street, Adelaide.

## **5. STUDENTS' LOAN FUNDS**

The University and the Union sponsor loan funds, which are available to assist any student in temporary financial difficulty. Students in need of assistance should contact the Union Welfare Co-ordinator in the first instance.

The Australian Government has announced its intention to introduce a student loans scheme but details are not available at the time of printing.

## **6. ADELAIDE UNIVERSITY REGIMENT**

Attention is drawn to the fact that the Adelaide University Regiment provides military training which may be carried on during term time concurrently with University study, and also provides employment for part of the vacation periods. For those who choose to enlist, the obligation is to complete a minimum of 26 days training per year, made up of a series of 3 hour night parades, some weekend parades and a 14 day camp. The Regiment particularly provides leadership and management training which is increasingly being recognised by employers. The pay, which in certain circumstances can exceed \$1,400 a year, is tax free. Further information may be obtained from The Recruiting Officer, Adelaide University Regiment, Torrens Training Depot, G.P.O. Box 1788, Adelaide, S.A. 5001; Telephone 223 5628.

## **7. TRAVELLING CONCESSIONS**

In certain circumstances students may be eligible for fare concessions when travelling on buses or trains operating under the State Transport Authority, or by air. Particulars may be obtained from the relevant travel authority.

# Principal Dates, 1982

Fri.	1 January	New Year's Day
Mon.	25 January	Clinical Year begins.
Mon.	1 February	Public Holiday: Celebration of Australia Day.
Mon.	8 February	<b>Enrolments begin.</b> NOTE: Particulars of the procedures for enrolment may be found in the enrolment leaflet available in January.
Mon.	1 March	<b>FIRST TERM BEGINS.</b> Orientation week begins. NOTE: Students are required to attend such preliminary meetings of classes in the first week of term as may be announced. Details will be on notice-boards from 22 February.
Mon.	8 March	Lectures begin.
Fri.	9 April	Good Friday
Mon.	12 April	Easter Monday
Sun.	25 April	Anzac Day
Mon.	26 April	Anzac Day Holiday
Sat.	8 May	First term lectures end.
Mon.	17 May	Adelaide Cup Day
Mon.	24 May	Examinations week begins.
Mon.	7 June	<b>SECOND TERM BEGINS.</b> Queen's Birthday (Date to be determined.)
Sat.	7 August	Second term lectures end.
Mon.	16 August	Examinations week begins.
Mon.	30 August	<b>THIRD TERM BEGINS.</b>
Mon.	11 October	Labour Day
Sat.	30 October	All lectures end.
Mon.	8 November	Annual examinations, in general, begin.
Sat.	11 December	Third term ends.
Sat.	25 December	Christmas Day
Tues.	28 December	Proclamation Day

# Careers

This Handbook has, as its sole aim, the provision of information about the University and its courses. Accordingly, it does not include descriptions of the careers to which University courses might lead.

However, the University realises that many intending students will wish to have information about possible careers, and about the employment opportunities likely to be open to University graduates. It suggests that such students refer to the relevant section in Chapter 1 of **The SATAC Guide, 1982**. Their attention is also drawn to the University's Counselling Service and the Careers Advisory Board.

**The University's Counselling Service** is located in the Union Buildings on the lower level of the University grounds. The Service offers an opportunity for the perusal "on campus" of material about careers and, if desired, for discussion of any uncertainty about career or course choice; and it is available to prospective students as well as to those already enrolled.

**The Careers Advisory Board** provides information on careers and assistance in finding employment.

The attention of prospective Arts, Economics, Law, Mathematical Sciences, and Science students is drawn to "Employment Opportunities" on pages 77 to 81.



# COURSES

## Courses available in 1982

The following table gives particulars of the courses, leading to first degrees, available to new students in 1982.

Degree	Minimum Length of course in years
Bachelor of Agricultural Science (B.Ag.Sc.)	4
Bachelor of Architectural Studies (B.Arch.St.)*	3
Bachelor of Arts (B.A.)	3
Bachelor of Dental Surgery (B.D.S.)	5
Bachelor of Economics (B.Ec.)	3
Bachelor of Engineering (B.E.)	4
Bachelor of Laws (LL.B.)	4
Bachelor of Medicine and Bachelor of Surgery (M.B., B.S.)	6
Bachelor of Music (B.Mus.)	3
Bachelor of Science in the Faculty of Mathematical Sciences (B.Sc.)	3
Bachelor of Science in the Faculty of Science (B.Sc.)	3

\*After successful completion of at least two years of the B.Arch.St. course or other suitable course selected candidates who wish to become architects may enrol for the degree of Bachelor of Architecture (B.Arch.) which will normally require a further minimum period of three years.

There are a number of other courses in which teaching is provided but which are not listed in the table above. These include a number of courses not thought to be of immediate interest to new students such as the course for the Honours degree of Bachelor of Medical Science, which is available only to medical students who have passed in at least the third-year examination in the medical course, or the courses for the postgraduate diplomas in Applied Psychology, Computing Science, Education, Environmental Studies and Psychotherapy. Further, only limited reference is made to Master's degrees which are offered by the University and to the various Doctorates.

Further details of each course are in the Regulations, Schedules, Syllabuses and Timetables for 1982. These may be found in Volume II of the University Calendar for 1982, available in late December 1981, and they should be carefully studied by each intending student. Some students will find it useful to look up the detailed syllabuses—and perhaps some of the text-books—of subjects in the later years of any course in which they are interested, and in this way to gain a better insight into the kind of work covered in that course.

Studies leading to an Honours degree are available for students in all faculties and every student capable of proceeding to Honours is encouraged to do so.

# Agricultural Science

## 1. INTRODUCTION

Broadly speaking, Agricultural Science is concerned with soils, plants and animals, and their interaction with one another. These are complex matters requiring an understanding of basic sciences such as chemistry, biology, physics and mathematics, as well as of the more specialised sciences relevant to agricultural practices and problems.

The Faculty of Agricultural Science provides courses leading to both the Ordinary degree and the Honours degree of Bachelor of Agricultural Science (B.Ag.Sc.). A student may obtain either degree, or both. In addition, suitably qualified persons may proceed, by advanced study and research in one of the many specialised aspects of Agricultural Science, to the degree of Master of Agricultural Science, the degree of Master of Agriculture or the degree of Doctor of Philosophy.

## 2. DEGREE OF BACHELOR OF AGRICULTURAL SCIENCE

### 2.1. General

The course for the Ordinary degree requires four years of full-time study. It can be taken on a part-time basis, although evening classes are available only in some subjects which mainly are taught in first year. An additional year is required for Honours.

The course comprises studies in the various sciences, both pure and applied, that are basic to agriculture. Candidates may select their subjects from a wide range. They may obtain a broad training by taking subjects covering almost the whole field; or, alternatively, they may begin to specialise at a relatively early stage by taking a sequence of subjects related to a particular field.

The first two years are taught in the Faculty of Science at North Terrace; in the third and fourth years students study at the University's Waite Agricultural Research Institute.

All students must satisfy the requirement for sixteen weeks of practical experience in at least three different and approved agricultural environments. A student who holds the diploma of Roseworthy Agricultural College is, however, exempted from this requirement.

### 2.2. Ordinary Degree

The subjects available in each of the four years are set out below. It will be seen that certain subjects in each year are compulsory. A student may be permitted to include an appropriate first-year subject or its equivalent from those offered by the Faculty of Arts, or one of the subjects Engineering IA or Engineering IB, in lieu of one Group A subject. A student may also present Astronomy IH and another half-subject available in either the Faculty of Arts or the Faculty of Science in lieu of one Group A subject.

The subjects available in the first year are the same as those available in the first year of the Science course; and details of them may be found on pages 69-76. See also pages 20-22.

A brief description of the Economics subjects may be found under the Faculty of Economics (page 52).

#### Group A subjects (First-year):

Biology I, Chemistry I, Economics I, Geology I, Mathematics I or IM, Physics I.  
Half-subjects: Botany IH, Computing IH, Genetics and Human Variation IH,  
Macroeconomics IH, Mathematics IH, Microeconomics IH, Statistics IH.

Of these subjects a candidate must present Chemistry I, Biology I, Statistics IH and one and a half other subjects.

**Group B subjects (Second-year):**

Agriculture II, Applied Mathematics IIA, Applied Mathematics IIB, Botany II, Chemistry II, Genetics II, Geology II, Macroeconomics IIH, Microeconomics IIH, Pure Mathematics II, Zoology II.

Candidates must present Agriculture II and *either* two other subjects from this group *or* one other subject from this group and one subject (or two half-subjects) from Group A not previously taken.

**Group C subjects (Third-year):**

Agriculture III, Biometry, Agricultural Microbiology, Agricultural Biochemistry I, Animal Physiology and Production I, Crop Physiology, Economics of Natural Resource Use\*, Crop Protection, Farm Management\*, Farm Prices and Policy\*, Mathematical Statistics II, Soil Science I.

Candidates must present Agriculture III and Agricultural Microbiology, and *either* Biometry and three other subjects from this group, *or* Mathematical Statistics II and two other subjects from this group.

**Group D subjects (Fourth-year):**

Agricultural Biochemistry II, Agriculture IV, Agronomy, Animal Physiology and Production II, Economics III (Ag.Sc.), Entomology, Genetics III, Horticultural Science, Mathematical Statistics III, Plant Breeding and Crop Genetics, Plant Pathology, Soil Science II.

Candidates must present Agriculture IV and *either* two other subjects from this group, *or* one other subject from this group and two subjects from Group C not previously taken.

Agriculture IV is part of an integrated series with Agriculture II and III in Groups B and C, and is designed to give the student an understanding of the structure of world and Australian agriculture.

## 2.3. Honours Degree

The Honours degree requires one year of full-time work beyond the Ordinary degree, making five years in all. The work comprises advanced study, together with a research project. A candidate for Honours must first:

- (i) have qualified for the Ordinary degree of B.Ag.Sc.; and
- (ii) have completed all the Ordinary degree courses in the subject in which he wishes to take Honours, together with such other pre-requisite subjects (if any) as may be prescribed in the Honours syllabus; and
- (iii) obtain the approval of the Chairman of the Department concerned.

The disciplines in which the Honours degree may be obtained are as follows:

Agricultural Biochemistry	Genetics
Agronomy	Horticultural Physiology
Animal Physiology and Production	Plant Pathology
Biometry	Plant Physiology
Entomology	Soil Science

An Honours degree is the normal pre-requisite for students who wish subsequently to proceed to a Master's or Ph.D. degree and to responsible positions in tertiary education and research institutions. The Faculty of Agricultural Science recommends that every student capable of proceeding to Honours should aim to do so.

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\*Farm Management will be offered in even years. Farm Prices and Policy, and Economics of Natural Resource Use, will be offered in odd years.

### 3. SUBJECTS IN THE AGRICULTURAL SCIENCE COURSE

The choice of subjects during the whole four-year course depends largely upon the field in which a student may wish to specialise. The optional fourth-year or Group D subjects represent the major sciences underlying Agriculture and each follows on a similar subject in Group C, but takes the study to much greater depth. The present structure of the course allows a student to specialise by taking two of the Group D optional subjects, or to gain a broader coverage by taking one of the Group D optional subjects and two of the Group C optional subjects not previously taken.

An outline of the field covered in some of the Group C and each of the Group D optional subjects is set out below.

#### **Agricultural Biochemistry**

Agricultural Biochemistry deals with the fundamental chemistry and interactions of living matter which control growth, function and differentiation. Major topics include: the structure of viruses and their effect on the metabolic pathways of living cells; the detailed chemical and kinetic study of the metabolic pathways and control mechanisms involved in storage, production and utilisation of energy in living cells and in the synthesis of cellular constituents; the role of the nucleic acids in biochemical genetics and in cell growth, division and differentiation.

#### **Agronomy**

Agronomy is the study of the growth of crops and pastures in the field. The course deals with the origin and botany of crop plants, their growth and nutrition, the relationship of plants to the soil and climate, and to management practices in crop and pasture production.

#### **Animal Physiology and Production**

Animal Physiology and Production deals with the anatomy, histology, chemical composition and physiological organisation of the main types of animals involved in agriculture. Considerable attention is given to growth, reproduction, lactation and cellular functions. Animal Production is studied in terms of the role of pasture quality in animal nutrition and growth.

#### **Biometry and Mathematical Statistics**

Biometry and Mathematical Statistics are concerned with the mathematical and statistical aspects of Agricultural Science, including the use of computers. **Mathematical Statistics** provides the basic mathematical and practical training for those wishing to specialise either as biometricians or in the mathematical aspects of other fields of Agricultural Science. **Biometry** provides a background in statistical methods for agricultural experimentation.

#### **Economics III (Agricultural Science)**

Economics III (Agricultural Science) comprises Economics IIIA and one half-subject from the following list:

Agricultural Economics IIIH, Econometrics IIIH, Economics of Labour IIIH, Managerial Economics IIIH, Public Finance IIIH.

#### **Entomology**

Entomology is the study of insects and the course relates to insects in agriculture. An introductory course deals with some physiological processes in insects, and with insects as pests and as useful animals. The advanced course covers in greater depth insect physiology, the kinds of insects and changes in their numbers.

## **Economics of Natural Resource Use**

Economics of Natural Resource Use deals with methods of project evaluation, special problems associated with public projects and the application of benefit-cost analysis to public agricultural projects in Australia. It is also concerned with resource conservation and the economics of common property resources, externalities and the theory of public goods as applied to environmental problems, and an analysis of the effect on efficiency of resource use of various methods of combating environmental problems.

## **Farm Prices and Policy**

Farm Prices and Policy deals with an analysis of the determinants of prices for agricultural products, and various methods of forecasting agricultural prices. It also deals with the objectives of agricultural policy, and an analysis of agricultural policy measures in Australia and some overseas countries.

## **Farm Management**

Farm Management deals with the nature of farm businesses, theories of farm management, farmers' goals and an analysis of farm investment. It deals also with 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.

## **Genetics**

Genetics deals with the study of inheritance in all types of living organisms. Attention is given to the application of the principles of genetics to physiology and biochemistry, plant and animal breeding and population theory.

## **Horticultural Science**

Horticultural Science deals with all aspects of the physiology of vegetative and reproductive growth of fruit and vegetable crops. Methods used and problems encountered in commercial aspects of these crops are also studied.

## **Plant Breeding and Crop Genetics**

Plant Breeding and Crop Genetics deals with the production of better varieties of crop plants and pasture plants. Many of the great advances in agriculture have been due to the development of superior varieties by plant breeders and the course deals with the breeding methods used to achieve increased yield and better quality in agricultural products.

## **Plant Pathology**

Plant Pathology deals with the causes, effects and control of disease in plants. The micro-organisms (bacteria, fungi, viruses and nematodes) which cause plant disease are studied in some detail, as are the principles underlying infection processes, disease spread and control.

## **Soil Science**

Soil Science is concerned with the factors which determine the ability of soil to support plant growth, and the reasons for the differences between soils and the factors governing the distribution of different soil types.

# Architecture

## 1. INTRODUCTION

### 1.1. General

The Faculty of Architecture and Planning provides courses at both undergraduate and postgraduate levels.

Undergraduate studies are divided into two degrees, the Bachelor of Architectural Studies (B.Arch.St.) and the Bachelor of Architecture (B.Arch.).

### 1.2. Architectural Studies

Architectural Studies (B.Arch.St.) is a 3-year course for all those interested in the built environment, including intending architects. Careers of an administrative kind in architecture, construction, environment, and planning are expected to be accessible to holders of this degree. It is a basic tertiary education, comparable with a B.A. or a B.Sc., and there is some interchange of subjects with those degrees available to the student. Its two 'core' subjects are Design Studies and Building Studies (the latter being the science/technology area related to design and construction).

### 1.3. Architecture

Architecture (B.Arch.) is a 3-year course which can be entered only after at least two years of previous suitable study (e.g. in B.Arch.St.). There are limitations upon numbers admitted, so not all B.Arch.St. students can expect to be offered places. Applications for admission to this course will be considered from holders of suitable degrees in faculties other than Architecture.

The B.Arch. course is essentially a professional education for architects. Its central subject is Architectural Design and its activities are largely studio based. The practising architect is a professional consultant or a government officer involved with the planning and design of building structures of all kinds (and of urban areas as well), and with the supervision of their construction.

The new B.Arch. course is being monitored by the Royal Australian Institute of Architects, the Commonwealth Association of Architects and the South Australian Architects' Board, with the expectation that it will be recognised, and that B.Arch. graduates will after suitable practical experience be admitted to membership by those bodies.

### 1.4. Postgraduate studies

At the postgraduate level, students may proceed by advanced study and research to either the degree of Master of Architecture (M.Arch.) or the degree of Doctor of Philosophy (Ph.D.).

The degree of Master of Urban and Regional Planning (M.U.R.P.) has been transferred from the Faculty to a separate Board of Studies in the University, but it is now in abeyance for financial reasons.

## 2. DEGREE OF BACHELOR OF ARCHITECTURAL STUDIES

### 2.1. General

The Ordinary degree consists of full-time study normally extending over three years. An additional, fourth year leads to the Honours degree.

The candidate must complete a total of four first-year subjects, three second-year subjects and two third-year subjects. Part-time candidates should note that enrolment for at least one 'core' or compulsory subject in each year of the course is required. A candidate who ceases to be enrolled for at least one 'core' or compulsory subject will automatically cease to be enrolled for the other subjects.

## 2.2. Core subjects

In each of the three years there are two subjects which must be taken by all candidates for this degree: Design Studies and Building Studies, though in third year these are combined in one subject, and in second year the subject Building Studies is a half-subject.

## 2.3. Elective subjects

The subjects which are not the compulsory ones can be chosen from a range of available subjects, some are taught in the Department of Architecture, and some are made available by other Departments of the University. A few subjects are also available from other institutions, e.g. S.A. Institute of Technology and Flinders University.

## 2.4. Subjects offered for other faculties

The Faculty of Architecture offers any of the B.Arch.St. subjects to students of other faculties, and certain ones have been chosen by other faculties (and by S.A.I.T.) as allowable for credit towards their degrees. Students of other faculties should obtain further information from that faculty.

# 3. FIRST-YEAR ARCHITECTURAL STUDIES SUBJECTS

## Building Studies I (Compulsory 'core' subject)

The theme of this subject is the nature of buildings; scientific, constructional and structural aspects.

Following a two week introduction to the subject, entitled **Building Performance**, the following topics are covered over the three terms:

**Environment and buildings:** The building as shelter and filter in response to environmental circumstances; climatic zones and pre-literate shelters. Environmental factors; solar radiation, sunlight and daylight, wind, rain and damp, intrusions such as noise. Performance criteria. Units of measurement. Temperature measurement and analysis.

**The building industry:** The building industry in Australia, its role in national economy, the processes that produce buildings; the role of owner, designer, buildings and manufacturers; communications within the industry—drawings, specifications, trade literature.

**Production of buildings: events, processes, costs:** Order of work on the site, and associated builders' plant. Building systems. Factory production of component parts, and the involvement of standardisation—in components, materials, fittings and equipment. Characteristic times taken and distribution of costs.

**Building structures:** The nature, function and form of structures. Some historical developments illustrating the influence of materials and skills. Loads on buildings and other urban structures. Equilibrium of forces, resultants and reactions at supports. Centroid, centres of gravity and pressures. Materials and their behaviour under load; stress and strain. Failure and instability. Deflection of simple trusses under load. Structural forms and actions. Determinacy and its effects. Failure and limit states. Foundations. Tutorials in structures will illustrate material in lectures and develop skills in numerical and graphical calculations. Practicals will demonstrate conditions for equilibrium of forces and the behaviour of members in tension and compression. Several projects requiring the writing and illustrating of reports will be included.

## Design Studies I (Compulsory 'core' subject)

The nature of Design: development of an appreciation of both the design process and its results in terms of a model relating the factors inherent in design; its physical and semantic purposes (*ends*), seen in their *contexts* (i.e. considering both physical and semantic implications of users and environments), and the material and technological *means* available for their realisation.

Architectural Design considered in relation to other acts of design as varied as landscape, industrial, engineering and graphic design, music, theatre, choreography, etc.

Design compared and contrasted with art, craft and invention, to explore the ways in which Design is distinguishable from the others.

Examination of certain problem notions well known to designers: e.g. the notion of functionalism; the apparent conflict between the utilitarian and the semantic; the relationships between art, craft and Design (the Bauhaus, etc); the notions of 'good' and 'bad' Design.

### **History and Theories of Architecture I (Elective subject)**

The theme of this subject is Australian, and European Architecture of the Australian period (c.1750—present day).

The course consists of studies in history related to architecture of the nineteenth and twentieth centuries with emphasis upon theories concerning the nature of architecture. Australian architecture will be the subject of one portion of the course.

### **Art History and Theories (Elective subject)**

The theme of this subject is visual arts in the twentieth century.

The course introduces students to some of the leading ideas and manifestations of art throughout this century. The term 'visual art' is broadly understood as including film, photography, graphics, posters, performance and the arts of process and idea as well as painting, sculpture and architecture (although architecture is chiefly dealt with in another subject).

### **Visual Communication (Elective subject)**

The course is planned to increase the *visual* literacy of students through the study of: (1) The nature of vision and perception; (2) Interpretation of visual information; (3) The characteristics of visual images and (4) The transmission of visual images.

The course consists of 2 hour lecture sessions weekly and, in the third term only, 3-hour tutorial sessions weekly.

In addition to essays, experiments and projects are undertaken to study the effectiveness and uses of visual communications. Topics are selected to suit both the analytically and also the creatively minded students.

### **Other elective first-year subjects**

Other elective first-year subjects may be chosen from a wide range of subjects in Arts, Mathematical Sciences, Science, etc. The full range of subjects made available by other faculties and institutions for Architectural Studies students to choose from is published in Volume II of the Calendar (Details of Courses).

Note that at least **one** of the two elective subjects in first year **must** be taken outside the Department of Architecture.

## **4. OTHER INFORMATION**

### **4.1 Expenses**

New Architectural Studies students will be required to purchase some drawing equipment, but they are advised to consult members of the staff of the Department of Architecture before doing so. They will also be required to make purchases of drawing paper throughout their course.

### **4.2 Student memberships**

The Architectural Students' Society arranges meetings, conventions and socials throughout the year. It is strongly recommended that all students join the Society and that they join also the Royal Australian Institute of Architects as student members.



# Arts

## 1. INTRODUCTION

At the undergraduate level the Faculty of Arts provides courses leading to both the Ordinary degree and the Honours degree of Bachelor of Arts (B.A.). At the postgraduate level are courses leading to the degree of Master of Arts (M.A.), the Diploma in Applied Psychology (Dip.App.Psych.), the Diploma in Education (Dip.Ed.), the degree of Bachelor of Education (B.Ed.), and the degree of Master of Education (M.Ed.). In addition, suitably qualified persons may proceed by full-time (or in certain circumstances half-time) work to the degree of Doctor of Philosophy (Ph.D.).

The degree of Doctor of Letters (D.Litt.) may be awarded to a graduate of the University who, through publications, has made an original, substantial and scholarly contribution to some branch of letters.

## 2. DEGREE OF BACHELOR OF ARTS

### 2.1. General

The course for the Ordinary degree of B.A. extends over three years of full-time study or the equivalent, while the course for the Honours degree requires one year of full-time work beyond the Ordinary degree.

The Arts course involves the study of subjects chosen from a wide range of disciplines often loosely referred to as the Languages, the Humanities and the Social Sciences. A brief description of the subjects for the Ordinary degree is given in section 4 on pages 41 to 47.

### 2.2. Ordinary Degree

The Ordinary degree requires passes in nine subjects, of which four will normally be taken in the first year, three in the second and two in the third.

Students have considerable freedom in choosing their subjects. However, the schedules are designed to ensure both breadth and depth of study.

In general an approved degree course shall include:

- (i) not more than four specified first-year subjects;
- (ii) at least two third-year subjects;
- (iii) not more than four Science subjects (a Science subject is not compulsory).

### 2.3. Honours Degree

An Honours degree may be obtained in one of the following subjects:

Anthropology	Greek (Classical) and/or Latin
Classical Studies	History
Economics	Music
English Language and Literature	Philosophy
French Language and Literature	Politics
Geography	Psychology
German Language and Literature	

or in a combination of subjects (or part of a subject together with work in the Centre for Asian Studies) approved by the Faculty. With Faculty approval, the Honours degree may be obtained in a subject taught in a department in another faculty.

The University recommends that every student capable of taking Honours should do so. The requirements of the Honours degree in each subject are set out in the syllabus. A candidate for Honours must first:

- (i) obtain the approval of the Head/Chairman of the Department concerned; and
- (ii) have qualified for the Ordinary degree of B.A.; and
- (iii) have completed such pre-requisite subjects (if any) as may be prescribed for the Honours degree in the syllabus.

### 3. COMBINED COURSES

#### **Arts-Law**

Students may apply for admission to both the Arts course and the Law course, and, if successful, may enrol concurrently in the courses for the degrees of B.A. and LL.B. Such students should, before enrolment, consult the Course Advisers for both courses. (See also section 4 on page 60.)

#### **Arts-Music**

Students may apply for admission to both the Arts course and the Music course and, if successful, may enrol concurrently in the courses for the degrees of B.A. and B.Mus. The combined course takes five years. Intending students should, before enrolment, consult the Course Advisers for both courses.

### 4. SUBJECTS AND HALF-SUBJECTS IN THE ARTS COURSE

#### **Anthropology**

##### **Anthropology I.**

Basic issues in Anthropology; cultural and social behaviour in Western and non-Western settings.

##### **Anthropology IIA, IIB, IIC, IIIA, IIIB, IIIC.**

The second and third-year subjects cover many topics in anthropology such as economic and political anthropology; religion, ritual and communication (the anthropology of symbolic action); change and control in modern societies; anthropology of tribal societies (ethnographic material studied will be mainly from Australia and Oceania); ideologies and inequality; social organisation and culture; cities and towns (the sociological character of the urban phenomenon mainly in modern non-Western settings but also in modern Western settings.)

#### **Architectural Studies**

Up to three first and second-year Architectural Studies subjects may be included in the Arts course. Subjects available include Design Studies I and II, History and Theories of Architecture I and II, Visual Communication, and Art History and Theories. For descriptions of these subjects see page 38.

#### **Asian Studies**

##### **Chinese I, II and III.**

A course in modern Chinese language (Mandarin). No previous knowledge of Chinese is required for Chinese I.

##### **Japanese I, IA, II, IIA and III.**

Courses in modern Japanese language. No previous knowledge of Japanese is required for Japanese IA. Japanese I is for students who have reached a satisfactory standard at matriculation level.

##### **Introduction to Japanese Literature I and II.**

The course will cover the full range of Japanese literature from the seventh to the present century. No particular knowledge of Japanese culture or language is assumed.

##### **Asian Civilisations: Past and Present II.**

##### **Asian Development III.**

These courses which are offered subject to the availability of staff are interdisciplinary subjects offering a survey of the history, politics and economics of the three major regions of Asia; East, South and South-East Asia.

## Classics

### **Greek I, IA, II, IIA, IIS, III and IIIS.**

### **Latin I, IA, II, IIA, IIS, III and IIIS.**

Courses in classical Greek or Latin language and literature.

For students who have no previous knowledge of classical Greek or Latin the Department provides degree level courses entitled Greek IA, and Latin IA, which are preparatory courses for classical Greek and Latin respectively.

### **Classical Studies I, II and III.**

The study of the literature and social and cultural background of the classical world of Greece and Rome. No knowledge of Greek or Latin is required since classical literature is studied in translation.

### **Classical Art and Archaeology II and III.**

A comprehensive survey of ancient art and an account of the history of archaeological discovery. (Roman Art and Archaeology is offered in even years and Greek Art and Archaeology in odd years.)

### **Ancient History II and III.**

These subjects deal with the political, social and cultural development of Greece (600-400 B.C.) or Rome (133 B.C.-180 A.D.). (Roman history is offered in odd years and Greek history in even years.)

## Computing Science

Candidates for the degree of Bachelor of Arts may include studies in computing science in their courses. A first-year half-subject Computing IH is offered and second- and third-year subjects are available. A description of computing science studies and a brief syllabus for Computing IH may be found on pages 63-64.

## Drama

### **Drama I and II.**

History and development of theatre arts, and theory and practice of drama.

## Economics

Arts students may take the following subjects and half-subjects in Economics: first-year subjects—Economics I, Economic History IH, Economic Institutions and Policy IH, Mathematical Economics IH, Mathematics for Economists IH, Accounting I; second-year subjects—Macroeconomics IIH, Microeconomics IIH, Mathematical Economics IIH, Economic History IIH(A), Economic History IIH(B), Economic Statistics II, Economic Statistics IIA; third-year subjects—Economics III (Arts), Economic Development Studies III.

The subject 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 subject Economics I.

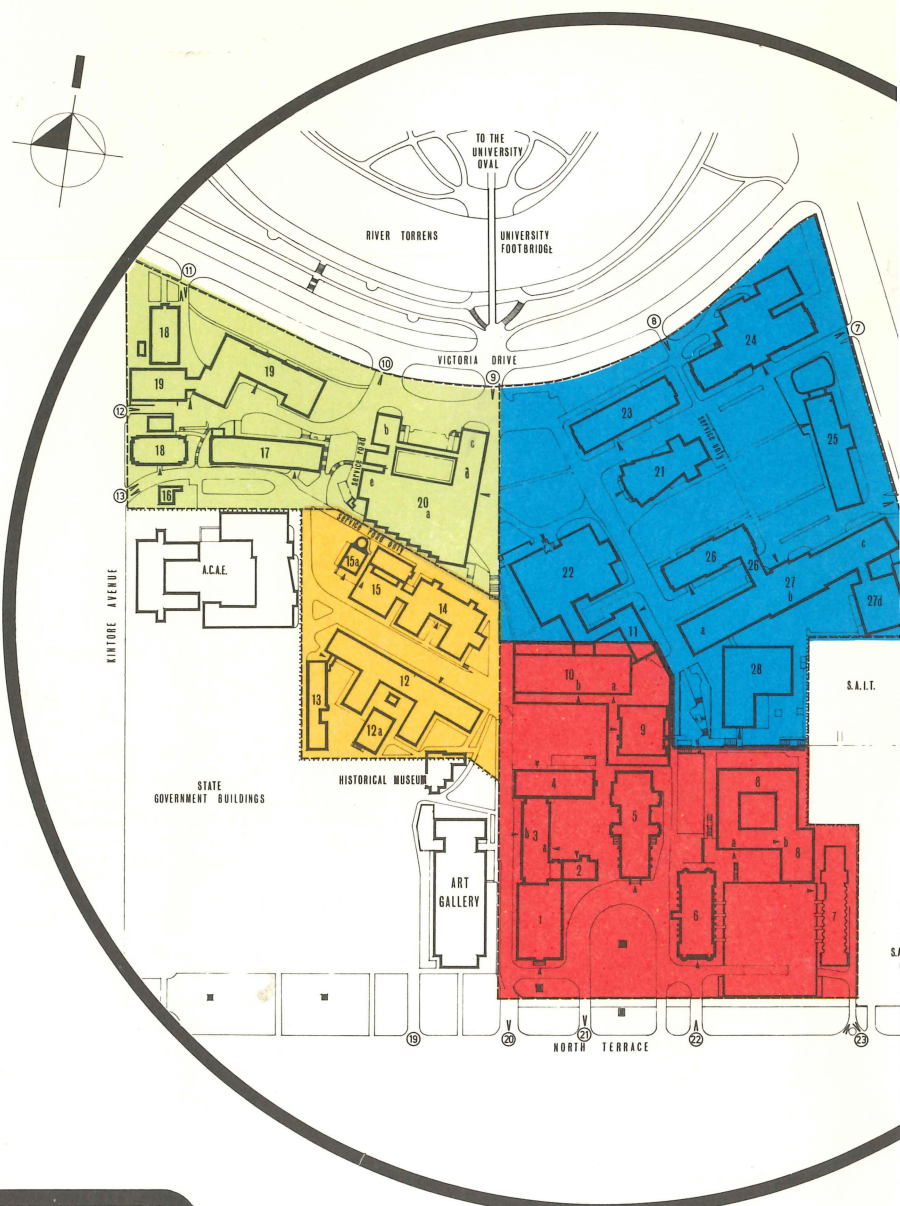
### **Social Economics I.**

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; an introduction to the process of development in developing countries.

A brief description of other first-year subjects and half-subjects may be found under the Faculty of Economics on pages 52-53.

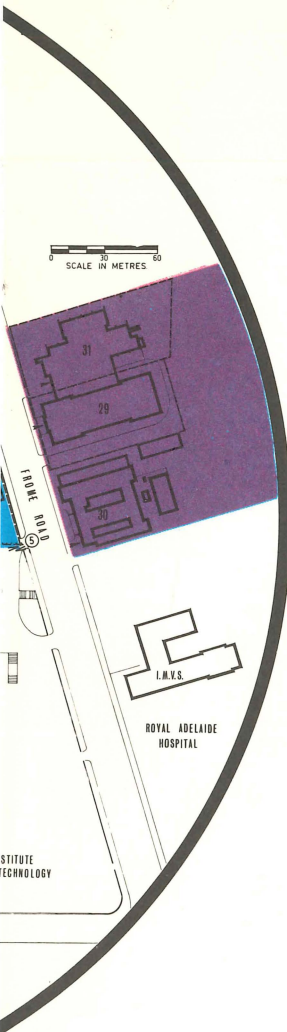
### **Economics III (Arts).**

Economics III (Arts) comprises Economics IIIA (which includes studies in microeconomics, macroeconomics and international economics) plus one half-subject from the following list—Agricultural Economics IIIH, Econometrics IIIH, Economic History IIIH, Economic Theory IIIH, Economics of Labour IIIH, Managerial Economics IIIH, Public Finance IIIH.



**STUDENT SERVICES**

- REGISTRAR, FACULTY SECRETARIES, STUDENT RECORDS & EXAMINATIONS  
Mitchell Bldg. First Floor ..... 1
- CAREERS ADVISORY SERVICE  
Mitchell Bldg Grd. Floor ..... 1
- COUNSELLING SERVICE  
University Union,  
George Murray Bldg.  
First Floor ..... 20c
- HEALTH SERVICE  
Horace Lamb Bldg.  
Ground Floor ..... 11
- WELFARE SERVICE  
University Union,



**Mitchell Building** ..... 1  
Faculty/Administration.  
Parking Office.

**Old Classics Wing** ..... 2  
Executive Secretariat.  
Buildings Office.

**Kenneth Wills Building** ..... 3  
a. Administration.  
Office of  
Vice-Chancellor.  
Registrar.  
a. Student Records  
& Examinations.  
Bursar.  
b. Adult Education.  
b. Post Office.

**Hughes Building** ..... 4  
Advisory Centre for  
University Education.  
Philosophy.  
Bank of Adelaide.  
Multilith Centre.  
Music.  
Psychology.  
W.E.A.

**Elder Conservatorium** ..... 5

**Bonython Hall** ..... 6

**Ligertwood Building** ..... 7  
Classics.  
Law.  
Philosophy.

**Napier Building** ..... 8  
a. Commerce.  
a. Economics.  
b. Education.  
b. English.  
b. French.  
b. Geography.  
b. German.  
b. History.  
b. Politics.

**University Club** ..... 9

**Library Complex** ..... 10  
a. Architecture.  
a. Computing Centre.  
a. Computing Science.  
a. Health Service.  
a. Radio VL5UV.  
b. Research Library.  
Levels 1, 2, 3 & 4.

**Physics Building** ..... 12  
Physics.  
a. Physics & Maintenance  
Workshop.

**Oliphant Wing** ..... 13  
Physics.  
Mathematical Physics.  
Mawson Institute.  
Asian Studies.  
Environmental Studies.

**Darling Building** ..... 14  
Biochemistry.

**Bragg Laboratories** ..... 15  
Physics.

**Observatory** ..... 15a  
Physics.

**Services Supt.'s Residence** ... 16

**Organic Chemistry** ..... 17

**C.S.I.R.O.** ..... 18

**Johnson Laboratories** ..... 19  
Physical and Inorganic  
Chemistry.

**University Union** ..... 20  
a. Refectory and  
Amenities.  
b. Lady Symon Building.  
c. George Murray Building.  
d. Union Bookshop.  
e. Little Theatre.

**Horace Lamb Building** ..... 11  
Architecture.  
Mathematics.  
Library.

**Union Hall** ..... 21

**Barr Smith Library** ..... 22

**Benham Laboratories** ..... 23  
Botany.

**Mawson Laboratories** ..... 24  
Economic Geology.  
Geology.

**R. A. Fisher Laboratories** ..... 25  
Biology.  
Genetics.  
Zoology.

**Mathematics Building** ..... 26  
Mathematics.  
Statistics.

**Engineering Building** ..... 27  
a. Civil.  
b. Electrical.  
c. Chemical.  
d. Engineering Depts.

**Mech. Engineering Building** .. 28

**Medical School (South Wing)** 29  
Anatomy & Histology.  
Microbiology & Immunology.  
Pathology.  
Physiology & Pharmacology.  
Oral Biology.  
Anthropology.  
Road Accident Research  
Unit.

**Medical Sciences  
(North Wing)** ..... 31  
Anatomy.  
Pathology.  
Physiology & Pharmacology.  
Electron Microscopy.  
Faculty Administration.

**Dental School** ..... 30  
Dental Health.  
Oral Pathology and  
Oral Surgery.  
Restorative Dentistry.

THE FOLLOWING ARE AT NORTH ADELAIDE

**Mark Mitchell Centre**  
Physical Education Administration.  
Gymnasium.  
Squash Courts.

**Child Care Centre**

**Aquinas College**

**Lincoln College**

Mackinnon Parade

Mackinnon Parade

Palmer Place

Brougham Place

DEPARTMENTS RELOCATED

Anthropology—Moved to the  
Medical School.

Oral Biology—Moved to the  
Medical School.

Philosophy—Moved to the

### **Economic Development Studies III.**

Economic Development Studies III is available for Arts students and comprises Economic Development III and one of the half-subjects Economic History IIIH *or* Public Finance IIIH *or* Agricultural Economics IIIH, provided that a part-subject may not be counted towards both Economics III (Arts) and Economic Development Studies III.

## **English Language and Literature**

### **English II, IIB, IIC, IIIA, IIIB**

Each of these subjects consists of one option chosen from topics such as:

- Major English Texts
- Old and Middle English
- American Studies
- Australian Literary Studies
- Linguistics
- Modern Literature
- New Literatures in English

### **Advanced Old and Middle English**

Medieval culture and institutions; old and Middle English language and texts. (A third year subject).

## **French Language and Literature**

### **French IA.**

A subject for students with little or no knowledge of French. In addition to lectures on language there will be lectures on life, culture, literature and thought of modern France. Students who reach a satisfactory standard may continue the study of French in second and third year.

### **French I.**

A general course, designed both as an introduction for those students who intend to go further in the study of France, its language and its literature, and as a short but comprehensive survey for those students whose French studies will be confined to one year. A knowledge of matriculation French is assumed.

Lectures are given on the French civilisation, treating in outline the geography of France and its history, institutions and literature. French literary texts are set for reading, and for translation into English. The pronunciation of French is studied in a course of phonetics and by means of regular exercises in a language laboratory. The French Club exists to present monthly programmes in French, organised by a student committee.

### **French II, IIA and III.**

Each of these subjects includes a language component consisting of training in the speaking and writing of French (including translation from English into French), and a choice of language, literature and civilisation options.

### **French IIB and IIIB.**

Each of these subjects consists of a choice of language, literature and civilisation options.

## **Geography**

### **Geography I.**

Only one full subject in Geography is offered at first-year level. It consists of two half-subjects, Physical Geography IH (taught in the first half of the year) and Human Geography IH (second half of the year).

### **Physical Geography IH (half-subject).**

The study, in an Australian context, of earth surface patterns and processes (geomorphic, climatic and biotic) influenced by and affecting humans.

**Human Geography IH (half-subject).**

The nature and distribution of social well-being in western and other cultures; poverty, crime, housing, health, minority groups.

**Geography IIA, IIB and IIIH.**

Geography IIA consists of two optional courses, and Geography IIB two of the optional courses not presented for Geography IIA. Options include Biogeography; Economic Geography; Geomorphology; Social Geography. Geography IIIH is a half-subject consisting of one of the optional courses.

**Geography IIIA, IIIB and IIIH.**

Geography IIIA consists of two optional courses and one techniques course and Geography IIIB any other two optional courses and one techniques course not presented for Geography IIIA. The optional courses include Biogeography; Cartography; Cultural Geography; Economic Geography; Geomorphology; Rural Geography; Urban Geography. Techniques courses include Remote Sensing and Social Survey.

Geography IIIH is a half-subject comprising one optional course and one techniques course.

## **German Language and Literature**

The Department offers two first-year subjects: German I, for students who have studied German to at least fourth-year secondary school level; and German IA, for students with little or no knowledge of German. Students who reach a satisfactory standard in German IA may continue the study of German in second and third year.

All students must pass an oral test at the end of each year. Practice in conversation, pronunciation, intonation, etc., is also given in regular tutorial classes; and students are encouraged to attend the meetings (conducted in German) of the German Club and of the Goethe Society.

**German I, IA, II, IIA, IIB, III and IIIB.**

Each of these subjects comprises language studies; studies of German life, culture, and literature; and translation, prose composition and essay writing.

## **History**

There are six subjects offered in History but no more than five may be counted towards the B.A. degree.

**History IA and IB.**

One of the following options.

European history.

Old Societies and New States: The Revolutionary Transformation of Asia, Africa and the Pacific, 1700 to the present.

Australian history.

**History IIA and IIB.**

Each subject consists of one option chosen from topics such as:

The rise of China and Japan; conflict and crisis in modern east Asia.

Russia in crisis and revolution: from Peter the Great to the second World War. Bismarck to Hitler.

Australia: Outpost of Empire in the Antipodes.

Comparative history of the family

France 1850-1918

War and Peace: Britain, Germany and the Great War, 1890's-1930's

Fascism and National Socialism

African History

Everyman in pre-industrial Europe (1300-1700)

Pacific History

The United States: Settlements to civil war.

Nationalism and revolution in south-east Asia.

### **History IIIA and IIIB.**

Same options as second year but at greater depth. An option taken in the second year is not available in the third year.

## **Mathematics**

Mathematics may be studied as a major subject for either the B.Sc. or the B.A. degree. Those wishing to specialise in mathematics should bear in mind the possibility of proceeding to the degree of Bachelor of Science in Mathematical Sciences.

After the first year, a student may proceed in one or more than one of the following branches: Pure Mathematics, Applied Mathematics, Mathematical Statistics, Computing Science.

A description of the nature of university studies in mathematics and brief syllabuses for first-year mathematics subjects may be found on pages 63-64.

## **Music**

### **Music I.**

For students who have some basic musical knowledge.

Music theory; music in Western Society; introduction to ethnomusicology.

### **Music IA.**

A terminal course for students with little or no previous knowledge of music. It is similar to Music I but not as advanced in the study of music theory.

### **Music II and III.**

Music theory; elective studies in electronic music, ethnomusicology, musicology, music in education; and two projects.

### **Music IIIS.**

For prospective honours students only. Preliminary Honours work in ethnomusicology, musicology, music in education and one project.

## **Philosophy**

This subject has been described as "an endeavour to think clearly about confusing questions".

In first year students may take Philosophy IH(A) *and/or* either of Philosophy IH(B) *or* Logic IH.

### **Logic IH.**

The nature of reasoning; an introduction to modern formal logic.

### **Philosophy IH(A).**

Ethics; knowledge and mind; concepts of freedom.

### **Philosophy IH(B).**

The nature of reasoning (the first term is identical with Logic IH); the state and the individual; the existence of God.

### **Philosophy II, IIIA and IIIB.**

General philosophy leading on from first-year philosophy, with a choice of options including logic, ethics, political philosophy, causation, ancient philosophy, metaphysics, philosophy of religion.

### **Logic II and III.**

The three Logic options which are available in the second and third year Philosophy subjects may instead be studied as either Logic II or (with extra work) Logic III.

### **Philosophy IIIS.**

A half-subject available only to students taking the half-subject Social Biology IIIS.



## Physics

### Physics, Man and Society IH.

This half-subject is intended primarily for students of the humanities and social sciences. The course is non-mathematical in character and 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.

Only *one* of Physics I and Physics, Man and Society IH may be counted towards the degree of B.A.

## Politics

### Politics IA and IB.

Each subject consists of one option chosen from topics such as:

- Politics and political economy.
- History of political thought.
- Australian politics.
- Political development in Australia.
- Political sociology.

### Politics IIA and IIB.

Each subject consists of one option chosen from topics such as:

- Chinese politics.
- Contemporary social theory.
- History of political thought.
- Australian politics.
- Marxism-Leninism.
- Political development in Australia.
- Political sociology.
- Public policy in Australia.
- Sociology of power.
- International politics.
- Third world political economy.
- Problems of political philosophy

### Politics IIIA and IIIB.

One of nine similar options. An option taken in the second year is not available in the third year.

### Political Sociology IIIB.

A half-subject available only to students taking the half-subject Social Biology IIIB.

## Psychology

Psychology may be studied as a major subject for either the B.A. or the B.Sc. degree.

A description of the nature of psychology, and brief syllabuses, may be found on pages 74 and 76.

## Science subjects

Science subjects may be studied for the Arts degree. Four Science subjects may be counted for the B.A.—three at first and second-year level and one at third-year level. However, a Science subject is not compulsory. The first-year Science subjects and half-subjects available for the Arts degree are Biology I, Chemistry I, Geology I, Physics I, Astronomy IH, Botany IH, and Genetics and Human Variation IH.

A description of Science subjects may be found on pages 71-76.

## Social Biology

### Social Biology IIIB.

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. Although only available as a third-year half-subject, students are advised to plan ahead; thus they should consider including in their

first-year the two half-subjects Genetics and Human Variation IH and Statistics IH and should also take at least one of Anthropology I, Psychology I or the equivalent of a first-year subject in Geography.

## **Statistics**

Statistics may be studied as a major subject for either the B.Sc. or the B.A. degree, the subjects Mathematical Statistics II and III following Mathematics I. A first-year half-subject, Statistics IH is also available.

A description of studies in Statistics and a brief syllabus for Statistics IH may be found on page 64.

# Dentistry

## 1. INTRODUCTION

The course for the degree of Bachelor of Dental Surgery (B.D.S.) extends over five years of full-time study after matriculation. The degree is recognised for registration by all Australian Dental Registration Boards and by the General Dental Council of the United Kingdom. There is no formal agreement, however, with countries outside the British Commonwealth for recognition and registration.

A Bachelor of Dental Surgery may apply to become a candidate for the degree of Master of Dental Surgery. Normally a candidate should have completed the Honours degree of Bachelor of Science in Dentistry at a satisfactory standard, but others may be accepted provisionally subject to passing a qualifying examination. Persons who hold an Honours or Master's degree, or who have passed a qualifying examination, may apply to be registered as candidates for the degree of Doctor of Philosophy. Appropriate students may undertake the course for the Honours degree of Bachelor of Science in Dentistry upon successful completion of the third or later year of the B.D.S. degree. Such students may complete their B.D.S. course or seek admission as candidates for the degree of Doctor of Philosophy. In addition the degree of Doctor of Dental Science is offered by the University, being awarded for an original and substantial contribution to knowledge in some branch of Dental Science.

## 2. DEGREE OF BACHELOR OF DENTAL SURGERY

### 2.1. General

The course is designed to provide a sound education, together with the necessary background and skills for the clinical practice of dentistry.

In broad principles, the course is similar to that undertaken in medicine. It prepares the graduate to enter a profession which is one of the health sciences and which has as its main aims the prevention of dental disease and the correction of dental deformities. Studies in the physical, biological and behavioural sciences are followed by training in general and dental aspects of disease leading finally to clinical instruction in prevention, diagnosis and treatment. Although the majority of graduates will enter private practice the foundation is also laid for specialist practice or for entry to academic life, which includes research into dental and associated problems.

### 2.2. Course for the degree

The course for the degree of B.D.S. extends over five years of full-time study; it cannot be taken on a part-time basis. Students are required to enrol each year for all necessary subjects and withdrawal from only a part of a year's work is not permitted. Students who wish to intermit their course for any reason whatsoever must obtain prior Faculty approval for leave of absence.

The subjects of the first year are intended to provide a basis for subsequent work in the biomedical and clinical sciences. They include Biology ID, which is similar to the standard first-year science subject; Chemistry ID which is also similar to the standard science subject but includes certain material and emphasises certain aspects of particular relevance to medical science; Behavioural Science which comprises a selection of topics from psychology and related disciplines; Introductory Anatomy and Histology which comprises gross anatomy and general histology; and two half-subjects Medical Physics and Genetics IH (M). A recent trend is to introduce the student to an appreciation of patient requirements at the outset of the course, and a series of lectures and clinical sessions entitled "An Introduction to Dentistry—Dental Care I" is given during terms 1 and 2 and the first component of the second-year course in Oral Anatomy is commenced in term 3.

In the second year, candidates continue their studies in Oral Anatomy and in Anatomy and Histology and undertake further studies in the biomedical sciences in Biochemistry and Physiology—with special reference to the requirements of the dental course; at the same time they attend demonstrations and practical work, at the Dental School, in Dental Materials.

At the beginning of the third year, candidates attend an integrated course of pre-clinical instruction which emphasises the relation of the basic sciences to clinical work. The subjects of instruction during the year are: Human Physiology, General Pathology, Microbiology, Oral Pathology, Pharmacology, Conservative Dentistry, Prosthetic Dentistry. Candidates also attend at the Dental Department of the Royal Adelaide Hospital for clinical instruction.

During the fourth and fifth years, medical aspects are continued with instruction and general hospital tutorials in General Medicine and Surgery. Dental instruction continues in Pharmacology and Therapeutics, Oral Pathology, Oral Surgery and Anaesthesia, Oral Medicine, Oral Diagnosis, Periodontics, Orthodontics, Principles of Dental Practice, Children's Dentistry, and Conservative and Prosthetic Dentistry and Pain Control.

Lectures are also given in Advanced Oral Biology, Dental Radiology, and Oral Diagnosis.

Clinical work occupies much of the student's time in the fourth and fifth years.

### **3. FIRST-YEAR SUBJECTS—BRIEF DESCRIPTION**

#### **Chemistry ID**

The subject is designed to meet the specific needs of students enrolled in the Faculty of Dentistry. It differs from Chemistry I in that there is a larger component of Organic Chemistry and principles are illustrated with biological and medical examples. A brief description of Chemistry I is given under Faculty of Science on page 75.

#### **Biology ID**

This subject 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.

#### **Behavioural Science**

This subject deals with scientific approaches to the understanding of human behaviour in health and disease. Biological, psychological, sociological, anthropological and developmental aspects will be considered.

#### **Genetics IH(M)**

This half-subject is designed to introduce the principles of human genetics as a means of understanding individual variation which is part of the background of the practice of medicine and dentistry.

#### **Introductory Anatomy and Histology**

This subject covers introductory gross anatomy, general histology and cytology.

#### **Medical Physics**

This is a course in bio-physics for medical and dental students. It seeks to show that an application of basic physical laws and theories to physiological and biological systems can help in understanding their structure and function.

#### **Introduction to Dentistry—Dental Care I**

The aim of this course is to give students an initial appreciation of the nature of dental practice, and an opportunity to become aware of their own levels of dental health and the factors affecting this. This will lead to a discussion of the nature of the remainder of the course to show how training will enable students to become competent to provide dental care to individual patients and to become involved in community dental care programmes.

#### **Oral Anatomy I**

This course covers the anatomy of the hard and soft tissues of the oral cavity. The course is closely integrated with Dental Care I.

#### **4. HONOURS DEGREE OF BACHELOR OF SCIENCE IN DENTISTRY**

A graduate or an undergraduate who has completed appropriate pre-requisites and who is regarded as a suitable candidate for advanced work may be admitted to the course for the Honours degree of Bachelor of Science in Dentistry. The course extends over one academic year devoted to a programme of study in one of the following fields: Anatomy, Biochemistry, Dental Health, Genetics, Histology, Materials Science, Microbiology, Oral Biology, Oral Pathology, Oral Surgery, Pathology, Pharmacology, Physiology, Restorative Dentistry.

Any able student and particularly a person who may wish to enter a research career or attempt postgraduate study should carefully consider the possibility of undertaking an Honours course.

#### **5. COST OF THE DENTAL COURSE**

In addition to living costs and any fees payable (see page 23) a student must allow for the cost of text-books (which at 1981 prices is about \$1,500 for the five-year course), and equipment costs.

Students in the third year of the dental course are required to pay to the Cashier, Royal Adelaide Hospital, a returnable deposit of \$20 in connection with the use of hospital equipment during the clinical years of the course.

# Economics

## 1. INTRODUCTION

At the undergraduate level the Faculty of Economics provides courses leading to both the Ordinary degree and the Honours degree of Bachelor of Economics (B.Ec.).

At the postgraduate level suitably qualified persons may work towards the degrees of Master of Economics (M.Ec.), Master of Business Management (M.B.M.), or Doctor of Philosophy (Ph.D.).

## 2. DEGREE OF BACHELOR OF ECONOMICS

**NOTE:** Certain changes which may be introduced in 1982 to the Bachelor of Economics course are currently under discussion. Further information will be published in Volume II of the Calendar (Details of Courses) in December, 1981.

### 2.1. General

The course for the Ordinary degree of B.Ec. extends over three years of full-time study, or the equivalent period of part-time study, while the course for the Honours degree requires four years. It is possible for students to complete the Ordinary degree by part-time study. The fourth year of Honours work is normally taken full-time but in special circumstances may be taken part-time. Every student capable of taking Honours is encouraged to do so.

For the first two years of full-time study, no distinction is made between an Ordinary and an Honours student.

It is helpful for at least one mathematics subject to have been studied to matriculation level. A half-subject, Mathematics for Economists IH, is designed for students who have not done any matriculation mathematics. Familiarity with mathematical concepts at this level will be assumed in second-year economics.

### 2.2. Ordinary Degree

A candidate for the Ordinary degree must pass in seven subjects and six half-subjects or the equivalent as follows:

#### First Year of full-time study

Economics I

Mathematical Economics IH *or* Mathematics for Economists IH and another half-subject from schedule I (*or* two other half-subjects *or* one full subject approved by the Dean).

Accounting I

Another subject *or* two half-subjects at first-year level or above from the range of Arts and Economics options.

#### Second Year of full-time study

Microeconomics IIH

Macroeconomics IIH

Economic Statistics II *or* IIA

Another subject or two half-subjects at second-year level or above from the range of Arts and Economics options.

#### Third Year of full-time study

Economics IIIA

Another subject or two half-subjects at third-year level from the range of Economics options.

Two third-year half-subjects *or* another subject above a first-year level from the range of Economics options or another third-year subject or two third-year half-subjects from the range of Arts options. (For a candidate admitted to preliminary honours work this subject shall be Economic Theory and another third-year Economics half-subject not taken above).

## 2.3 Combinations of Subjects

Students will notice that there are a number of choices in the course structure outlined above. Course Advisers give assistance to students in planning their individual course patterns. The range of Economics and Arts subjects and half-subjects available allow considerable flexibility, and course patterns may emphasise one or more of the following fields:

Quantitative methods.

Accounting and Commerce.

Economic History, Economic Development, Economic Geography and other social sciences.

Behavioural Science.

Economic policy and theory.

These directions of emphasis are suggestions only and are in no way binding upon the student. Many students will not want to concentrate their studies in one direction only and others may change their minds during the course of their studies.

### Quantitative methods

A field including Mathematical Economics IH, Mathematical Economics IIIH, Economic Statistics IIA, Econometrics IIIH, Mathematical Economics IIIH, and either one or both of Computerised Accounting and Systems IIIH and Management Decision Analysis IIIH.

### Accounting and Commerce

Relevant subjects are: Accounting I, Accounting II, Accounting III, Commercial Law IH, Commercial Law IIIH, Computerised Accounting and Systems IIIH, Managerial Economics IIIH, Marketing IIIH, Business Finance IIIH and Income Tax IIIH.

Students who complete the appropriate subjects can obtain professional accounting qualifications subject to the usual practical experience requirements. Students seeking these professional qualifications should consult a course adviser.

### Economic History and Development

The course pattern will include some or all of the following: Economic History IH, Economic Geography I, Economic History IIIH(A), Economic History IIIH(B), Economic Development III and Economic History IIIH.

### Economic Theory and Policy

Besides the core subjects shown on page 51, other relevant half-subjects offered include Economic Institutions and Policy IH, Agricultural Economics IIIH, Economics of Labour IIIH, Public Finance IIIH, and Economics of Antitrust and Regulation IIIH.

## 3. FIRST-YEAR SUBJECTS—BRIEF DESCRIPTION

Economics is a large subject, but it may be briefly described as being concerned with the growth and distribution of the national income, and with ways of using physical resources to achieve maximum results. Among the problems studied are the causes of poverty, methods of maintaining full employment and of avoiding inflation, the balance of payments, taxation, the monetary system, and the organisation of industry. Alfred Marshall, a famous English economist, once described economics as “a study of mankind in the ordinary business of life”.

### Economics I

This is the first course of the Economics major. (Students who wish to do a survey course in Economics and who do not anticipate undertaking more than one year of study in the subject are advised to enrol in Social Economics.) The first part of the course introduces the particular terminology of Economics. It then moves on to explain the determination of prices in different markets and the behaviour of firms and industries under competition and various degrees of monopoly. Finally the determination and distribution of the national income is considered within various frameworks of analysis.

## **Accounting I**

Accounting is basically concerned with measuring the performance and financial position of organisations. This involves interpreting and summarising the effects of many different transactions. Many practical and theoretical problems remain unresolved.

Accounting I is both a terminal course for students who do not expect to take any further accounting courses, and a basic course for those who expect to continue with accounting studies. The first term covers basic recording and reporting procedures; the second considers some of the more difficult areas of accounting and the third surveys the theoretical and conceptual bases of accounting.

## **Mathematics for Economists IH**

(This course is designed for students who have not taken Mathematics at Matriculation level.)

Introductory calculus, analysis and matrix algebra.

## **Mathematical Economics IH**

(A knowledge of Matriculation Mathematics IS is assumed.)

Calculus of several variables, integral calculus, matrix algebra, difference equations, linear programming and game theory.

## **4. DEGREE OF BACHELOR OF ARTS**

Economics I, Macroeconomics IIH, Microeconomics IIH, and Economics III (Arts) and Economic Development Studies III (which comprise combinations of appropriate third-year subjects and half-subjects) may be presented for the Ordinary degree of B.A. Accounting I, Mathematical Economics IH, Mathematics for Economists IH, Economic History IH, Economic Statistics II, Economic Statistics IIA, Economic History IIH(A) and Economic History IIH(B) are also available for B.A. students. Social Economics I is a one-year terminal course, available to B.A. students only, covering the basis of social welfare. Thus it is possible, in the Arts course, to combine the study of Economics with a wide range of subjects in the general areas of the languages, the humanities and the other social sciences.

## **5. DEGREE OF BACHELOR OF AGRICULTURAL SCIENCE**

Economics I, Macroeconomics IIH and Microeconomics IIH and a combination of appropriate third-year half-subjects may be presented as a sequence for the Ordinary degree of Bachelor of Agricultural Science.

## **6. DEGREE OF BACHELOR OF SCIENCE IN THE FACULTY OF MATHEMATICAL SCIENCES**

For this degree a student may take up to four subjects outside the Faculty of Mathematical Sciences. Thus a major sequence in economics or in accountancy or commerce may be taken in conjunction with work in mathematics, computing or statistics. Combinations of subjects from the Faculty of Economics in this degree might include Economics I, Macroeconomics IIH, Microeconomics IIH, and Economics III (Ma.Sc.); Accounting I could also be included. Alternatively a student who takes Accounting I and Economics I in first year can take Accounting II in second year and three commerce or accounting half-subjects in third year.

## **7. COMBINED COURSES—ECONOMICS-LAW**

Attention is drawn to the fact that students may now apply for admission concurrently to both the Law course and the Economics course, and, if successful, to undertake a combined course in Economics and Law. Such students should, before enrolment, consult the Course Advisers for both courses. (See also Section 4 on page 60.)



# Engineering

## 1. INTRODUCTION

Engineering is a profession based on the physical sciences and mathematics, and developed through a wide range of applied or engineering sciences to achieve specified objectives.

The art of synthesis or design to satisfy the scientific, technical, economic and human factors involved in meeting a specification is the factor differentiating engineering from science. At the research level, however, it is sometimes difficult to distinguish between the work of the engineer and the scientist.

The aim of engineering is to control and use natural forces and materials to meet the physical needs of mankind. Engineering is a dynamic art whose boundaries are continually being extended due to new basic discoveries and to new inventions and techniques. The establishment of criteria—what is required to serve human needs, and the study of complex implications—are of great importance.

Areas for creative development include materials, structures, equipment, machines, processes, power, communications, transport, public works, and so on.

The professional engineer is concerned with ideas and their realisation, from research to application. He pioneers new developments, and leads the way in technical innovation and organisation. He may direct large numbers of technical and other ancillary staff in governmental and industrial enterprises, and may plan the efficient utilisation of vast resources and systems.

Engineering degree courses seek to provide a sound basic education in appropriate scientific and mathematical disciplines; in a broad spectrum of applied or engineering sciences and in a narrower selection of these in depth; in the art and practice of design; and in the principles of economics, organisation and management. The emphasis is on logical analysis of engineering problems and creative design synthesis. In the later stages of courses student seminars and projects provide experience in the discussion and assessment of complex situations, in the defining of problem-areas for experimental and analytical study, and in the presentation of reports and theses.

## 2. COURSES OFFERED IN ENGINEERING

The Faculty of Engineering provides courses leading to the degree of Bachelor of Engineering (B.E.) in the following four basic branches of engineering: Chemical, Civil, Electrical and Mechanical.

At the postgraduate level suitably qualified persons may proceed to the degree of Master of Engineering Science, to the degree of Master of Applied Science or to the degree of Doctor of Philosophy, in any one of the major branches of engineering. Such post-graduate studies are increasingly necessary for those seeking to become specialists in their profession.

### Chemical Engineering

Chemical Engineering is concerned with the development and application of manufacturing processes in which chemical or certain physical changes of materials are involved. These processes may usually be resolved to a co-ordinated series of unit physical operations and chemical processes (e.g. distillation, evaporation, heat transfer, filtration, crushing, grinding etc.).

The design and operation of such a chemical process is complex and requires a thorough understanding of control theory, thermodynamics, and reaction kinetics, as well as of physical operations.

Corrosion is a major problem for the chemical engineer and its minimisation requires that he be well acquainted with the properties of traditional materials such as metals and their alloys, wood, cement and ceramics, and glass, in addition to modern materials such as plastics and the more recently developed metals, such as titanium.

Industries typical of those employing chemical engineers include petroleum and petrochemicals, pharmaceuticals, dye-stuffs, explosives, fertilisers, cement, sugar, glass, food and beverages, wood products, coal by-products, inorganic chemicals, mineral processing, and many more. A field in which chemical engineers are becoming ever more active is that of energy technology, including treatment of fossil fuels to reduce pollution, conversion of such fuels from solid to liquid or gaseous form, nuclear technology, and the utilisation of “income fuels”, particularly those derived directly from solar energy.

## Civil Engineering

Civil Engineering covers a wide range of activities which may, for convenience, be classified as follows:

- (a) **Structural Engineering.** The design of load-bearing structures of various kinds, e.g. large public or industrial buildings, bridges, jetties, dams, etc.
- (b) **Hydraulic Engineering.** The control of the flow of water and other liquids, e.g. in irrigation, water conservation, hydro-electric power production, the movement of water in pipes and channels, etc.
- (c) **Geotechnical Engineering.** The investigation of the engineering properties of soils and rocks, groundwater flow, stability analyses of slopes, foundations and tunnels.
- (d) **Transport Engineering.** The design and construction of roads, railways, docks and harbours.

## Electrical Engineering (including Electronic Engineering)

The Electrical Engineer is concerned with the applications of electricity in all its forms. These usually entail the transmission either of information in the form of electric signals, or of large amounts of electrical energy. He may be involved in the design or operation of electronic systems for communication networks or radio and television; the design and application of digital computing and instrumentation systems; the use and control of electrical energy in industrial processes; the design, construction or operation of power stations and their associated sub-stations and distribution networks; and in situations ranging from research and development to management and commercial engineering.

The Electrical Engineering department provides courses relevant to all these activities and in particular those required for the practice of electronic power control, computer and communication engineering. Many of the studies are of fundamental aspects which enable some of our graduates to contribute in further fields such as medicine, oceanology and acoustics.

## Mechanical Engineering

The Mechanical Engineer is concerned with the engineering sciences of the Mechanics of Fluids, Thermodynamics, Mechanism, Systems and Materials, and with their application over a wide range of activities. These include power generation by energy conversion from such sources as hydraulic, solar, chemical and nuclear fuels; power utilisation through an ever-increasing variety of machines and processes in home, office, farm, factory, mine, construction; and all forms of transport by sea, land, air and space. He may specialise in one of many areas such as industrial, acoustic, environmental, marine, aeronautical, agricultural or power engineering, and in any of these he may operate in research and development, design, production, commercial, organisation or management.

The branches of engineering overlap to some extent; and the various kinds of Engineer often work closely with each other (and with Applied Scientists also in research and development work). For instance, the Civil Engineer constructing a large reservoir will use pumping machinery designed by the Mechanical Engineer, containing materials resulting from the work of the Chemical Engineer, and controlled by electronic devices designed by the Electronic Engineer. Likewise any sophisticated transport vehicle for land, sea, air or space involves contributions from all major branches of engineering for its design, construction, operation and control.

### **3. DEGREE OF BACHELOR OF ENGINEERING**

#### **3.1. Ordinary Degree**

Each course for the Ordinary degree of Bachelor of Engineering requires the equivalent of four years of full-time study. The courses are not designed for part-time students.

All subjects require attendance at lectures. Engineering and Science subjects also require practical work, which may involve workshop or laboratory sessions in excess of three hours a week for each subject. Tutorials and field work in some subjects are also prescribed.

During the vacations of the first three years of the B.E. course a student must obtain a total of sixteen weeks' practical experience in work appropriate to the course he is following. Chemical Engineering students must spend at least eight weeks of the sixteen in an approved chemical factory or research establishment on plant operation, industrial research or development.

As part of the sixteen weeks' practical experience Electrical and Mechanical Engineering students must complete a course of Workshop Practice arranged by the Faculty; this will normally be taken in the second year of the course. The course will have an equivalent duration of one week for the purpose of assessing Practical Experience.

#### **3.2. Honours Degree**

The Honours degree is available in each of the four courses, Chemical, Civil, Electrical and Mechanical Engineering. All work for this degree is taken concurrently with the professional subjects of the final year of the Ordinary degree course, and includes additional lectures and examinations at an advanced level beyond the Ordinary degree requirements. The Honours classification is assessed on the student's overall performance. The Faculty encourages able students to undertake the Honours course.

#### **3.3. Combining the B.E. and B.Sc. Courses**

For students contemplating work in certain fields of Engineering research there are advantages in completing a Bachelor of Science degree in addition to the Bachelor of Engineering degree.

In Electrical Engineering the usual pattern is for students to complete the first three years of the B.E. course and then interrupt their course to spend a year to qualify for the B.Sc. degree. It is also possible for Chemical Engineering students to complete the requirements for the B.Sc. and B.E. degrees within a period of five years of full-time study. Students intending to complete both degrees should consult a Course Adviser for Engineering.

### **4. FIRST-YEAR SUBJECTS—BRIEF DESCRIPTION**

The first-year course in each of the four branches of Engineering comprises the subjects Mathematics I, Physics I, and Engineering IA or IB. Chemical and Electrical Engineering students must also take Chemistry I; Civil Engineering students must take either Geology IH(E) and one of the following subjects: Microeconomics IH, Macroeconomics IH, Human Geography IH, Physical Geography IH, Philosophy IH(A), Logic IH or Geology I; and Mechanical Engineering students must take either Chemistry I or Economics I or Psychology I.

## **Engineering IA and Engineering IB**

There are two first-year engineering subjects (Engineering IA and Engineering IB). The Engineering Mechanics and Engineering Drawing components are common to both. Chemical and Civil Engineering students will take Engineering IA which includes an Engineering Planning and Design component whilst Electrical and Mechanical Engineering students will take Engineering IB which includes an Introductory Electrical Engineering component.

## **Geology IH(E)**

This half-subject is intended for students who do not propose to continue with geology. It is concerned with the study of geological materials, structures and processes which are relevant to the making of engineering decisions.

## **Other First-year Subjects**

A brief description of the other subjects is given with the notes for the Faculty which teaches them. See also "Preparation for University Studies" on pages 20-22.

# Law

## 1. INTRODUCTION

The Faculty of Law provides an undergraduate course for the Ordinary degree of Bachelor of Laws (LL.B.). Students may also qualify for the Honours degree of Bachelor of Laws.

Suitably qualified students may proceed to the degree of Master of Legal Studies (M.L.S.) mainly by course work, and/or to the degrees of Master of Laws (LL.M.) or Doctor of Philosophy (Ph.D.) by presenting a thesis on a subject approved by the Faculty. The degree of Doctor of Laws may be awarded for an original and substantial contribution of distinguished merit to legal knowledge or understanding.

For undergraduates, the Law School seeks to provide a broadly based, liberal education. It also aims to provide courses of vocational value for those students who wish to become legal practitioners. While a large proportion of graduates enter into the practice of the law, a number of graduates enter government service (both Commonwealth and State), and others join commercial enterprises or take up other similar occupations. A law degree is regarded as an acceptable qualification for positions not directly related to the law. However, as is explained in "Employment Opportunities" on pages 78-79, of this handbook, future employment opportunities are uncertain and applicants for admission should be informed of the possible difficulty they may face in securing employment upon graduation.

## 2. DEGREE OF BACHELOR OF LAWS

### 2.1. General

The course for the Ordinary degree of Bachelor of Laws extends over four years of full-time study. The Honours degree of Bachelor of Laws is also normally completed in the same period. It is possible to take both degrees by part-time study. Important classes in all subjects, and more particularly lectures, are normally only given during the day, however, and no special provision can be made for students unable to attend. Regular attendance at tutorials and seminars is an important part of the legal training. For the first three years of full-time study there is no distinction between the basic courses of study for Ordinary and Honours students, but a student must have achieved a high level of performance in those years to be qualified to enter the Honours course. These studies will also affect the level of Honours he may ultimately be awarded.

### 2.2 The Normal Course Structure

#### **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  
Two optional half-subjects (making up approximately 27% of the year's work).

#### **Third Year:**

Trusts  
Associations  
Optional subjects (making up approximately 63% of the year's work).

(Note: Associations may be taken in the Fourth Year)

**Fourth Year:**

The Law of Evidence

Optional subjects (making up 80% of the year's work or optional subjects (60%) and an Honours dissertation (20%)).

**Optional Subjects** (this list is subject to change from year to year, and is given by way of example only):

Administrative Law	International Trade Law
Child Welfare Law	Jurisprudence
Commercial Transactions	Land Contracts
Comparative Law	Legal History
Conflict of Laws	Legal Philosophy
Consumer Credit	Media Law
Criminal Investigation	Penology
Criminology	Roman Law
Environmental and Planning Law	Soviet Law
Family Law	Succession
Industrial Law	Taxation Law
Institutional Business Transactions	The Law of Procedure
International Law	

A student who wishes to qualify for practice in South Australia must, in the fourth year or a later year, take the subject The Law of Procedure and also attend and show satisfactory interest in a course of lectures in Legal Ethics and Accounts.

### 2.3. Nature of the Course

Tuition in the Law School in most subjects consists basically of lectures, tutorials and in some instances discussion group classes. An integral part of course work is the preparation of essays, and other written work requiring a great deal of reading in the Law Library. This, in addition to mid-year tests and end of year examinations is taken into account in determining the final standing of students in each subject. Moot court cases (mock trials) are also held.

## 3. FIRST-YEAR LAW SUBJECTS—BRIEF DESCRIPTION

### Elements of Law

An introduction to the structure and nature of legal institutions.

### Constitutional Law I

The principal institutions of government in the United Kingdom and Australia, with particular reference to South Australia; the major sources of governmental authority in Australia; the main principles of British constitutional law as they apply in Australia; an introduction to federalism.

### Criminal Law

An examination of the substantive principles of criminal law. In this course studies cover such crimes as murder, manslaughter, larceny, the criminal liability of corporations and attempts to commit crimes.

### The Law of Torts

This subject is concerned basically with circumstances where private citizens seek damages through court actions as a result of what are termed civil "wrongs". In this course such topics as the law of negligence (a legal basis for court actions for damages resulting from car accidents, for example), nuisance and trespass are examined.

#### **4. CONCURRENT LAW—ARTS, OR LAW—ECONOMICS STUDIES**

Special provision is made for combined courses in Law-Arts and Law-Economics.

Students may enrol concurrently for the degrees of LL.B. and B.A., or LL.B. and B.Ec., if they apply for and are admitted to the appropriate combined course. Alternatively, students who are already candidates for the degree of LL.B. and who wish to proceed to the degrees of LL.B. and B.A. or LL.B. and B.Ec. concurrently may apply at the end of their first or second year in the Faculty of Law for admission to the B.A. or the B.Ec. course in the following year, since after a student has completed one year of study in one Faculty he may apply (on Form R, to be submitted to the South Australian Tertiary Admissions Centre) to enter another and, if admitted, may subsequently undertake courses in both. Similarly, students who are already candidates for the degrees of B.A. or B.Ec. may apply for admission to the Law course. The method of such application is described on pages 9 to 11 of this handbook. Law students admitted to the Faculty of Arts or to the Faculty of Economics may count towards the degree of B.A. or B.Ec., certain approved Law subjects. This means that combined courses may be completed in a minimum of six years. Students should discuss proposals for concurrent study with the Course Adviser for Law.

#### **5. ADMISSION TO PRACTISE LAW**

Students who are qualified for the degree of LL.B. and who wish to qualify for admission to practise law in South Australia must attend and show satisfactory interest in a course of lectures in Legal Ethics and Accounts and must fulfil, to a satisfactory standard, certain specified practical training qualifications. In the past the practical training qualification was obtained by a period of training in "articles". Recently, however, the Admitting Body and the profession have determined that the articles system shall lapse and be replaced by the training provided by the Graduate Diploma course in Legal Practice. By 1982 it is anticipated that all graduates intending to practise will be accommodated by the course. The G.D.L.P. is a 9-month full time course, commencing in March, concluding in November. Successful completion of the course by students who have undertaken certain LL.B. subjects specified in the Supreme Court Rules should enable them to seek admission in December of the same year. The requisite term of training in articles is 12 months for those who have taken certain LL.B. subjects specified in the Supreme Court Rules. For further information, the Supreme Court Rules should be consulted. Information relating to the G.D.L.P. is available on request from the South Australian Institute of Technology, North Terrace, Adelaide.

Students intending, after qualifying for the degree of LL.B., to seek admission to practise law in jurisdictions other than South Australia, are strongly advised to seek guidance as soon as possible from the appropriate authorities in those places as to the requirements for admission there.

# Mathematical Sciences

## 1. INTRODUCTION

The Faculty of Mathematical Sciences includes the University's mathematical science departments, namely Applied Mathematics, Computing Science, Mathematical Physics, Pure Mathematics and Statistics.

Students accepted for enrolment in the Faculty of Mathematics Sciences must enrol in at least one of Mathematics I, Computing IH or Statistics IH in the first year of enrolment.

Students (in all faculties other than Engineering) who intend to enrol in Mathematics I are advised to consult a Course Adviser for Mathematical Sciences during the enrolment period. Students contemplating studying second- and third-year Mathematical Science subjects in later years should seriously consider enrolling in the half-subjects Computing IH and Statistics IH together with Mathematics I.

The Faculty provides courses leading to both the Ordinary degree and the Honours degree of Bachelor of Science (B.Sc.). The Ordinary degree course is designed to give a broad grounding in first year, leaving open many options, followed by increasing specialisation in the later years. It enables students with interest and ability in mathematics to study the subject at a higher level and to apply their mathematical ability to fields of science, economics and the humanities. The Honours degree course is a one-year full-time or two-year part-time course following the Ordinary degree.

At the postgraduate level, students may proceed by advanced study and research to either the degree of Master of Science (M.Sc.) or the degree of Doctor of Philosophy (Ph.D.). The degree of Doctor of Science (D.Sc.) may be awarded to a candidate who furnishes to the University 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 of Mathematical Sciences is directly concerned.

The Faculty administers the postgraduate Diploma in Computing Science (Dip.Comp.Sc.). To qualify for this Diploma a candidate must 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.

## 2. DEGREE OF BACHELOR OF SCIENCE IN THE FACULTY OF MATHEMATICAL SCIENCES

### 2.1. General

The course for the Ordinary degree of Bachelor of Science requires three years of full-time study or the equivalent. It can be taken on a part-time basis, but not by evening studies alone.

Mathematical Science subjects involve attendance at lectures and tutorials, regular class exercise work, use of the University library, and, in many subjects, use of the University's computer.

### 2.2. Ordinary Degree

The subjects available for the B.Sc. degree are:

#### First-year subjects and half-subjects:

##### Mathematical Sciences

Subject: Mathematics I.

Half-subjects: Computing IH and Statistics IH.

##### Arts

The first-year subjects and half-subjects described on pages 41-47 of this booklet.

##### Economics

Subjects: Accounting I, Economics I.

Half-subject: Commercial Law IH.



**Engineering**

Engineering IA, Engineering IB.

**Science**

Subjects and half-subjects listed on pages 74-76 of this booklet. Mathematics IM may be counted as a Mathematical Sciences subject only with permission of the Faculty.

**Second-year subjects and half-subjects:**

**Mathematical Sciences**

Applied Mathematics IIA and IIB, Computing Science II and IIC, Mathematical Statistics II and Pure Mathematics II.

**Arts**

The second-year subjects and half-subjects described on pages 41-47 of this booklet.

**Economics**

Subject: Accounting II.

Half-subjects: Microeconomics IIIH, Macroeconomics IIIH, Economic History IIIH(A), Economic History IIIH(B).

**Science**

The second-year subjects listed on page 69 of this booklet.

**Third-year subjects and half-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**

The third-year subjects and half-subjects described on pages 41-47 of this booklet.

**Economics**

Two subjects, Economics III (Ma.Sc.) and Commerce III (Ma.Sc.) are available. These subjects consist of combinations selected from the following options and grouped to satisfy certain requirements.

Economics III (Ma.Sc.)

Economic Development III, Economic History IIIH, Economics IIIA, Public Finance IIIH, Economics of Labour IIIH, Agricultural Economics IIIH, Management Economics IIIH, Econometrics IIIH, Mathematical Economics IIIH and Economic Theory IIIH.

Commerce III (Ma.Sc.)

Accounting III, Business Finance IIIH, Marketing IIIH, Commercial Law IIIH, Income Tax IIIH, and Industrial Sociology III.

**Science**

The third-year subjects listed on page 69 of this booklet. Certain subjects are also available in which parts of third-year Science courses are combined with parts of third-year courses given by the departments of the Faculty of Mathematical Sciences.

The basic requirements for the Ordinary degree are:

- (i) 9 subjects with at least 2 third-year subjects,
- (ii) at least half of the subjects taken must be Mathematical Sciences subjects.

First-year students enrolling in the Faculty must take Mathematics I and are advised to take Computing IH and Statistics IH as well.

In order to be able to satisfy the pre-requisites for admission to many second-year and third-year subjects students are advised to plan their whole courses for the degree at the beginning of their University studies; and by consulting the syllabuses for later-year subjects make sure that they take, in the preceding year, the subjects necessary for their more advanced studies.

## 2.3. Honours Degree

A candidate for Honours must first:

- (i) have qualified for the Ordinary degree of B.Sc., and
- (ii) have completed the third-year course in the subject in which he wishes to take Honours, together with such other pre-requisite subjects (if any) as may be prescribed in the Honours syllabus, and
- (iii) obtain the approval of the Head/Chairman of the Department concerned.

In general, the Honours degree requires one year of full-time work beyond the Ordinary degree but the Faculty may permit a student to spread the work over two years, but no more.

The subjects in which the Honours degree may be obtained are as follows:

Applied Mathematics  
Computing Science  
Mathematical Physics  
Pure Mathematics  
Statistics

Students wishing to take Honours in a subject taught by a Department outside the Faculty should, in the third year of their course, consult the Chairman of the relevant Department and apply to the Faculty for permission.

An Honours degree is the normal pre-requisite for students who wish subsequently to proceed to a Master's or Ph.D. degree and to responsible positions in tertiary education and research institutions. Some Honours courses have been designed to meet the needs of students with a special interest in mathematical education, for example, those taking an Honours degree as a preparation for a teaching career in a secondary school.

The Faculty of Mathematical Sciences recommends that every student capable of proceeding to Honours should aim to do so. At an early stage in his course he should consult the Head/Chairman of the Department in which he proposes to work, and he should study carefully the syllabus of his proposed Honours course to ensure that he will have the correct pre-requisites for it.

## 3. SUBJECTS TAUGHT BY THE FACULTY OF MATHEMATICAL SCIENCES

### Applied Mathematics

Applied Mathematics is primarily concerned with the application of mathematical methods to real-world problems, problems of the physical sciences, problems of the social sciences. The problems are formulated as mathematical models, and a compromise is usually necessary to make the models sufficiently simple so that they can be solved, yet sufficiently complicated to describe the problems realistically. Often the model formulations give impetus to the development of new mathematical methods and new mathematics of general importance. Typical of the wide range of problems studied by applied mathematicians are: tide phenomena, storm surges, motion of ships in shallow water, effects of waves on ships, elasticity of plates, operation of the human heart, action of muscles, epidemics, zero population growth, queues, public transport, dial-a-bus, telephone networks, open-pit mining, marketing, forecasting University quotas.

### Computing Science

Computing Science is concerned with computers and computation. Courses in all years involve practical computing but in the later years there is increasing emphasis on the theory of computation.

The practice of computing requires, as a basic skill, the ability to analyse a problem, to derive an algorithm which solves it, and to express this algorithm as a programme in a specific programming language. Once this skill has been learned one may go on to study algorithms used in particular applications such as programme compilation, numerical analysis, simulation or business data processing. PASCAL is the main language used for practical programming in most undergraduate courses; other languages such as FORTRAN, COBOL and SNOBOL are taught where appropriate.

The theory of computation is concerned with a variety of topics which assist in the understanding, design and use of computing systems, for example the syntax and semantics of programming languages, data structures, computer architecture and operating systems.

### **Mathematical Physics**

Mathematical Physics is concerned with the fundamental principles of the physical sciences, their mathematical formulation, and their applications. Historically the subject has developed from Newton's laws of motion, Faraday's and Maxwell's theories of electricity and magnetism, thermodynamics and the kinetic theory of matter, Einstein's theory of relativity, and the quantum theory of atomic and nuclear phenomena. Today the most important developments are occurring in high energy particle physics and nuclear physics, cosmology, the statistical mechanics of matter, and plasma dynamics. Subjects in mathematical physics are available at third-year and Honours levels.

### **Pure Mathematics**

Pure Mathematics is concerned with the pursuit of mathematical knowledge for its own sake. Research mathematicians attempt to extend the frontiers of this knowledge, especially in the newer branches of mathematics, by generalising existing concepts, developing new ones, and establishing new theories which are fruitful for further research. The undergraduate courses give a broad coverage of topics in calculus, analysis, algebra, geometry, topology, etc. which provide a firm foundation for the student wishing to teach mathematics in schools or for the student wishing to proceed with further studies, in any of the mathematical sciences.

### **Statistics**

Statistics is the science of the analysis and interpretation of data, whether from experiments, sample surveys or naturally occurring. Courses combine theory and practice. Statistical theory develops the reasoning which guides the methods by which data is analysed. It is both logical and mathematical. Statistical practice involves use of computers and testing of methods on data.

For Mathematical Statistics II, Mathematics I is pre-requisite and Statistics IH is strongly recommended. Mathematics I assumes a knowledge of Matriculation Mathematics I and II.

## **4. FIRST-YEAR MATHEMATICAL SCIENCES SUBJECTS—BRIEF DESCRIPTION**

### **Mathematics I**

The course, taught jointly by the Departments of Pure and Applied Mathematics, assumes a knowledge of Matriculation Mathematics I and II, and consists of four lectures and one two-hour tutorial session a week. The syllabus covers topics in pure and applied mathematics including sequences and series, functions of one and two variables, elementary differential equations, vectors, modern linear algebra, with some applications.

### **Computing IH**

The course in this half-subject assumes a background in algebra such as may be obtained from the Matriculation Mathematics IS course, and consists of two lectures and one tutorial per week throughout the year. The subject is designed to convey an understanding of the elements of Computing Science as well as to teach computer programming. The syllabus covers algorithmic processes and languages, computer organisation and machine language coding, data structures and their manipulation.

### **Statistics IH**

The course in this half-subject provides a study of the basic aspects of Statistics and of the important elementary statistical methods. It comprises two lectures and one tutorial a week throughout the year. The syllabus includes probability distributions, significance tests and linear regression etc.

# Medicine

## 1. INTRODUCTION

The Faculty of Medicine provides courses leading to the degrees of Bachelor of Medicine and Bachelor of Surgery (M.B., B.S.), and to the Honours degree of Bachelor of Medical Science (B.Med.Sc.). At the postgraduate level students may proceed by advanced study and research to the degrees of Doctor of Philosophy (Ph.D.), Doctor of Medicine (M.D.) and by course work to the Diploma in Psychotherapy.

## 2. DEGREES OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY

The course extends over six years of full-time study; it cannot be taken on a part-time basis. Students are required to enrol each year for all necessary subjects and withdrawal from only a part of a year's work is not permitted. Students who wish to intermit their course for any reason whatsoever must obtain prior Faculty approval for leave of absence.

The subjects of the first year are intended to provide a basis for subsequent work in the biomedical and clinical sciences. The first-year curriculum includes Biology IM, Chemistry IM which is similar to the standard science subject but includes certain material and emphasises certain aspects of particular relevance to medical science; Behavioural Science which comprises a selection of topics from psychology and related disciplines; and two half-subjects Anatomy IH and Genetics IH(M). There are also programmes in Bio-medical Statistics and Emergency Medicine.

In the second year a co-ordinated course in human biology comprises Anatomy, Biochemistry and Human Physiology. Also included are Medicine in the Community and Medical Physics.

In the third year a co-ordinated course in advanced human biology comprises Anatomy, Human Physiology and Pharmacology. Also included are Biology of Disease, comprising Microbiology and General Pathology, and Medicine in the Community.

The clinical section of the course begins in the third term of third year, and during that term and the fourth year the work covers Applied Physiology, Pharmacology, Medicine in the Community and systemic topic instruction in Medicine, Surgery, Psychiatry, Microbiology, Pathology, Human Physiology, Pharmacology, Clinical Biochemistry, Applied Anatomy, Community Medicine and Public Health. The Fourth-Year Examination is held in two parts in May and November of the fourth year.

During the fifth year the work covers Obstetrics and Gynaecology, Paediatrics, Medicine, Surgery, and Psychiatry. The student resides in a hospital for about 6 weeks during the year.

During the sixth and final year the student is attached to hospital clinics for further instruction in Medicine, Surgery, Psychiatry, Obstetrics and Gynaecology, Paediatrics and Medicine in the Community. Courses are also given in Applied Pathology and Forensic Medicine and Medical Ethics. The Final (Sixth-Year) Examination is held in November.

## 3. FIRST-YEAR SUBJECTS—BRIEF DESCRIPTION

### Anatomy IH

This half-subject covers introductory gross anatomy, cytology, general histology and the regional anatomy of the lower limb.

### Chemistry IM

This subject is designed to meet the specific needs of students enrolled in the Faculty of Medicine. It differs from Chemistry I in that there is a larger component of Organic Chemistry and principles are illustrated with biological and medical examples. A brief description of Chemistry I is given under Faculty of Science on page 75.

### **Biology IM**

This subject includes: elementary biochemistry, cell structure and physiology, an introduction to bacteria, fungi and autotrophs, structure and physiology of vertebrate and invertebrate animals, the mechanisms of evolution and the principles of ecology.

### **Behavioural Science**

This subject deals with scientific approaches to the understanding of human behaviour in health and disease. With this objective, contributions from developmental psychology, psychophysiology, social psychology, sociology, and anthropology are studied.

### **Genetics IH(M)**

This half-subject is designed to introduce the principles of human genetics as a means of understanding individual variation which is part of the background of the practice of medicine. 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.

### **Bio-medical Statistics**

This programme provides an introductory coverage of the following topics: the role of statistics in human biology and medicine, the collection and presentation of data, measures of central tendency and variation, statistical inference, the concepts of probability and correlation, and sampling.

### **Emergency Medicine**

The topics covered in this programme include: basic life support; abdominal, cardiac, drug related, neurological, obstetric, psychiatric, respiratory and miscellaneous emergencies; trauma, and head injuries.

## **4. HONOURS DEGREE OF BACHELOR OF MEDICAL SCIENCE**

An undergraduate who has passed the appropriate examinations in the medical course may interrupt his course for one year to proceed to the Honours degree of Bachelor of Medical Science, by taking advanced work in one of the following fields: Anatomy and Histology, Behavioural Science, Biochemistry, Community Medicine, Genetics, Medicine, Microbiology, Obstetrics and Gynaecology, Paediatrics, Pathology, Pharmacology, Physiology, Psychiatry, Surgery.

## **5. REGISTRATION OF MEDICAL PRACTITIONERS**

Before being admitted to full registration as a medical practitioner in South Australia a medical graduate must, after graduation, serve at least twelve months as a Resident Medical Officer in an approved hospital. The degrees awarded by the University and the period of service as a Resident Medical Officer are recognised for the purpose of registration by all Australian Medical Registration Boards and by the General Medical Council in Great Britain. There is no formal agreement with countries outside the British Commonwealth for recognition and registration.

## **6. COST OF THE MEDICAL COURSE**

In addition to living costs and any charges payable a student must allow for the cost of text-books and instruments, which at the prices prevailing in July 1981 is about \$4,000 for the whole course. This cost would be reduced considerably if second-hand books and equipment were bought.

Students in the fourth and fifth years of the medical course are required to pay hospitals residence charges of \$34.50 a year. They may elect to pay the full amount of \$69 at the beginning of the fifth year. It is payable to the University, which transmits it to the hospitals concerned.

# Music

## 1. INTRODUCTION

The Faculty of Music provides courses leading to both the Ordinary degree and the Honours degree of Bachelor of Music (B.Mus.). At the postgraduate level the degrees of Master of Music (M.Mus.), and of Doctor of Philosophy (Ph.D.) are offered.

The degree of Doctor of Music (D.Mus.) may be awarded to a candidate who furnishes to the University satisfactory evidence that he has made an original and substantial contribution of distinguished merit to some branch of music.

## 2. DEGREE OF BACHELOR OF MUSIC

### 2.1. General

The course of study for the degree of Bachelor of Music assumes prior knowledge of music theory and considerable proficiency in performance and/or composition. The Schedules of the degree of Bachelor of Music state that "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."

The special entrance examination will take the form of an audition and interview held normally in the September preceding the year to which entry is sought. Candidates will be informed of their results as soon as possible after the examination. Successful candidates may apply for admission to the Bachelor of Music course in the usual way (*See page 9*) and will be subject to selection on the basis of their matriculation results.

Details of the special examination are published in a leaflet available on request to the Academic Registrar.

The course for the Ordinary degree of Bachelor of Music extends over three years of full-time study, while the Honours degree requires a further year of specialist study.

### 2.2. Aims

The syllabus is designed to provide the student with overall competence in general areas and to allow for specialisation in particular fields (composition, performance, historical musicology, ethnomusicology, music in education).

### 2.3. Course Supervision

On enrolment, the Director of the Elder Conservatorium assigns each student a course supervisor from the academic lecturing staff, whose function is to aid the student in the selection of his course. The normal course work and lectures will be supplemented by tutorials.

### 2.4. The Course

There are four subjects offered in each year. In first year historical and related studies are covered by lectures and tutorials on the History of Western Music together with an Introduction to Ethnomusicology. In second and third years these studies are undertaken in the form of projects. Practical Studies in Performance or Composition are pursued through each year of the course. The subject Elective Studies enables the student to implement his work in the specialised field of his choice.

**Note:** Changes which may be introduced to the Music Course in 1982 are currently under discussion.

### 2.5. Practical Work

Individual and/or group tuition is provided for all students in instrumental/vocal studies appropriate to their course, and/or in composition. It is possible for 50% of the student's course work to be taken in the field of Performance. All students take part in the general practical programme of the Elder Conservatorium (e.g. choir, orchestra, chamber music).

## **2.6. Centre for Aboriginal Studies**

The Centre offers projects in tribal Aboriginal Music and other fields of Ethnomusicology. Aboriginal singing can be taken as a Practical Study and studies are offered relating to music in cross-cultural situations. An Introduction to Ethnomusicology forms part of the first-year degree course.

## **2.7. Drama**

The first year Drama course may be taken as an alternative to Elective Studies I.

## **2.8. Honours Degree**

Every encouragement is given to suitably talented students to proceed to the Honours degree which is available in Performance, Composition, Musicology (Ethnomusicology, Historical Musicology, or Systematic Musicology) and Music in Education. Candidates taking Musicology will be required to have a reading knowledge of a language or languages necessary for the course of study involved.

After qualifying for the Ordinary degree, an honours student takes a further full year of specialist study, participates in the honours seminar course and takes one further Project at honours level.

## **3. DEGREE OF BACHELOR OF ARTS**

Music I (or IA), II and III and IIIS may be presented as subjects for the Ordinary degree of B.A. (see page 45); that is to say, the Arts course provides an opportunity for Music to be combined with the other subjects.

Music I and IA are primarily historical and analytical in orientation and do not include tuition in performance or composition, although Music I assumes some prior knowledge of music theory.

Selection for these courses is therefore not subject to the selection policy of the Faculty of Music but made strictly on academic merit.

## **4. CONCURRENT MUSIC-ARTS**

Special provision is made for a combined course leading to the degrees of Bachelor of Music and Bachelor of Arts. Candidates who have been admitted to the two courses should consult the Course Advisers in both Music and Arts when planning the details of their courses, and the subjects for which they should enrol each year.

# Science

## 1. INTRODUCTION

The Faculty of Science provides courses leading to both the Ordinary degree and the Honours degree of Bachelor of Science (B.Sc.).

The aim of the Ordinary degree course is to produce graduates with a sound knowledge and understanding of the particular branches of science chosen, rather than a professional training in one narrow branch. Accordingly, the course is designed to give a broad scientific grounding in the first year, followed by increasing specialisation in the later years.

At the postgraduate level, students may proceed by advanced study and research to either the degree of Master of Science (M.Sc.) or the degree of Doctor of Philosophy (Ph.D.).

The degree of Doctor of Science (D.Sc.) may be awarded to a candidate who furnishes to the University 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 of Science is directly concerned.

## 2. DEGREE OF BACHELOR OF SCIENCE IN THE FACULTY OF SCIENCE

### 2.1. General

The course for the Ordinary degree of Bachelor of Science requires three years of full-time study or the equivalent. It can be taken on a part-time basis, but not by evening studies alone; indeed only some of the first-year subjects can be taken after 5.00 p.m. Second- and third-year subjects are given only during the day.

All Science subjects involve attendance at lectures and tutorials and, with the exception of Mathematics, involve laboratory work as well. This work may vary from 3 hours a week for some first-year subjects to as much as 12 hours a week in some third-year subjects. Some subjects, such as Botany and Geology, also involve field work.

Every intending Science student should have a thorough knowledge, at least to matriculation standard, of Physics, Chemistry and Mathematics.

### 2.2 Ordinary Degree

The subjects available for the B.Sc. degree are:

#### Group A subjects (First-year):

Biology I, Chemistry I, Geology I, Mathematics I and IM, Physics I, Psychology I.

#### Group A half-subjects (First-year):

Astronomy IH, Botany IH\*, Computing IH, Genetics and Human Variation IH, Mathematics IH, Statistics IH.

#### Group B subjects (Second-year):

Biochemistry II, Botany II, Chemical Engineering II, Chemistry II, Chemistry IIE, Genetics II, Geology II, Microbiology and Immunology II, Organic Chemistry II, Physical and Inorganic Chemistry II, Physics II, Physiology II, Psychology II, Zoology II.

The second-year Mathematical Sciences subjects listed on page 62 of this booklet are also available for the degree.

#### Group C subjects (Third-year):

Third year subjects are available in the fields of Biochemistry, Botany, Economic Geology, Genetics, Geology, Geophysics, Anatomy and Histology, Microbiology and Immunology, Organic Chemistry, Physical and Inorganic Chemistry, Pharmacology, Physics, Physiology, Psychology and Zoology. All subjects, except

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\*Botany IH may be taken only by students who are enrolled in, or who have previously passed, Biology I.



Genetics and Microbiology and Immunology, are unitised and it is possible to combine units from two departments, in some cases, to form subjects. The third year subjects in Applied and Pure Mathematics, Mathematical Physics, Computing Science and Statistics, which are given by the Faculty of Mathematical Sciences, are also available.

**Group D subject (Third-year):**

Physical and Inorganic Chemistry IIIA.

**Group E subjects (Third-year):**

Palaeontology III, Social Biology III.

In general terms, to qualify for the Ordinary degree a candidate must present four subjects from Group A or their equivalent; either three subjects from Group B, or two subjects from Group B and a fifth subject from Group A or its equivalent; and two subjects from Group C, or one subject from Group D. (But he cannot present overlapping subjects such as Mathematics I and Mathematics IH.) A candidate may also take Engineering IA or IB or not more than the equivalent of a first-year subject given within the Faculty of Arts instead of one Group A subject.

In order to be able to satisfy the pre-requisites for admission to many second-year and third-year subjects students are advised to plan their whole courses for the degree at the beginning of their University studies; and by consulting the syllabuses for later-year subjects make sure that they take, in the preceding year, the subjects necessary for their more advanced studies.

The Faculty of Science has introduced a number of half-subjects into the first year of the course, so that students are able, if they wish, to broaden their knowledge of the various disciplines taught within the Faculty. The breadth of knowledge available needs to be balanced with the necessity for a thorough grounding in the basic sciences. The Faculty, therefore, strongly recommends that students should include in their first-year subjects, a mathematical subject; either Physics or Chemistry; and either a biological subject or Geology. Students are also advised to give careful consideration as to whether they wish to enrol in more than two unrelated half-subjects.

The third year of the course has been designed to allow students *either* to take subjects from two separate departments *or* to study subjects covering areas of knowledge in which the conventional divisions of Science overlap.

### 2.3. Honours Degree

The Honours degree requires one year full-time work beyond the Ordinary degree, making four years in all. The work comprises advanced study and, in most departments, a research project. A candidate for Honours must first:

- (i) have qualified for the Ordinary degree of B.Sc.; and
- (ii) have completed all the Ordinary degree courses in the subject in which he wishes to take Honours, together with such other pre-requisite subjects (if any) as may be prescribed in the Honours syllabus; and
- (iii) obtain the approval of the Head/Chairman of the Department concerned.

The subjects in which the Honours degree may be obtained are as follows:

Anatomy and Histology	Organic Chemistry
Biochemistry	Pharmacology
Botany	Physical and Inorganic Chemistry
Genetics	Physics
Geology	Physiology
Geophysics	Psychology
*Mathematical Physics	Zoology
Microbiology and Immunology	

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\*May also be taken in the Faculty of Mathematical Sciences.

Students wishing to undertake the Honours degree of Bachelor of Science in other departments (e.g. Animal Physiology, Entomology) should consult the Head/Chairman of the Department concerned during the third year of their course.

An Honours degree is the normal pre-requisite for students who wish subsequently to proceed to a Master's or Ph.D. degree and to responsible positions in tertiary education and research institutions.

The Faculty of Science recommends that every student capable of proceeding to Honours should aim to do so. At an early stage in his course he should consult the Head/Chairman of the Department in which he proposes to work; and he should study carefully the syllabus of his proposed Honours course to ensure that he will have the correct pre-requisites for it.

### 3. SUBJECTS IN THE SCIENCE COURSE

The following is intended to give a brief indication of the nature of the various science disciplines which may be studied for the degree particularly those with which students may not be familiar from their school studies.

#### **Anatomy and Histology**

Anatomy is the study of animal structure, and provides a background for many aspects of animal biology and medicine. Histology and cytology are branches of anatomy dealing with the microscopic structure of organs and cells (respectively) of the body and the relationship of their structure to function. A short course in mammalian anatomy, histology and cytology is given as part of Physiology II in second year. The third year subject, Anatomy and Histology III, is divided into units which deal with selected aspects of anatomy at three different levels, gross human anatomy in a comparative and evolutionary vertebrate context, functional systematic histology of nervous and reproductive systems, and advanced work on cells and the techniques used to study them. Selected units may be taken in combination with units from other third year subjects. An Honours course is available, in which topics in different branches of anatomy (e.g. gross anatomy, embryology, neuroanatomy, histology, cytology) are studied in depth, and a research project is carried out.

#### **Biochemistry**

Biochemistry, literally the chemistry of life, deals with all living processes in terms of behaviour of molecules; and indeed an important section of it is referred to as Molecular Biology. It covers the chemical reactions of the cell by which energy is obtained with the synthesis of the components of the living cell and the manner in which such reactions are controlled. The subject is also intimately concerned with the molecular processes in cell reproduction and information transfer—DNA structure and replication, chemistry of gene action, protein synthesis, virus infection and reproduction and the like. Biochemistry includes phenomena of life in chemical terms and thus areas such as antibiotic and drug action, the nature of genetic disease, the structure and mode of action of enzymes, evolution of protein molecules etc., are all within its scope.

The study of Biochemistry requires an adequate preparation in Chemistry and is therefore not available until the second year of the course. Since the subject bridges between Biology and Chemistry there is a place in it both for those mainly interested in Biology and for those mainly interested in the more chemical aspects.

#### **Botany**

Botany, or the biology of plants, embraces a wide range of studies from cell biology, biochemistry and genetics to the physiology, taxonomy and ecology of the great diversity of plant life both in the ocean and on the land. One full first-year subject, Biology I, and a half-subject Botany IH, which is intended to be taken concurrently with Biology I, are available, from which students can proceed to the second-year course in Botany (a knowledge equivalent to that of Chemistry I will be assumed). Biology I and Botany IH together cover a basic introduction to plant biology, with the half-subject developing to greater depth the general biology and plant studies in Biology I. The second-year course

deals with the biology of the higher plant, including studies on plant physiology, plant ecology, taxonomy and evolution. In the third year, a variety of courses is offered, including rangeland ecology, marine plant biology, biochemistry, mycology, plant nutrition, plant water relations, comparative morphology, evolutionary processes, plant taxonomy, palaeobotany and ecology of fresh-water lakes. Qualified students can proceed to further studies in any of the above second- or third-year fields.

## Chemistry

**Physical and Inorganic Chemistry**, like Organic Chemistry, interprets the properties of matter mainly from a molecular viewpoint. There are two main aims, present in varying degrees, of most investigation in Physical and Inorganic Chemistry; (a) the deduction and testing of laws and principles describing the properties of chemical materials; and (b) the preparation of new compounds and the determination of their structure and reactions. Compounds of all the metals and non-metals are investigated; there are strong links with organic chemistry especially in studies of carbon compounds. Physico-chemical principles and experimental techniques have important applications in the biological sciences and geology as well as in technology.

**Organic Chemistry**, like Physical and Inorganic Chemistry, is a major branch of molecular science. It is concerned with all aspects of the molecular structure, physical properties, and chemical reactions of compounds containing carbon, a large and diverse family which includes pharmaceuticals, drugs, dyes, plastics, fibres, fuels and indeed most of the familiar materials of everyday life. Reactions of organic compounds provide the very basis of life itself, and a knowledge of organic chemistry is indispensable to the detailed study of molecular biology. Investigations in organic chemistry range from the theoretical and physico-chemical study of bonding in simple systems to the synthesis and investigation of the reactions of proteins and similar molecules of great complexity. The principles and techniques of organic chemistry have important applications in the biological, geological and medical sciences.

## Computing Science

A brief description of this subject is given under "Mathematical Sciences" on page 63.

## Genetics

Genetics is the study of inheritance and variation in all forms of life from viruses to man. It is concerned with the nature of the genetic material, its replication, transmission, organisation and functioning and its role in development and evolution. An introductory course is devoted to the genetics of Man while the courses in second and third year deal with the subject in its many aspects.

## Geology

Geology literally is the science of the earth. It combines its own special methods with the application of other sciences in the study of the physical and chemical constitution of the earth, the processes which are constantly modifying these characters and the history of the earth through geological time (approximately 4,500 million years). The phenomena of volcanism and earthquake activity are among the most fundamental and spectacular of geological processes.

**Geophysics** supplements basic Geology in bringing physics to bear on the study of the structure, physical properties and deformation of crystals, minerals, rocks and the earth as a whole.

**Geochemistry** applies chemical methods to the study of the constitution of minerals and rocks and to the processes which have produced them.

**Palaeontology** is concerned with the study of the structure and function of living organisms of the past and with their evolution.

## Mathematical Physics

A brief description of this subject is given under “Mathematical Sciences” on page 64.

## Microbiology and Immunology

Microbiology is the study of micro-organisms and the courses deal with bacteria and viruses of bacteria and animals. Study of the structure, function and genetics cover the many unique properties of these organisms and also the importance of microbiology in analysing basic biological processes.

The courses also deal with the major role of micro-organisms in the ecology of natural and man-made environments, in food and fermentation industries and in disease.

Many bacteria and viruses are parasites of various species of animals and cause diseases. Immunology is the study of the mechanisms involved in resisting and/or overcoming infection by these parasites. This involves a study of antibodies, including their structure, how they are produced, the cellular events which must take place during their production, and the mechanisms which enable phagocytic cells of the animal to recognise the presence of these parasites and to remove them. Lymphocyte-mediated mechanisms of immunity will also be discussed, with particular emphasis on the role of the major histocompatibility complex in the control of these responses, and the role these mechanisms play in resistance to some infections.

Finally, the courses deal with the evolution of recognition processes by phagocytic cells and the development of these processes in foetal and newborn animals.

Studies in Microbiology and Immunology begin at the Second Year level, with Biology I as a pre-requisite.

## Mathematics

Brief descriptions of mathematical subjects will be found under “Mathematical Sciences” on pages 63-64.

## Pharmacology

Pharmacology is the study of the actions of drugs, and it is taught, following the course in Physiology, at the third year and honours levels. It includes consideration of how drugs reach their sites of action, and the factors which determine the duration and intensity of drug effect. The major component of the course is concerned with the mechanisms by which drugs modify physiological functions of the body. A shorter component within the course deals with adverse effects caused by drugs and environmental chemicals.

## Physics

Physics is the most fundamental of the sciences and deals with the nature of matter and energy and their interactions. The Physics courses aim to provide a foundation of fundamental experimental and theoretical principles on which to build a broad understanding of the physical world; and courses are provided covering such basic areas of physics as mechanics, relativity, quantum mechanics, statistical physics, optics, electromagnetism, electronics, and atomic, nuclear and solid state physics. At third-year and honours level a very broad range of additional topics is offered including courses in environmental physics, atmospheric physics, astrophysics and planetary interiors.

## Physiology

This subject is taught at the second- and third-year level and as an honours course in the fourth year at University. Physiology is concerned with the function of living organisms and how their function is controlled. It is concerned, for example, with how muscles are controlled, how heart rate is regulated, and how and why these might change during, say, exercise, and so on. The subject covers all body functions and their control and regulation.

This subject, concerned as it is with the control of body functions, is therefore of interest to people involved in human sciences, physical education, nutrition, and medicine, and to ecologists concerned with the harmful effects of alteration in the environment.

## Psychology

Psychology is the systematic study of human and animal behaviour, and of human experience. Academic psychology is founded on experiments, and on the statistical analysis of observations of behaviour. Some aspects of behaviour studied include learning, perception, physiological processes, personality, social interactions, thinking and language. Other topics studied include statistical methods, emotion, motivation, information processing, developmental psychology and abnormal behaviour. Explanations are sought in terms of patterns of responses, physiological mechanisms, theories of a mathematical nature, analogies based on physical systems, and so on. Psychology is clearly related to many other branches of science, but has its own special interests and methods.

## Social Biology

The course examines a number of social problems such as race and race differences, class and social stratification, aspects of eugenics and genetic engineering and the biosocial consequences of man's changing environment. It is available as a part subject in several science subjects at third year level or it can be combined with approved second year Arts subjects in Anthropology, Geography, Psychology and others to form a group E subject. The prerequisites for the course are Genetics and Human Variation IH and a knowledge of statistics which may come from Statistics IH, Genetics II or Psychology II.

## Statistics

A brief description of this subject is given under "Mathematical Sciences" on page 64.

## Zoology

Biology I is the only course that is offered at first year by the Zoology Department (in collaboration with the Botany Department). The second year course deals with diversity, structure and function of vertebrates and invertebrates and also examines aspects of evolution and cellular physiology. Units offered in third year are Population Biology, Comparative Biochemistry and Pollution, Comparative and Environmental Physiology, Parasites and Parasitism, Systematics and Biogeography, Freshwater Ecology.

Overall, the aims of the courses in Zoology offered are firstly to provide sufficient background knowledge to those students not willing to pursue the subject in depth, but desirous of having an awareness of the nature and content of modern zoology; and secondly to provide the basic zoological knowledge for those students wishing to major in Zoology and continue as professional zoologists or teachers.

## 4. FIRST-YEAR SCIENCE SUBJECTS—BRIEF DESCRIPTION

### Astronomy IH

This is a half-subject comprising three lectures and one tutorial a fortnight, and four three-hour laboratory or observational sessions a term. Evening observations occur mainly in the first term. The course includes discussion of: optical and radio astronomical instruments; the Solar System, Sun, planets, comets, asteroids, meteors, space probes, stars, stellar distances, the Milky Way, types of stars, stellar evolution; galaxies; radio-astronomy; space astronomy; cosmology.

### Botany

The half-subject of Botany IH consists of one lecture and two hours practical work a week and one tutorial a fortnight throughout the year, and is intended to be taken concurrently with Biology I.

**Botany IH:** Plant cell structure and function, evolutionary relationships of plants, ecology, structure, physiology and reproduction of plants.

## Biology I

A course of two lectures, one tutorial, and one period of practical work a week. It 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.

## Chemistry I

The course consists of three lectures, three hours practical work and one tutorial each week.

The course is given in four sections:

**Structure and Bonding:** the structure of molecules and methods of determining structure, models for chemical bonding, forces between molecules, acids and bases.

**Physical Chemistry:** an introduction showing how chemical phenomena can be treated quantitatively and how such phenomena as the properties of states of matter, solutions, surfaces, rates of chemical reactions, depend on molecular properties and forces between molecules.

**Inorganic Chemistry:** the chemistry of the main group and first row transition elements with reference to halides, oxides, hydrides, aqua ions and simple organometallic compounds. The concepts of crystal chemistry, dynamic equilibria and reaction mechanisms will be introduced.

**Organic Chemistry:** an introduction to the properties, reactions (including mechanisms) and synthesis of representative organic compounds, including those of biological significance.

## Computing IH

A brief description of this half-subject is given under "Mathematical Sciences" on page 64.

## Genetics and Human Variation IH

This half-subject is intended to provide an introduction to the principles of human genetics as a means of understanding the diversity and the underlying unity of mankind. It consists of one lecture and a tutorial/practical class each week throughout the year.

## Geological Sciences

One first-year subject Geology I is available. This subject provides a balanced introduction to the geological sciences through lectures and practical work and is the normal pre-requisite for entry to Geology II. It also serves students in the Faculties of Engineering and Agricultural Science.

**Geology I:** The lecture course (three lectures a week) is given in four sections:

**Crystals, Minerals and Igneous rocks.**

**Global Geology and Geophysics,** including global gravity, seismicity, radioactivity, magnetism; sea floor spreading, continental drift; geological structures, petrology and plate tectonics.

**Geological History and Evolution of the Landscape,** including weathering and erosion, sedimentary rocks, the fossil record, principles of stratigraphy, landscape evolution.

**Earth Resources and Conservation,** including mineral and energy resources, aspects of engineering geology and hydrology.

The associated practical work (3 hours a week) includes the study of crystals, minerals, rocks and fossils; interpretation of elementary geological maps. The practical course thus illustrates and develops the lecture course with reference to Australian examples; and it is supplemented by several weekend field excursions to local areas of particular geological interest.

## Mathematics

There are three first-year Mathematics subjects: Mathematics I, which pre-supposes a knowledge of Matriculation Mathematics I and II, and is intended for students whose main interests are in Mathematics or its application to Physical Science or Engineering; Mathematics IM, which pre-supposes a knowledge of Matriculation Mathematics IS, and which permits the student to proceed to certain later-year work in Mathematics; and Mathematics IH, a half-subject, which assumes a knowledge of Matriculation Mathematics IS, and is intended for students who do not wish to proceed to further courses in Mathematics.

Mathematics I and IM both comprise four lectures and one two-hour tutorial session a week. Mathematics IH comprises two lectures a week and a one-hour tutorial session a week.

A brief description of the subject **Mathematics I** is given under "Mathematical Sciences" on page 64; the syllabuses of the other subject and half-subject are as follows:

**Mathematics IM:** Differential and integral calculus of functions of one or two real variables; differential equations; linear equations, matrices and determinants; group theory; fields and number systems.

**Mathematics IH:** Differential and integral calculus, differential equations, vectors, linear equations, matrices and determinants.

## Physics I

The course comprises three lectures, one tutorial and three hours of practical work a week.

The course is given in the following parts:

**Mechanics and the structure of matter**, including classical mechanics, atomic physics, structure and properties of microscopic systems, the solar system, macroscopic properties of matter.

**Oscillations and Electromagnetism**, including mechanical oscillations and resonance, electrostatics, electric fields, current electricity, electromagnetic effects.

**Waves, radiation and relativity**, including wavemotion, dispersion, special relativity, matter waves.

## Psychology I

An introductory survey of the main topics in modern experimental psychology. The topics include aspects of learning, perception, physiological psychology, personality, social psychology, thinking, language, perception, conditioning and innate behaviour. A laboratory course is given as part of Psychology I, and this includes practical experience of laboratory work, experimental design, statistics as applied to psychological data, demonstrations and films.

## Statistics IH

A brief description of this half-subject is given under "Mathematical Sciences" on page 64.

# EMPLOYMENT OPPORTUNITIES

## Arts

In general, the aim of an Arts course is not professional or vocational, and accordingly such a course may best be thought of as providing a good general education rather than as a preparation in the narrow sense for one particular career. For employment purposes it usually needs to be supplemented by more specific training or experience, to meet the needs of the occupation eventually entered.

For some occupations the subject studied in an Arts course may be particularly relevant: e.g. a graduate with an Honours degree in psychology, or one with an Ordinary degree which included third-year courses in psychology, may be fitted on graduation for appointment as a psychologist in an appropriate field such as vocational guidance, or clinical or industrial psychology. In general, however, the subjects taken by an Arts graduate may be thought of mainly as being one of the most important of the media by which he becomes an educated person.

An Arts graduate will, of course, have the special knowledge derived from his study of his subjects; but more than this, his Arts degree will in effect be a certificate that he has been subject to a rigorous intellectual training; that he has had the opportunity of learning how to think logically, and how to apply orderly and soundly-based methods in whatever he does. If he has benefited from his studies he will be flexible and adaptable, able to see the part in relation to the whole, and able to cope with new situations from first principles.

With these qualities, the Arts graduate should be in a good position to proceed to further studies, or to undertake any task of a general administrative nature.

At present there are indications that in the near future it may not be easy for a generalist Arts graduate to secure suitable employment. In this respect the graduate with a degree of good academic quality, or with a good honours degree, will obviously be better placed than one whose academic record was relatively poor.

The following are some of the careers open to Arts graduates. In considering them an intending student would be wise to keep as flexible an attitude as possible, because of the difficulty of forecasting employment opportunities in any area three or four years after a course has been embarked upon.

**Social Work.** After adding to Arts studies a course of study and training for a Diploma in Social Studies or for a postgraduate degree such as Bachelor of Social Administration at the Flinders University.

**Teaching.** At primary school, secondary school, or university level. For teaching at university level a good Honours degree, followed by advanced study, is usually required; and competition is very keen.

Since the beginning of 1976 anyone wishing to teach at primary or secondary level in South Australia must first obtain registration with the South Australian Teachers Registration Board. To be qualified to seek such registration Arts graduates should supplement their Arts studies either with professional training through a College of Advanced Education or by a course of university study leading to the Diploma in Education and subsequently, perhaps, to the degree of Master of Education.

**Librarianship.** By obtaining experience in a library and undertaking professional studies such as a postgraduate course at the S.A. Institute of Technology.

**The Church.** Most denominations encourage candidates for the ministry to obtain an Arts degree.

**Administration.** Normally, openings for Arts graduates exist in the Australian Public Service in all States including A.C.T., and in the State Public Services. Some industries and business firms are interested in recruiting Arts graduates who have done courses of good standard and who have acceptable personal qualities. The usual pattern here is for the graduate to be given a period of comprehensive training lasting perhaps two years after which, if he has proved suitable, he will be given executive responsibility.



**Miscellaneous Careers.** From time to time vacancies occur for Arts graduates in fields such as publishing, journalism, drama, advertising and public relations; but these vacancies are highly competitive, and often demand particular talent in certain specialised areas.

## Economics

The demand by employers for Economics graduates over the years has been strong. The sources of this demand are very widespread: in the private sector, where accounting subjects are preferred, they include public accountants, banking, financial and insurance institutions, mass media, motor, chemical, and oil companies, textile, food and drink manufacturers, wholesalers and retailers; in the public sector, where a knowledge of economic theory and development is often looked for, they include the Bureau of Statistics, the Bureau of Agricultural Economics, the Reserve Bank, several Commonwealth Government departments (Treasury, Overseas Trade, etc.), and the State Public Service.

In the Government areas, graduates are most likely to be engaged in economic research. In industry and commerce the work is chiefly in accounting, marketing and administration.

The Honours degree requires an extra year, but it gives the student a much better understanding of economics and a wider view generally, and may improve his starting salary and his prospects of promotion.

It is possible to take economics as a major subject within an Arts degree, in combination with such other subjects as history, psychology, politics, or mathematics. This provides a desirable general education, but lack of familiarity with accounting and statistics may prove a handicap in tackling practical problems involving the use of economic data.

It is possible to take a major sequence in economics or in accounting or commerce subjects towards a Science degree in the Faculty of Mathematical Sciences. A combination of these subjects with applied mathematics, mathematical statistics and/or computing science would provide a valuable qualification increasingly sought for a wide range of careers.

## Law

The question of employment opportunities for law graduates is a matter of concern. Although future employment opportunities appear to be uncertain, the following information may help to set the position in perspective.

Most law graduates in South Australia are admitted as legal practitioners, and the majority enter private practice. Recently graduates have found more difficulty in obtaining employment in the legal profession. It is difficult to predict what the future demand for legal practitioners in South Australia will be. Two uncertain factors are firstly, the number of retirements or changes in occupation, and, secondly, the amount of work requiring legal expertise. As regards the first, it would be unwise to forecast any trends at a time of economic uncertainty. As regards the second, opinions differ as to the likely impact of developments in consumer and environmental protection, compensation for injury, taxation and many other fields.

Account should be taken of opportunities beyond the profession itself. Although most graduates enter private practice, a significant minority traditionally have chosen to pursue careers in commerce, government departments, legal aid services, law reform agencies, universities and colleges of advanced education. Again, however, it is difficult to predict the extent to which openings for law graduates will continue to be found in these areas; so much depends upon the economy and upon levels of government funding.

The policy of the Faculty of Law stands against reducing the quota of admissions to the Law course: intending students should have the maximum opportunity to take whatever courses they choose, irrespective of the employment situation at any particular time. At the same time, however, the view of the Faculty and the University of Adelaide is that **no-one should be under any illusions about career prospects at the end of any particular university course.**

More particular information is available from the Dean and the Law Society of South Australia. It should also be noted that employment opportunities are kept under review by the Faculty of Law, the Law Society, the Careers Advisory Board of the University, and other agencies.

## Mathematical Sciences

A student with mathematical talents often wonders—with his or her parents and friends—what employment opportunities there may be for one who specialises in mathematical sciences at the University.

Opportunities for Mathematical Sciences graduates occur over a wide range of occupations, but throughout his or her course a student would be wise to keep as flexible an attitude as possible concerning eventual employment. This is necessary because of the difficulty of forecasting the need for graduates in any particular discipline three or four years after a particular course has been embarked upon.

As more and more fields of endeavour are being quantified, computerised, and analysed with statistical and mathematical models so, in normal times, is the demand for the mathematical scientist gradually increasing. The importance of the applications of the mathematical sciences in the physical and biological sciences is well established, and now the role of the mathematical scientist is also being recognised as increasingly valuable in interdisciplinary areas in the social sciences, in economics, linguistics, psychology and other arts disciplines. A knowledge of mathematics can also be useful in library work.

An area where there is a growing need for Mathematical Sciences graduates is in computer programming and data processing. An ordinary degree including Computing Science III at third-year prepares the graduate for a professional career in programming; an Honours or Research degree will give access to a wider range of professional opportunities in scientific and commercial computing. Here it should be made clear that a student who intends to enter a commercial computing area would be wise to supplement his studies in computing with the commerce subjects which may be undertaken in the Economics Faculty. As an alternative to majoring in computing science in his bachelor's degree, a suitably qualified graduate in mathematics might take a postgraduate Diploma in Computing Science. There is also a continuing need for graduates with a background in statistics. An Ordinary degree including Mathematical Statistics III can lead to a position in a multi-disciplinary research team; a good Honours or higher degree in Statistics is usually the starting point of a professional Statistical or Actuarial career.

Government establishments, such as C.S.I.R.O., The Defence Research Centre, the Department of Transport, the Bureau of Statistics, and Planning Departments, employ mathematical scientists and are particularly interested in those with at least a good background of computing and statistics. Most openings are for work with scientists, engineers, economists, etc. in group projects and in these the mathematical expert is recognised as a key person. Although the appointments often require an Honours or even higher degree, the graduate is more likely to use his general mathematical knowledge rather than the more advanced specialised courses he has studied. Industry and private firms employ some mathematical scientists with qualifications ranging from an Ordinary degree to a Ph.D.

There are also opportunities for Mathematical Sciences graduates in Government departments such as the Bureau of Statistics, and in private industry and educational institutions. It should be kept in mind that graduates in Mathematical Sciences can compete strongly for more general positions in insurance companies, banks, retail organisations or general administrative areas.

Many Mathematical Sciences graduates, particularly those with an Honours degree, have found openings as secondary school teachers. However, since the beginning of 1976 anyone wishing to teach at primary or secondary level in South Australia must first obtain registration with the South Australian Teachers Registration Board. To be qualified to seek such registration, graduates must supplement their Mathematical Sciences studies either by professional training through a College of Advanced Education or by a course of University study leading to the Diploma in Education and subsequently, perhaps, to the degree of Master of Education. It should be noted, however, that the number of teaching positions available in South Australia is declining.

A student's interest and abilities in mathematical science subjects often mature markedly at the University, and it is unusual and unnecessary for a student to plan the details of his course or decide his subsequent career until he has completed one or two years of his Ordinary degree work. Mathematical talent is a rare commodity in the community; those who possess it and develop it to the full are unlikely, in normal times, to be denied satisfying employment opportunities.

Any student, parent or teacher wanting additional information about careers in the mathematical sciences is invited to get in touch at the University with the Chairman of one of the five departments in the Faculty.

## Science

Although the aim of courses in Science is to provide a sound knowledge of the particular branches of Science chosen, rather than a professional training in one narrow branch of Science, the extent to which this object is achieved varies considerably and is dependent on the subjects studied in the final, third year. Thus whilst it is not easy to predict the branch of Science that a person majoring in physics, chemistry or mathematics may enter, those majoring in geology, biochemistry or physiology generally seek a position in which their speciality will be directly and immediately used. However because of changing employment trends and the difficulty of forecasting the needs of the labour market three or four years after a course has been embarked upon, a student would be wise to keep as flexible an attitude as possible towards his or her eventual employment.

In general, employment opportunities for Science graduates occur in industry, government establishments, hospital laboratories, and teaching. They could involve laboratory or mathematical work, e.g., for chemists, physicists, biochemists, microbiologists, etc.; field work, e.g., for geologists and biologists, etc.; technical service and technical sales in industrial firms, and administration. In general, industrial firms employ Science graduates first in laboratories; they may later move, as opportunity arises, to technical service or administration positions.

For a career in scientific research in universities, government establishments, and industry, a higher degree is essential as competition is very keen. A Master's degree is the minimum qualification generally required, but the Ph.D. degree is generally preferred. Such work generally involves membership of a research group, and promotion is possible to group leader and higher positions. In government research laboratories the Ph.D. degree is generally an essential qualification for promotion to the higher grades. In industry it is becoming more common to recruit executive staff from the research staff.

The careers open to Science graduates include the following:

**Government.** In the S.A. Public Service and in the Australian Public Service some opportunities exist in hospital laboratories, chemical testing laboratories, meteorological work, weapons research, atomic energy, environmental sciences, energy resources, museums and agricultural and fishery departments, as well as in certain other areas. Vacancies depend a good deal on the national economic situation, which makes it difficult to forecast needs. Competition for the presently limited research vacancies in organisations such as the C.S.I.R.O. is extremely keen, and normally calls for Ph.D. qualifications and specialised experience.

**Industry and Private Firms.** For specialists, work in general laboratories in South Australia is limited; but openings may be found in wineries, breweries, food processing factories and some of the larger industrial manufacturers.

**Teaching.** Since the beginning of 1976 anyone wishing to teach at primary or secondary level in South Australia must first obtain registration with the South Australian Teachers Registration Board. To be qualified to seek such registration, Science graduates—who preferably should have an Honours degree—should supplement their studies either by professional training through a College of Advanced Education or by a course of university study leading to the Diploma in Education and subsequently, perhaps, to the degree of Master of Education.

For the generalist graduate, without particular specialisation, opportunities might for example be in Australian Government or State Government departments. In private firms, there are many opportunities in marketing and technical representation. It is likely that an increasing number of vacancies will occur in smaller firms where managerial ability would be required.

X Honours degree or higher qualifications

## NOTES

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