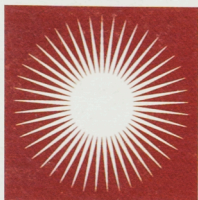


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The University of New South Wales



CENTRE · FOR LIBERAL · AND GENERAL · STUDIES

HANDBOOK · 1989



■ How this Handbook is Organised

Part 1: The University, General Education, and You

Provides an overview of the philosophy of, and requirements for, General Education at the University, including its relationship with the rest of undergraduate education.

You should read this section before commencing studies in General Education to ensure that you are familiar with the University's objectives and requirements for General Education, as well as your role and contribution.

Part 2: Program Implementation and Administrative Arrangements

Sets out the guidelines for the General Education Program, and the administrative arrangements for 1989.

As the new General Education Program requirements are to be introduced progressively by the University, you should read this Section very carefully before planning your General Education program and enrolling.

Part 3: Subject Information

Includes: subject descriptions; listings of subjects by category, area, length; summary of subjects with exclusions.

Refer to this part when planning your General Education program and selecting subjects at enrolment.

The General Education Timetable is published separately and is available from the Centre for Liberal & General Studies Office [see below] or at the General Education Enrolment Centre at Unisearch House during the enrolment period.

■ Contacting the Centre

The Centre for Liberal & General Studies administers the General Education Program under the authority of the Academic Board's Undergraduate Studies Committee. The Centre is the subject authority for all subjects offered in the General Education Program, even though many subjects are contributed by various academic units of the University.

All enquiries about the program, including requirements and subject information, should be made in the first instance to the Centre.

Location

Room G.58, Ground Floor, Morven Brown Building. Hours: 9.00am-1.00pm and 2.00-5.00pm.

Who to contact

Telephone enquiries should be made to the following Centre staff:

Don Heaton, Administrative Assistant, 697 2436

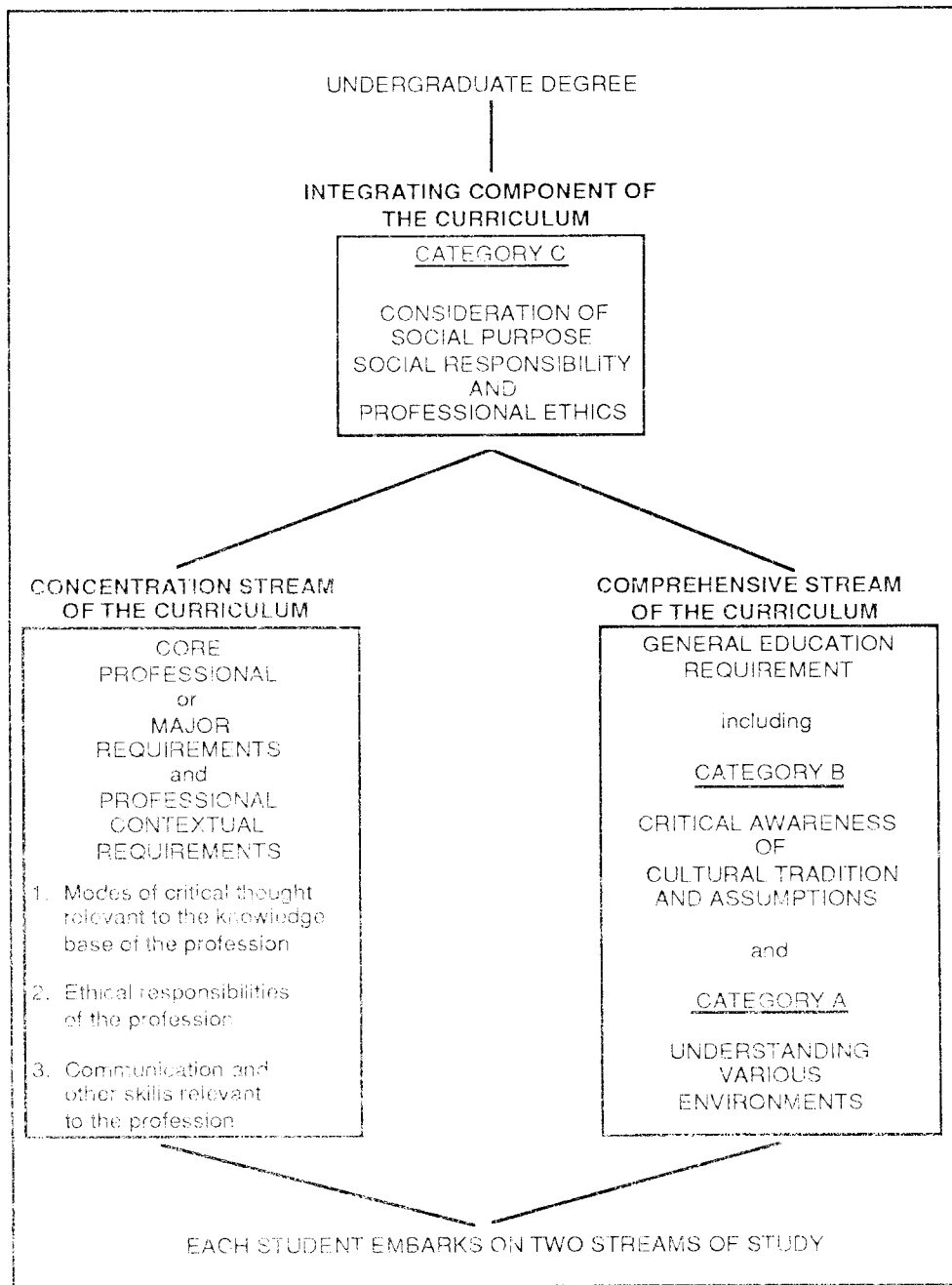
Karenne Irvine, Administrative Officer, 697 2438

Correspondence

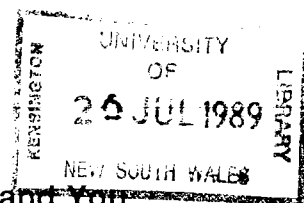
All correspondence should be addressed to:

The Director Centre for Liberal & General Studies
The University of New South Wales
PO Box 1
Kensington NSW 2033

Table 1: Undergraduate Education at the University



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1. The University, General Education and You

Introduction

The purpose of this Handbook is to help you to understand the educational objectives of your undergraduate degree program and the role of the General Education Program in helping you attain these objectives.

Neither the objectives nor the educational role of the program is simple. Your education should equip you to deal with a complex world. Hence, you are asked to read this Handbook carefully so that you may develop an understanding of this educational task and make an active contribution to carrying it out.

The Contemporary Challenge

The world into which you will graduate, by all accounts, is becoming more crowded and more complex. It seems to be changing at an accelerating pace. By the time you graduate from the University, the amount of information and knowledge in most fields of study will have almost doubled.

Our knowledge and our technological ingenuity are powerful tools for change. Their application often has far reaching and sometimes unpredictable consequences for both social and ecological systems.

These and many other factors constitute a powerful challenge to our capacity safely, justly and humanely to manage our world in the foreseeable future. This, then, is the fundamental challenge facing education at all levels, but especially at the university level. How can the university develop a curriculum which will equip students to function not only as competent professionals but also as responsible persons and citizens capable of participating in a democratic way in the understanding, design and management of their world?

What Is University Education?

There is no precise and simple answer to this question. Most would agree that it is more than a job training program and more than simply an opportunity to obtain a secure career.

The traditional role of the university has been to serve society in three crucially important ways. In the first place it adds to the treasury of human knowledge. Secondly, it systematically subjects inherited ideas, assumptions, values and practices to analysis and critical scrutiny. Thirdly, it opens up, either directly or indirectly, new possibilities for human thought and action.

The ideal of university education, therefore, has been to open the doors to a

The drift over the last two decades has been to more and more specialised courses and this has been at the expense of general education. What is important is that universities preserve the notion that alongside vocational and professional aims stands an absolutely indispensable commitment to general education. I think that's something the university system in this country hasn't faced up to at all. This university has.

L. Michael Birt, Vice-Chancellor, U.N.S.W.

universe of possibility and, consequently, of responsibility for its students. Hence, while universities, especially in Australia, have been organised for the most part along vocational lines to provide their students with a thorough preparation in the professions of science, arts, medicine, law, engineering and so on, they have also usually attempted to maintain something of the traditional ideal of introducing students to the "universe" of knowledge. In spite of the knowledge explosion in all areas of professional specialization, the University of N.S.W. is committed to the education of its students, not just as very competent professionals but also as well informed and responsible persons and citizens.

In most modern societies university graduates are educated to exercise some form of leadership in their society and some form of responsibility through the use of their knowledge and technological expertise, for the management of the human future.

This education, therefore, must include both a depth of special understanding and a breadth of general comprehension in order adequately to equip university graduates for the role they are expected to play in society.

The Structure of Undergraduate Education

Each of the undergraduate degree programs in the University tends to have its own structure and characteristics. Nevertheless, the policy of the University governing undergraduate education demands that three broad sets of requirements be satisfied before a program can be approved and an individual degree awarded.

The three sets of requirements are that students:

- 1 Receive a thorough education in the professional or major fields of specialised study which they have chosen - **CORE PROFESSIONAL REQUIREMENT**.
- 2 Acquire an adequate understanding of the social context in which they will function as professionals as a result of their developing:
 - (a) An understanding of the modes of critical thought relevant to the evaluation and development of the knowledge base of the profession, that is, of the prevailing "paradigm" of the profession;
 - (b) An appreciation of the ethical responsibilities of the profession;

- (c) A mastery of the communication and other skills relevant to the tasks and purposes of the profession - *PROFESSIONAL CONTEXTUAL REQUIREMENT*.
- 3 Develop a comprehensive understanding of, and sense of responsibility for, the general intellectual, cultural and social tradition they have inherited appropriate to university graduates - *GENERAL EDUCATION REQUIREMENT*.

The integrating component of the undergraduate curriculum is the attempt systematically to address and democratically to answer the question:

For what social and human purposes should we deploy the resources of knowledge and technological ingenuity at our disposal and how best can we deploy them?

Why General Education?

There are a number of reasons why a general education requirement is an indispensable component in a modern undergraduate degree program.

- 1 For eight hundred years, the university has been the institution in the western world which has encouraged the asking of fundamental questions. At the most general level is the set of perennial questions articulated by the philosopher Immanuel Kant:
- What can I know?
 - What ought I do?
 - For what can I hope?

At a more immediate level is a set of questions which we all face as persons in and citizens of the world of the future. This set of questions has been forcefully stated by the educationist Philip Werdell who asked: How do we prepare people for:

- Predicting probable futures,
- Imagining possible futures and
- Designing preferable futures?

It is still the essential task of the university to ensure that each generation of students grapples with these questions.

- 2 Each field of study is growing not just in the amount of information it is generating, but also in the intricate patterns of relationships and connections which are being discovered among different fields of study. A well educated graduate needs to be equipped with at least a general and strategic understanding of the major fields and traditions of learning. In this sense, "general" education should be thought of as derived from the Greek term for a military general, "strategos".
- 3 If undergraduates are to be expected to exercise a leadership role in the society of the future, they will need to understand something of the complex

cultural, social and ecological systems in which they will be involved.

- 4 Australia, in the future, will require a higher degree of creative and innovative thought and action, especially from its university graduates, if it is to flourish in an intensely competitive international environment. The key to fostering creativity in a society is to cultivate minds which have a rich diversity of frames of reference and discourse. Training in a narrow and exclusive range of technical and professional skills, no matter how advanced or sophisticated, is not conducive to the development of creativity in any field.

The Objectives of General Education

The University has identified the following objectives to be pursued in the General Education Program:

- i To ensure that all students address, in cooperative interaction with their peers from other faculties, some of the key questions which face them as persons, citizens and professionals;
- ii To encourage students to develop skills of rational thought, critical analysis, expression and communication in broader cultural terms, complementary to those developed in professional or major disciplinary courses;
- iii To encourage students to gain some appreciation of their general intellectual traditions, by providing a coherent and guided exposure to elements of those traditions; and
- iv To foster among students the competence and the confidence to contribute creatively and responsibly to the development of their society.

The General Education Program

The General Education Program is made up of three categories of subjects and learning.

Category A

Provides an introduction, in non-specialist terms, to an understanding of each of the following environments in which humans function:

- (1) Physical
- (2) Biological
- (3) Technological
- (4) Built and Planned
- (5) Social and Economic
- (6) Information and Communication
- (7) Symbolic and Expressive

The aim of the subjects in each of the areas of this category is to provide students with a basic understanding of the key issues and problems, the

modes of research and reasoning and the current state of learning in each of these fields of study.

Category B

Provides an introduction to and a critical reflection upon the cultural bases of knowledge, belief, language, identity and purpose.

The aim of the subjects in this category is to help students to examine, critically, the many assumptions and values they have inherited with their culture. This capacity for a critical analysis of inherited assumptions is indispensable for responsible and creative thought and action.

Category C

Provides an introduction to the development, design and responsible management of the systems over which human beings exercise some influence and control.

The aim of Category C is to consider, in a systematic way, the key issues of social purpose and social responsibility.

Category C is the culminating phase of the General Education Program and integrates it with the other components of the undergraduate curriculum.

The Overall Educational Design

The overall strategy and structure of undergraduate education at the University is diagrammatically illustrated in Table 1 (page 2 above).

The General Education Requirements

- (I) All undergraduates are required to take:
 - (i) 56 hours of instruction in at least one of the areas of study included in Category A according to rules which will ensure that they do not duplicate study done elsewhere in their degree program. This instruction may be part or all of a subject taught by the faculty concerned or another faculty as part of a degree program, i.e. a subject taken by other students for purposes other than to satisfy the General Education requirements.
 - (ii) 56 hours of instruction in an area of study covered by Category B. This instruction may be part or all of a subject taught by the faculty concerned or another faculty as part of a degree program, i.e. a subject taken by other students for purposes other than to satisfy the General Education requirements.
- (II) All undergraduates enrolled in a major disciplinary or professional degree program are required to take coherent instruction in Category C according to the provisions approved for their degree program.

These provisions are currently being developed. You will be informed how this requirement will be fulfilled by your Course Authority.

- (III) Individual students may make application to the Centre for Liberal and General Studies to substitute subjects which the Centre judges to be appropriate alternatives to those required in the General Education Program.
- (IV) The Centre for Liberal and General Studies may grant exemption from all or part of the General Education requirements, either individually or collectively, to undergraduates entering the University with advanced standing.
- (V) Students who come to the University already possessing a degree accepted as valid by the University would be exempt from the General Education Program, which applies only to first degrees.

Detailed information about requirements for the program is set out in Part 2.

The Learning Process

In pursuing the objectives of the General Education Program the process of learning is as important as the structure and content of the program.

You should note the following features of the learning process of the program:

You will often be asked to draw upon your own experience and that of your family and friends.

You will be expected to listen to and come to grips with the views of your fellow students from other degree programs in the University.

You will be expected to learn not only the content of the subject, but also to learn how to learn in the future, and to develop the capacity to retrieve and ingeniously deploy information from a variety of sources.

You will be expected to look in what may appear to be unexpected places for ideas and information.

You will be expected to be able to relate your ideas and experiences to the various traditions of thought and discourse which you will encounter in the program.

Most importantly, you will be expected to attempt to make connections among the various subjects and fields which you study in your undergraduate education.

You will be expected to reflect on, to write about, and to discuss your ideas.

For this reason in most subjects you will be required to keep a journal.

In the last analysis you will be expected to assume considerable responsibility for your learning and for your ability to achieve the intellectual and communication standards required for a General Education subject.

The various teachers in the General Education program will adopt a variety of approaches and use different procedures from subject to subject. As you go through the program, however, you should give some thought not just to what you are learning, but to how you are learning it.

Assessment: Requirements

The standards which you are expected to achieve in your professional and major sequences are also the standards which you are expected to achieve in the subjects of the General Education program.

Although there may be some variation among subjects, as a general rule you will be assessed on the basis of the following requirements:

Each student will be expected:

- 1 To develop a paper or a project which explores in depth a specific aspect of the subject;
- 2 To maintain a journal or log book of your ideas, readings, reflections, reactions to lectures, tutorials and field trips, quotations, relevant newspaper and magazine clippings;
- 3 To contribute positively to a consideration of the issues addressed in the subject, especially in tutorials;
- 4 To recapitulate and attempt to synthesise, at the conclusion of the subject, the main questions, issues and conclusions developed. This may take the form of a final examination.

How You Can Help: Student Evaluation of the Program

The General Education Program is designed to help equip you to become an effective person, citizen and professional: responsible for the future well being of the human species and the planet earth.

There are three ways in which you can help in improving the design and implementation of the program.

- 1 A few weeks after the beginning of every subject the teacher may hand out a form on which you will be asked to indicate how effectively the subject matter is being communicated to you. This is a short-term measure to allow teachers to adjust their presentation of the subject to your level of understanding.
- 2 At the conclusion of every subject you will be asked to fill out a form reviewing and assessing the subject you have taken. This form will be kept on file and used as a basis for evaluating the effectiveness of the program, and for adjusting it to changing circumstances.
- 3 If, at any time, you have a suggestion about the program or encounter a problem with it, write a brief note to the Director of the Centre. Your suggestions and comments will be welcome and used to help improve the program.

2. Program Implementation and Administrative Arrangements

Overview

This part sets out the key administrative arrangements for implementing the program.

Note that different rules apply depending on the guidelines under which students will satisfy their General Education requirement. Ensure that you understand which guidelines apply to you.

For students who first enrolled before 1988 the old General Studies Regulations apply. For students who first enrolled from 1988 onwards the new General Education Regulations apply. If you have any questions about these matters do not hesitate to contact the Centre for Liberal & General Studies office.

See Page 1 for how to contact the Centre.

Program Implementation: Transition Arrangements

Compliance with the University's policy for General Education is to be achieved in stages for various courses.

Table 2 (page 11) sets out the 'timetable' according to which various courses and faculties will begin to comply with the new provisions.

Courses with a General Studies requirement prior to 1988

• **Students first admitted to candidature in these courses before 1988:**

These students are permitted to complete their GS requirement according to the rules for the GS Program admini-

See Table 2 (page 15) for details

stered by the Board of Studies in General Education before 1988.

In particular, students in this classification will be able to select freely from the subjects to be offered in 1989 in all Categories and Areas, subject to individual subject exclusions.

Students are encouraged to select subjects in an area outside their professional specialisations. They may substitute 'outside' subjects for General Studies subjects according to guidelines established by the Board of Studies in General Education and previously administered by the Department of General Studies.

See list of subjects with exclusions in Part 3 below.

See section on Substitutions below.

Additional information for students who took General Studies subjects before 1983:

The rules defined in 1983 to account for the effect on GS requirements of the change from 42 to 56 hour GS electives in that year will continue to apply. Students must complete subjects totalling the required number of hours specified for their course.

• Students first admitted to candidature in these courses from 1988:

These students are required to satisfy their General Education requirement according to the provisions of the new General Education Program as defined by the University. These requirements are set out in Part 2 above.

When the new General Education Program is fully introduced* students must, therefore, complete 56 hours of instruction in each of Categories A and B, and in areas of Category A approved for their course by the Standing Committee on General Education.

Students in disciplinary or professional degree programs must also complete coherent instruction in Category C according to guidelines for their degree program.

See Part 1 above for information about the development and introduction of Category C studies to the program

**Courses to
Comply with
Program
provisions
from 1989**

These students will be required to satisfy their General Education requirement according to the provisions of the new General Education Program as defined by the University. These requirements are set out in Part 1 above.

*See Table 2
(page 15) for
details.*

Students must, therefore, complete 56 hours of instruction in each of Categories A and B and, within Category A, in areas approved for their course by the Standing Committee on General Education. Students in disciplinary or professional degree programs must also complete coherent instruction in Category C according to guidelines specified for their program.

*See Part 1
above for
information
about the de-
velopment and
introduction of
Category C
studies to the
program*

**Requirements for
Commerce
students**

In 1989 continuing students in the Faculty of Commerce and Economics are permitted to enrol in General Education or Arts subjects to satisfy the Rule 7 ["Humanities"] options for their degree. From 1989, however, all commencing Commerce students will be required to comply with the provisions of the General Education Program as set out above.

Subjects

This Section describes how the Program's teaching requirements - expressed in terms of categories and areas of study, and class contact hours - translate into subject offerings, and relate to the unit or elective system of the pre-1988 GS requirements.

The information should be read in conjunction with the subject descriptions and other data in Part 3, and the General Education Program timetable.

**What is a
subject?**

A subject is defined as a unit of instruction approved by the University as being a discrete part of the requirements for a course, including the General Education

components of a course, and identified by a distinctive subject number.

Who teaches the subjects?

Subjects offered in the General Education Program have been developed and are offered by many of the academic units of the University, including Schools and Departments in most Faculties. The complement of subjects are presented by staff of the Centre itself. By drawing on the resources and expertise of the University in this way, it is expected that the General Education Program will provide a focus for both the activities of the University, and the educational challenges to be faced in the coming years.

All subjects offered have been approved for inclusion in the program by the Standing Committee on General Education. The Centre for Liberal & General Studies is the subject authority for all General Education subjects and has responsibility for the delivery and management of the program.

Types of subject offered in the Program

All subjects offered in the General Education Program include formal tuition. In many cases subjects are taught by a combination of lectures and tutorials or laboratory work. Some subjects are taught by a seminar, usually of 2 hours duration per week. In a few subjects lectures are supplemented by excursions or field trips, usually held on weekends. Students should ensure, when enrolling in General Education subjects, that their timetable and other commitments will permit them to attend classes on the designated days and times.

*See
'Assessment'
below*

'Length' of Subjects

Subjects offered in the program are usually one of two lengths:

28 hours

This represents 2 hours per week tuition over a 14 week teaching session. These

Table 2: GEP Compliance Timetable
Rules under which students take General Education subjects

Faculty	Courses	Year first admitted to candidature		
		Before 1988	1988	From 1989
Applied Science	All	GS	GEP	GEP
Architecture	All	GS	GEP	GEP
Arts	All	Nil Req.	Nil Req.	GEP
Commerce and Economics	All	Rule 7	Rule 7	GEP
Engineering	All	GS	GEP	GEP
Law	All except 4790	Nil Req.	Nil Req.	GEP
	4790	Nil Req.	Nil Req.	Nil Req.
Medicine	All	GS	GEP	GEP
Professional Studies	4030	GS	GEP	GEP
	4040	Nil Req.	Nil Req.	GEP
Board of Studies in Science & Mathematics	3430, 3431	Nil Req.	Nil Req.	GEP
	3950, 3951	GS	GEP	GEP
	3970	GS	GEP	GEP

Abbreviations:

GS: General Studies rules established by Board of Studies in General Education

GEP: General Education Program

Nil Req.: No General Education requirement

Rule 7: Humanities subjects rule, as defined for B.Com.

subjects are equivalent to the 1/2 electives of the pre-1988 GS requirements.

56 hours May be delivered in 2 forms:

Full year

This represents 2 hours per week tuition over 2 sessions, ie, the full 28 week teaching year.

Compressed

This represents 4 hours per week tuition delivered or compressed into one session. Compressed subjects are usually taught in 2 x 2 hour 'blocks' per week. Students enrolling in compressed subjects must be able to attend both blocks each week.

These subjects are equivalent to the full or 1 unit electives of the pre-1988 GS requirements.

Timetabling

Rationale

General Education subjects are programmed for the most part in 12 designated blocks to ensure that a wide range of subjects are available to students. Course authorities plan timetables so that students have some of these blocks available to them to take General Education subjects.

The 12 blocks used for General Education teaching are:

Monday 9-11am	Wednesday 2-4pm
Monday 2-4pm	Wednesday 6-8pm
Monday 6-8pm	Thursday 11am-1pm
Tuesday 9-11am	Thursday 6-8pm
Tuesday 4-6pm	Friday 9-11am
Wednesday 9-11am	Friday 11am-1pm

In addition, in 1989, some subjects will be scheduled outside these slots to maximise student access to subjects. Details are in the General Education Program timetable, available from the Centre's office.

At what stage in my studies do I take General Education subjects?

The programs for many courses, as determined by the school or course authority responsible, set out at which stages students usually take General Education. In some courses these stages are closely prescribed, in others students are given a degree of flexibility to determine how and when they take part in the General Education Program.

You should consult your course authority or handbook for further details.

**Programming of
General
Education within
course structures**

See Table 1 in Part 1 for a diagrammatic representation of how General Education integrates with professional and contextual studies in the undergraduate curriculum at the University.

**In what order
should I take the
subjects?**

Students should fulfil their General Education requirements by taking subjects sequentially in Categories A, B and C. By so doing, students will receive an integrated exposure to the concerns addressed by the General Education Program program.

**Sequencing of
Subjects**

Subject Streams

A number of subjects offered in the 1989 timetable are taught more than once, that is, the set of lectures and support teaching comprising the subject is offered to more than one unique set of students. Such subjects are said to be taught in 'streams'. Please note that students may only attend the classes for a subject for which they have enrolled and at the times specified on their class card obtained at enrolment.

See "Enrolments" below

Compressed Subjects

Some subject offerings are taught as "compressed" subjects.

Students taking compressed subjects usually meet in two teaching blocks per week, at times specified in the Timetable and on class cards.

See under "Length of Subjects" above for a definition of a compressed subject.

Enrolments

**Re-Enrolment
Procedures 1989**

Information is published by the Academic Registrar and is available from all school and course authority offices. It contains important information about enrolments for all students, including General Education enrolments. Students should

obtain a copy of their course information and read it in close conjunction with the specific General Education information provided here.

When do I enrol in General Education?

You enrol in General Education on the day you complete enrolment with your Course Authority or School, and before presenting your enrolment form to the Cashier. For new students, this is the day you first attend the University to enrol, as invited by the Academic Registrar in your offer letter. For later year or re-enrolling students, this is the day you complete enrolment formalities in February.

You must complete enrolment in General Education subjects before presenting your enrolment form to the Cashier.

Can I enrol early?

It is not possible to enrol in General Education subjects before the day specified for you to complete enrolment.

Is there late enrolment?

The University specifies that students must enrol before Monday 27 February (start of Session 1), according to the schedule for their course.

Please note

Students who fail to enrol in General Education subjects at the times designated for their course may apply to the Director of the Centre for Liberal & General Studies to enrol late in the first two weeks of Session. However, students should expect a very limited range of subjects to be available at that time, and accordingly late enrolment is not recommended.

What if I cannot attend to enrol on the designated day?

In the event that you will be away from Sydney or for other reasons not be able to attend the University on the day specified for you to complete enrolment, please contact the Centre at your earliest convenience to discuss the possibility of making alternative arrangements.

Enrolment Dates and Venues

Dates for Enrolment in General Education are as set out in the information published by the Academic Registrar.

The General Education Enrolment Centre will operate within:

The Unisearch House Enrolment Bureau, Anzac Parade, Kensington

Tuesday 31 January- Friday 3 February 1989:

New 1st Year students only.

Monday 6 February - Friday 24 February 1989:

Re-enrolments.

Outside these times all enrolments in General Education subjects take place at days and times specified in the Re-Enrolment Procedures Book in the Centre for Liberal & General Studies office: Room G.58, Ground Floor, Morven Brown Building

Selecting Subjects: This section outlines the procedures for enrolling in General Education subjects. It includes information on what you should know before attending to enrol and takes you on a tour through the process of choosing subjects and finalising enrolment.

The Enrolment Process

How are places in subjects allocated? For a number of years the Department of General Studies, which previously had responsibility for the General Studies program at the University, operated a card or ticketing system for the management of GS enrolments. This system will be used by the Centre in 1989.

While students are given a free choice of subjects to

*There is no such thing as a **neutral** educational process. Education either functions as an instrument which is used to facilitate the integration of people into the logic of the present system and bringing about conformity to it or it becomes "the practice of freedom", the means by which men and women deal critically and creatively with reality and discover how to participate in the transformation of their world.*

J. Richard Shull

The study of a problem whose solutions are known is training; the study of a problem whose solutions are unknown is education.

Robert Theobald

enrol in [subject to any course or other restrictions], they must- in order to formally enrol in a subject - obtain a place in that subject, for which a subject or class card is issued.

This system is perhaps analogous to an airline booking service: your destinations are clear, you have your travelling times [timetable allocations!] in mind, but you still have to obtain a seat on the plane [a place in the subject]. Moreover, there may be 400 other people all wanting a seat on that flight [which may only carry 60 passengers]. Finally, the airline company [the Centre] has an interest in ensuring that a representative group of its clients [you, the students!] are carried on each flight.

To manage and balance these considerations, places in subjects are made available according to a quota system.

Places in subjects are **not** allocated on a first-come, first-served basis!

Prior to the enrolment period the Centre seeks information from course authorities concerning the number of students they estimate will take General Education subjects in the coming year, the number and types of subjects these students will be required to take, when these students are released to take General Education subjects [ie timetable availability], and on which day/s they will attend to enrol in the General Education Program.

From this information the Centre allocates a quota of subject places right across the range of its timetable offerings for each enrolling day of the enrolment period. The release of places is tied to the anticipated needs of the students enrolling on that day. As a result of these procedures students enrolling in General Education on the last day of the enrolment period [before the start of session] have the same range of subjects available to them as students enrolling at the start of this period.

Bear in mind, however, that a subject offered once only and accepting only 60 students, will never have very many places available in it on any day of the enrolment period. It is for this reason that it may seem that subjects “fill up” quickly, when in fact what has happened is that the quota for that day has been filled.

An educational imperative in this system is to ensure a mix of students from different specialisations, and therefore encourage students to address the issues raised within the General Education Program in “co-operative interaction with their peers”.

Before Enrolment Day

Before attending the Centre for Liberal & General Studies Enrolment Centre you should ensure that:

- You are familiar with the aims and requirements of the General Education Program at the University. Part 1 of this Handbook gives an overview of these matters.
- You know what the General Education requirement is for your course, including
 - How many subjects or electives you have completed
 - How many subjects or electives you have yet to complete

Your course enrolment officer will write down the number of General Education subjects you should take in 1989 on your enrolment form.

- Any special rules for your course concerning subjects and choice of subjects within the various categories and areas of the program.
See “General Education Program Implementation: Transition Arrangements” earlier in this part of the Handbook for information concerning subject availability for 1989.
- You know what your timetable for your course is for 1989, especially:
 - When you are scheduled to take General Education subjects.
See “Timetabling” above for further information about timetabling arrangements.
- You are familiar with the range of subjects to be offered, including when they are timetabled.
- You have a reasonable idea of which General Education subjects you would like to enrol in.

**Enrolment
Procedures on
the day**

On the day you attend the Centre for Liberal & General Studies Enrolment Centre, you will most likely be only one of many hundreds of students also enrolling in General Education. It is therefore in your interest to do your homework, along the lines suggested in the previous section, to assist you to make the right choice and obtain a place in an appropriate subject.

**Stage One:
Information
Gathering**

On arrival at the Centre for Liberal & General Studies Enrolment Centre, you should obtain from the desk, if not already possessed by you:

1989 General Education Handbook
1989 General Education Timetable
Green Subject Preference Form

After consulting the timetable and handbook, you should record your first and second subject preferences for the total number of General Education subjects which you will take in 1989.

Points to Note:

- Choose subject preferences carefully!
- When you attend to enrol in General Education you will be making important educational choices not merely completing an administrative process.
- Take time to review the range of subjects available to you. There will be limited opportunity to vary enrolment once each academic session commences. It is your obligation to ensure that you enrol in the correct subjects and number of subjects.
- Record preferences for the total number of subjects you must take, including any subjects to be taken in Session 2. The University requires that all students establish their study program for the entire academic year at the start of the year.
There will be only limited opportunity to vary second session subject enrolments after the main enrolment period and before Session 2 commences.

See Section above, "Before attending the Centre for Liberal & General Studies Enrolment Centre..." above for important tips!

Assistance for Students

Subject Advisers Subject advisers, representing the academic units offering subjects in the program will be available at the Unisearch House Enrolment Centre to counsel students on subject content and choice.

Program Requirements Advice The Centre's enrolling officers will be available to advise you on your General Education requirements.

Noticeboards The Centre's noticeboards at Unisearch House and outside the Centre's office in the Morven Brown Building will carry up-to-the-minute information about the 1989 General Education Program.

Stage Two: Card Allocation Having filled out your preference form you should proceed to the Card Allocation Line. Present your enrolment form and preference form to the Enrolling Officer, who will check your General Education requirement and preferences and issue subject cards for the subjects you have nominated, according to availability. Please check that the following details on the cards are correct:

- Subject no
- Session
- Day and time

You should then fill out all class cards and enter the details exactly as presented on the cards on your enrolment form.

Complete both sides of all cards: the information is used by subject conveners for preparing class lists and contacting students.

Stage Three: The Card Checking Station When you have filled out all cards and your enrolment form you should proceed to The Card Checking Station. The Enrolling Officer will:

- Check your cards and form
- Sign your enrolment form
- Tear off and return to you the student portion of your class cards

IMPORTANT

- Keep your class cards in a safe place!
- Cards are not transferable.
- You must attend classes at the days and times specified on the cards.
- You will need to show them at your first tutorial as proof of enrolment.

- You will also need to produce the class card should you ever seek to vary your General Education enrolment: it will not be possible to vary enrolment in General Education subjects later on without producing the class cards for subjects in which you are already enrolled.
- After completing these operations you will be able to proceed to the Fees Assessors to finalise enrolment

Varying Enrolment

Procedures

Students wishing to vary their enrolment by either adding or discontinuing subjects may do so by applying to the Director, Centre for Liberal & General Studies, on the University's form SR2. The following points should be noted:

- The Centre for Liberal & General Studies is the subject authority for all General Education subjects, that is, all subjects bearing a "26" prefix.
- All applications to vary enrolment must be lodged at the Centre's Office, not at your School office.
- Students wishing to discontinue subjects must present their class cards for those subjects with the SR2 form.
- Students wishing to add subjects must first obtain a place in those subjects and be issued with class cards.
- While the University permits students to add subjects to their enrolment program up to the end of the 2nd week of each Session, only a limited number of places in subjects will be available after the start of Session. As a general principle, only students with proven enrolment or timetable difficulties will be permitted to add subjects after the commencement of each session.
- Students enrolling in additional subjects after the commencement of each session should also note the University's attendance requirement for

See below under "Assessment" for further information.

subject assessment which states that students must attend 80% of classes. Students enrolling after the commencement of session must also satisfy this attendance provision.

- Only a limited number of places will be available for students seeking to add subjects to their program before the start of Session 2. Students should enrol in General Education subjects to the extent of their requirement during the official enrolment period in February.

Deadlines for Discontinuation of Enrolment

Students wishing to apply to discontinue subjects without failure should ensure that they do so by the University's stated deadlines for first session, second session and full year subjects.

Students should state why they are discontinuing a subject or subjects in the space provided on the SR2 form. Applications to discontinue will not be accepted without this section completed.

Subject Substitution

Students wishing to apply to substitute "outside" subjects for General Education subjects may do so on the form GE.SUB.1 [new rules] or GE.SUB.2 [old rules] available from the Centre for Liberal & General Studies office. Please note that the rules for substitution are different for students studying General Education under the GS requirements administered by the Department of General Studies, and those studying under the General Education Program requirements introduced from 1988.

An "outside" subject is defined as any subject not offered by Centre for Liberal & General Studies nor bearing a "26" prefix subject number. Subjects offered by other Schools of the University [other than those taught for the General Education Program], and other tertiary institutions would be classified as outside subjects.

For an overview of the differing requirements, see "General Education Program Implementation, Transition Arrangements" above.

Students completing under General Studies rules

These students will continue to be able to substitute according to the Guidelines established by Board of Studies in General Education and administered by the Department of General Studies. Contact the Centre's Office for information about permissible substitutions.

Students enrolling under General Education Program rules

These students will be able to apply to substitute according to the General Education requirements established by the University. Under these requirements, the Standing Committee on General Education will need to determine whether a subject proposed for substitution satisfies the University's objectives for any of the categories of study in the Program.

See "The General Education Requirements" in Part 1 above for details. Contact the Centre's Office for information about the Standing Committee's policy on substitutions

Advanced Standing

Students transferring between courses within the University or transferring into a course from another institution may be eligible for advanced standing in General Education. The Academic Registrar will provide transferring students with information about eligibility.

Advanced standing provisions should be understood within the frameworks of requirements for different courses outlined in "General Education Program Implementation" above.

Miscellaneous Enrolment

Subject to demand from enrolled degree students for subjects offered, and the University's overall quota on miscellaneous enrolments, the Centre is happy to consider applications from people wishing to enrol in General Education subjects as miscellaneous students.

Potential applicants are advised that they

may be required to pay tuition fees to be set by the University.

For further information please contact the Centre's Administrative Officer at the address given at the front of this book.

Assessment: Additional Information

The University's policy on assessment for subjects in the General Education Program is set out in Part 1 above. Contact the Centre's office for information about assessment in individual subjects.

Attendance Requirement

Students are advised that the University has ruled that if students attend less than 80% of their possible classes in a subject they may be refused final assessment. Students should bear this in mind when:

- Selecting subjects at enrolment. Students should not attempt to enrol in subjects which they will not be able to attend as required.
- Enrolling late or varying enrolment. The attendance rule is applied to students enrolling late in a subject.

See "Late Enrolments" and "Varying Enrolments" above.

Class Locations

The locations for lectures and tutorials are posted on the Centre's noticeboard in the week before the start of each session.

Laboratory times and locations are made available at lectures by the conveners of subjects with labs.

Tutorial locations are posted for students' information only. Students must attend the tutorial location/time specified for them by the subject convener at lectures

Further information about Subjects and the Program

Up-to-the-minute information about the General Education Program, timetabling and related matters is posted on the Centre's noticeboard outside Room G.58, Morven Brown Building.

The Centre also publishes guides to essay writing and related topics. Contact the Centre's office for further details.

3. Subjects in the program

Summary of Subjects by Category and Area

CATEGORY A

{This category provides an introduction, in non-specialist terms, to an understanding of each of the following environments in which humans function}

(1) Physical

I Contemporary Developments in Science

- 26.420 Astronomy
- 26.421 Atmosphere, Weather and Climate
- 26.444 Science of Music
- 26.448 Understanding the Earth
- 26.452 The World of Light
- 26.4509 ... Modern Cosmology
- 26.432, 26.4515 & 26.4516 From Alchemy to DNA

(2) Biological

II Human and Animal Behaviour

- 26.433 Human and Animal Behaviour
- 26.459 The World of Colour

III Humans and the Australian Environment

- 26.424 Australian Environment and Human Response
- 26.436 Man and the Sea
- 26.4527 ... An Introduction to Australian Ecosystems and Their Management

(3) Technological

I The Human Use of Matter, Energy and Information

- 26.429 Energy: Options for the Future
- 26.449 The Unreasonable Effectiveness of Mathematics
- 26.460 Minerals Game: Nature Sets the Rules
- 26.4506 ... Harnessing Energy: The Arrow of Time
- 26.4508 ... Measuring up the Universe: The Development of Scientific Instruments
- 26.4522 ... Consumer Chemistry in the Marketplace
- 26.4524 ... The Nuclear Arms Debate

II Technology and Social Change

- 26.443 Science and Technology in Modern Society
- 26.445 The Social Development of Technology
- 26.455 Technology and Regional Change
- 26.4523 ... Science and Governments in Historical Perspective

(4) Built and Planned*I The Design and Management of the Urban Environment*

26.4501 ... Australian Urban Studies

26.4514 ... Evolution of the Built Environment

II The Management of the Australian Environment

26.425 Australian Natural Environments

26.431 Environmental Planning

III The Global Environmental Crisis

26.441 Rainforests, Destruction and Development: The Amazonian Case

26.4504 ... Global Crisis: Transition to a Sustainable Society

(5) Social and Economic*I The Generation and Distribution of Wealth in Australia*

26.423 Australian Economic Policies

26.434 Introduction to Economics

II The Distribution of Political Power in Australia

26.439 The Political System in Australia

III Contemporary Social Movements in Australia

26.426 Australian Trade Unions

IV Development and Underdevelopment: The Role of Australia

26.428 Economic Issues of Less Developed Countries

26.4513 ... Development and Underdevelopment: The Role of Australia

V Social Conflict and Integration in Australia

26.435 Introduction to Industrial Relations

26.4510 ... Multicultural Societies

26.4521 ... Aboriginal Australia: A view of its Past, Present and Future

VI Australia and the World

26.457 Australia and the World Economy

26.461 Human Rights and the International Community

26.4517 ... The French Speaking World: The International Experience

26.4518 ... The French Speaking World: The Metropolitan Experience

(6) Information and Communication*I The Mass Media and Democracy*

26.447 Understanding Film

26.4507 ... Mass Media and Communication

(7) Symbolic and Expressive*I The Making of Australian Culture*

26.4525 ... The Making of Australians

26.4528 ... Culture Influences in Contemporary Society

II Religion and Social Change

26.4511 ... Religion and Social Change

III Expressive Forms in Australian Culture

26.454 Music in its Social Contexts

26.458 Theatre and Society in the 20th Century

26.4519 ... The Influence of Theatre and TV on the Development of Young People

CATEGORY B

{This category provides to and a critical reflection upon the cultural bases of knowledge, belief, language, identity and purpose}

I Conceptions and Models of the Universe

26.517 Order, Chaos, Entropy

26.5501 ... Conceptions of Physical Reality

26.5509 ... The Clockwork Universe and the Age of Modern Technology

26.5521 ... The Forms and Patterns of Matter

II Conceptions and Models of Human Nature

26.505 Individual and Social Psychology

26.516 Theories of Human Nature

26.5515 ... The Nature of and Conditions for Human Creativity

III Language, Symbols, Images and Society

26.507 Language and Society

26.512 Language Learning: Seeing the World Through Different Systems

26.5512 ... From Literature to Film: Reading Film as a Medium

26.5516 ... Writing, Computing, and Influence

IV Knowledge, Science and Belief

26.503 Changing Conceptions of the Scientific Method

26.504 Computers, Logic and Thought

26.506 Knowledge and Belief in the Sciences

V Gender and Society

26.451 Women, Science and Society

26.5518 ... Gender and Political Theories of Equality

26.5519 ... Sexual Representation and Gender Discrimination

26.5520 ... Gender, Ambivalence and Literature

VI Beliefs, Values and Ideologies

26.5510 ... Beliefs, Values and Ideologies

26.5513 ... Values, Ideologies and Nuclear Technology

VII Conceptions and Models of Economic Systems

26.509 The Origin and Development of Economic Ideas

VIII Conceptions and Models of Social Systems**IX Conceptions and Models of Moral and Legal Systems**

26.508 Moral Dilemmas About Life and Death

X Defining and Questioning Social Roles

26.5502 ... The Roles of Scientists and Engineers in Contemporary Australia

26.5517 ... Perceptions of Science and Scientists in Literature and the Media

There are no Category C subjects offered in 1989

Subject

Exclusions

26.420	Astronomy	1.901	Astronomy.
26.423	Australian Economic Policies	15.001	Microeconomics 1
		15.011	Macroeconomics 2.
26.424	Australian Environment & Human Response	27.010	Land Studies
		27.030	Environmental Processes
		27.111	Applied Physical Geography 1
		27.801	Introduction to Physical Geography
		27.818	Australian Environment & Human Response
		27.295	Physical Geography for Surveyors.
26.425	Australian Natural Environments	27.111	Applied Physical Geography 1
		27.811	Physical Geography.
26.426	Australian Trade Unions	15.512	Industrial Relations 1B.
26.428	Economic Issues of Less Developed Countries	BCom and BEc students	
26.431	Environmental Planning	26.253	Environment Planning
		36.211	Introduction to Planning
		36.411	Town Planning
		36.4014	Environmental Planning.
26.432	From Alchemy to DNA: Obs & Expts in Chem	26.4515	From Alchemy to DNA: Obs & Expts in Chem [Part 1]
		26.4516	From Alchemy to DNA: Obs & Expts in Chem [Part 2].
26.433	Human & Animal Behaviour	12.100	Psychology 1.
26.434	Introduction to Economics	15.001	Microeconomics 1
		15.011	Macroeconomics 1
		26.162	Economics
		26.610	Economics
		26.615	Economics.
26.435	Introduction to Industrial Relations	15.511	Industrial Relations 1A
		26.157	Introduction to Industrial Relations.
26.436	Man & the Sea	45.112	Marine Ecology
		68.302	Introduction to Marine Science
		26.225	Man & the Sea.
26.439	The Political System in Australia	26.1503	Political Conflict in Australia
		26.311	Political Conflict in Australia
		54.1006	Australian Political System.

Subject**Exclusions**

26.441 Rainforests, Destrctn & Devt: The Amaz. Case	26.221 Amazonia - Saga of a Rainforest.
26.443 Science & Technology in Modern Society	62.110 Science, Tech. & Social Change
26.444 Science of Music	26.226 Science of Music.
26.448 Understanding the Earth	25.110 Earth Materials & Processes 25.120 Earth Environments & Dynamics 25.520 Geology for Mining Engineers 1 25.5331 Physical Geology for Petroleum Engineers 1 26.220 Understanding the Earth.
26.449 The Unreasonable Effectiveness of Math.	26.223 The Unreasonable Effectiveness of Math.
26.4504 Global Crisis: The Transition to a Sustainable Soc	26.2501 Technology & Development 26.4513 Devt & Underdevt: The Role of Aust
26.4507 Mass Media & Communication	26.1523 The Mass Media.
26.4509 Modern Cosmology	26.2508 Cosmology 26.566 Cosmology.
26.451 Women, Science & Society	26.224 Women, Science & Society.
26.4510 Multicultural Societies	26.1512 Multicultural Societies 26.4007 Ethnic Minorities & US Society.
26.4513 Devt & Underdevt: The Role of Aust.	26.2501 Technology & Development 26.2502 Political Economy of Development 26.2503 Sociology of Development 26.4504 Global Crisis: The Transition to a Sustainable Soc.
26.4514 Evolution of the Built Environment	11.4101 Princ. of Dsgn, 35.591 Built Envmt I, 36.211 Intro to Plan., 37.0001 Intro to Landscape Architecture
26.4515 From Alchemy to DNA: Obs & Expts in Chem [Pt I]	26.432 From Alchemy to DNA: Obs & Expts in Chem.
26.4516 From Alchemy to DNA: Obs & Expts in Chem [Pt II]	26.432 From Alchemy to DNA: Obs & Expts in Chem.
26.4517 The French Spkng Wrld: The International Experience	26.131 The French Speaking World.

continued over

from previous page

26.4518	The French Spkng Wrld: The Metro Experience	26.131	The French Speaking World.
26.4528	Cultural Influences in Contemporary Society	26.427	Cultural Influences in Contemporary Society
26.454	Music in its Social Contexts	26.331	Music in Society.
26.457	Australia and the	15.101H	Australia in the International Economy in the 20th Century
		15.102H	Australia and the Asia - Pacific Economies: Hist. Perspectives
		15.213H	Australian Economic Develt. in the 20th Century
26.503	Changing Conceptions of the Scientific Method	26.2507	Philosophy of Science
		26.817	Philosophy of Science.
26.505	Individual & Social Psychology	12.100	Psychology 1.
26.506	Knowledge & Belief in the Sciences	26.222	Knowledge & Belief in the Sciences
		62.032	The Scientific Theory
		62.1021	Man, Megalith & Cosmos
		62.111	Man, Megalith & Cosmos
		62.202U	Scientific Theory
		62.219U	Knowledge & Belief in the Sciences.
26.507	Language & Society	50.208	Language & Society.
26.509	The Origin & Development of Economic Ideas	26.1504	Political Economy: Adam Smith to Karl Marx
		26.1505	Economic Thought: Marginalism to Monetarism
		26.613	Economic Thought: Adam Smith to Present Day.
26.512	Language & Learning: Seeing the World Through Different Systems	65.1000	Introductory Spanish Language & Civilization - A
		65.1100	" - B
		65.1200	" - C
26.5509	The Clockwork Universe & the Age of Mod Tech	26.569	Philosophy of Technology
		26.2504	Philosophy of Technology [Ancient]
		26.2505	Philosophy of Technology [Modern].

Subject Descriptions • Subjects Listed by Number

NOTE: For exclusions see pages 32-34.
Textbooks are indicated where prescribed.

26.420 Astronomy

Cat.: A (1) Physical

Involves an overview of Astronomy, from the Solar System to the galaxies. Includes an exploration of the Solar System to indicate the advances that have been made, particularly and most recently with space probes, in our understanding of planetary systems. The characteristics of stars discussed along with their use in establishing an understanding of stellar evolution. The treatment of galaxies includes consideration of the nature of our galaxy and its relation to other external systems, concluding with a brief discussion of aspects of observational cosmology. Discussion of such recent topics as black holes, pulsars, quasars.

26.421 Atmosphere, Weather and Climate

Cat.: A (1) Physical

A description of the Earth's atmosphere from the ground up to the Sun. Elementary physics of the atmosphere. Problems with the ozone layer, carbon dioxide increase, nuclear winter and climatic change. Normal and extreme weather in the Australian region. Cyclones, storms and drought. Effects of changes on the Sun upon the upper atmosphere. The ionosphere, magnetic storms and aurora.

26.423 Australian Economic Policies

Cat.: A (5) Social and Economic

An introduction to the theory and practice of economic policy-making in Australia. Policies considered include budgetary and monetary policies, exchange rate and other external policies, wages and incomes policies and policies towards industries, including the role of the Industries Assistance Commission, trade practices, legislation, consumer protection and research and development policies.

26.424 Australian Environment and Human Response

Cat.: A (2) Biological

Characteristics of the Australian environment as seen from a global context and the status of man. Topics considered include: the structure function and origin of the lithosphere, hydrosphere and biosphere; the plate tectonic

model and major landforms; atmospheric circulation, energy and radiation balances; the hydrological cycle; floods and droughts; characteristics and distribution of soils and vegetation; analysis of ecosystems. Lectures are supplemented with tutorials, workshops and a one-day field trip. Students are required to [provide some materials for workshops and to contribute to the cost of the field trip.

Textbooks: Strahler A.N. and Strahler A.H. *Modern Physical Geography* (3rd ed.) Wiley, 1986; Goudie a. *The Human Impact on the Natural Environment*, Blackwell, 1986.

26.425 Australian Natural Environments

Cat.: A (4) Built and Planned

Interdependencies of climate, soils, and vegetation and animals are briefly reviewed on global and regional scales, providing a background to the question "how and why is Australia different?" In focusing on this question the course gives particular attention to hazardous and other economically significant aspects of Australian natural environments.

Textbooks: Bell F.C. *Natural Hazards in Australia*, Longman Cheshire, 1989.

26.426 Australian Trade Unions

Cat.: A (5) Social and Economic

An examination of the role of unions in Australian society. Theories of the labour movement; origins, growth and development of unions; union aims and methods; union policies and strategies; white collar and professional unions; inter-union cooperation and conflict; unions and the Australian Conciliation and Arbitration Commission; unions and economic policy; unions and the trade cycle; unions and technological change; unions and the political process; unions and the Accord; trade union laws; unions and women's issues; the Australian Council of Trade Unions.

Textbooks: Rawson D.W. *Unions and Unionists in Australia* Allen & Unwin; Martin R.M. *Trade Unions in Australia* (2nd ed.) Hammondsorth Penguin

26.428 Economic Issues of Less Developed Countries

Cat.: A (5) Social and Economic
Economic issues facing less developed countries. Causes of low income levels, including population levels, lack of savings, distribution of income. Benefits and costs of agricultural and industrial development. Constraints imposed by the international economy, including effects of alternative development policies.

Textbooks: Todaro M., *Economics for a Developing World* Longman.

26.429 Energy: Options for the Future

Cat.: A (3) Technological
Reports in the media predicting, on the one hand "energy shortages", and on the other an "oil glut", have focussed attention in recent years on the fact that energy is a finite resource. Yet one of the central principles of Science states that energy is always conserved. How can this contradiction be reconciled? In this subject, we consider the different forms of energy, and the major processes for converting energy from one form to another. Among other topics considered will be the limits to more efficient use of energy, and the potential of various alternative energy sources to satisfy human needs, with particular emphasis on the Australian situation.

Textbooks: Printed notes will be supplied at nominal cost.

26.431 Environmental Planning

Cat.: A (4) Built and Planned
The environmental planning process and the individual's rights under it. The objectives of environmental planning and how the system operates, with particular reference to New South Wales. The nature of planning philosophy, environmental law and administrative structures. Topics: the central business district of cities, housing and equity, land-use and transport interaction, urban design, location theory, and urban and rural conservation. As planning is a temporal concept, historical, contemporary and future themes are built into the subject. Assessment is by written assignment, tutorial paper, and class participation. The assignment is based on the lecture material, and students are also required to prepare a written paper for tutorial discussion.

Textbooks: Hamnett S. & Bunker, R. (eds), *Urban Australia*, Mansell Nelson Wadsworth; McLoughlin J.B. & Huxley M. (eds), *Urban*

Planning in Australia: Critical Readings, Longman, Cheshire.

26.432 From Alchemy to DNA: Observations and Experiments in Chemistry

Cat.: A (1) Physical
Observation and experiment are essential to science. Theories put forth on the basis of limited observation and without test have often been shown to be incorrect and misleading. Formulation of suitable working hypotheses can assist in the avoidance of such pitfalls. The antecedents of present day chemical science, the development of concepts and modes of reasoning which form the bases of current advances, will be examined. Topics to be addressed include microstructure and chemical architecture, chemical reactions and energetics, macromolecules and biotechnology. The latter part of the subject will focus on the chemistry of living systems, the chemistry of DNA, medicines and drugs, natural products and folk medicines. Emphasis will be on the search for correlations between chemical structure and activity, the beneficial and deleterious aspects of chemical research, environmental effects and other current chemical issues.

26.433 Human and Animal Behaviour

Cat.: A (2) Biological
Although philosophers and other thinkers have been concerned with psychological issues for a very long time, scientific studies of psychology which explicitly recognise interactions between body and mind, are quite recent. This subject focuses on the ways human and animal responses, including those of infants and small children, can be measured, and then used to give information about underlying psychological and biological processes. Specific topics to be covered include the factors controlling thinking, memory and attention, the way in which information about the environment is acquired, how experience modifies behaviour and how actions are driven, sustained and controlled. The biological bases of behaviour will be introduced where necessary.

Note: This subject is the Session 2 component of 12.100 Psychology 1. Students who have already completed 12.100 are excluded from this subject.

Textbooks: Carlson N.R., *Psychology, The Science of Behaviour*, Allyn and Bacon.

26.434 Introduction to Economics

Cat.: A (5) Social and Economic
An introduction to economic theory and policy, and their application to the Australian economy, including important aspects of macroeconomics, microeconomics and international economics. Topics include: the monetary system, unemployment, fiscal and monetary policies; consumer choice, production, efficiency, market structure, labour markets; international trade and finance; exchange rate.

Textbooks: Baumol W.J., Blinder A.S. & J.R.L. Hicks, *Economics*, Harcourt Brace Jovanovich; Indecs Economics *State of Play 5*, Allen & Unwin, 1986.

26.435 Introduction to Industrial Relations

Cat.: A (5) Social and Economic
The subject examines some of the more significant aspects of Australian Industrial Relations. The focus is on current developments in such fields as negotiations, conciliation and arbitration, management and trade union strategies, wages and conflict. Students gain insights into the complexities of employer/employee relationships which enables a greater understanding of the world of work. The approach to teaching encourages student participation.

Textbooks: Dabscheck B. & Niland J., *Industrial Relations in Australia*, Allen & Unwin. Deery S & Plowman D.H., *Australian Industrial Relations*, McGraw Hill.

26.436 Man and the Sea

Cat.: A (2) Biological
The subject includes discussion of marine living organisms, ocean chemistry, geology and ocean physics, and their interrelationship. Emphasis will be placed on case studies and the impact of development of industry and recreational areas in the Sydney area. Lectures will be supplemented with field trips.

26.439 The Political System in Australia

Cat.: A (5) Social and Economic
This subject focuses on issues in Australian politics. The issues covered include those such as peace, equality and defence as well as those about the political system itself such as the fairness or otherwise of Australia's electoral systems, and the power of the Governor-General and the Senate. In order to make such issues comprehensible the subject

covers the components of the Australian political system - the House of Representatives, the Senate, the Governor-General, the Public Service, the High Court and the States as well as the relationships between these components.

Textbooks: Lucy R., *The Australian Form of Government*, Macmillan.

26.441 Rainforests, Destruction and Development: The Amazonian Case

Cat.: A (4) Built and Planned
The Amazonian rainforest is unique in its size and importance, not just to the countries in which it lies, but to the entire world. The geography of the area, "natural" ecosystems; indigenous peoples and their cultures. The impact of modern development on the environment and possible deleterious effects on the Earth's ecosystem. Rainforest resource management within the context of policy choices to be made by developing countries.

26.443 Science and Technology in Modern Society

Cat.: A (4) Technological
An introduction to the interaction of science and technology with social, economic and political development in the twentieth century. Major forms of organized scientific research and technological innovation and their differential development in different countries. The control of science and technology; basic concepts in science and technology policy; the role of experts in modern societies, social and ethical controversies over science and technology, topics to include genetic engineering and IVF, information technology and work, energy strategies.

Textbooks: Barnes B., *About Science*, Blackwell; Pacey A., *The Culture of Technology*, M.I.T. Press.

26.444 Science of Music

Cat.: A (1) Physical
The patterns and regularities of music are analysed and compared with those of science. We examine the way in which instruments produce musical sounds, how sound is transmitted and how we perceive and analyse music. The subject has laboratory sessions in which we investigate examples of the phenomena discussed in class. (Tone-deaf students would be disadvantaged in the laboratory). The course does not require a detailed knowledge of the terminology of either music or science.

26.445 The Social Development of Technology

Cat.: A (3) Technological

This course considers the various social, cultural and political forces that influence the direction in which technologies develop in industrial societies. Various technological controversies will be covered from reproductive technologies to food production technologies; and also various engineering projects, such as the Sydney Harbour tunnel, that have been in the news recently. The concepts of risk, accident and expertise will be discussed fully, as well as the role of education, goals and values in shaping ethnologists and influencing their designs.

26.447 Understanding Film

Cat.: A (6) Information and Communication

Film is more than entertainment. It is an industry backed by a sophisticated technology. It is a mass medium which comes in many forms, as feature, documentary or experiment. Film is politics, it is art, it is an essential ingredient in myth-building. All these aspects will be highlighted in this subject which centres around classic examples and examines particularly the position of Australian cinema.

Textbooks: Bordwell D. & Thompson K., *Film Art*, Knopf; Dermody S. & Jacka L., *The Screening of Australia*, Currency.

26.448 Understanding the Earth

Cat.: A (1) Physical

Formation, structure and dynamics of the Earth. Nature of geological processes involved in continental drift, mountain building and the formation on continents and ocean basins. Development of Australia during the past 4000 million years. Fossils, the origin and evolution of life, and the geological time scale. Economic importance of geology. Impact of exploitation of natural resources on the environment.

Textbooks: *Perspectives of the Earth*, Australian Academy of Science.

26.449 The Unreasonable Effectiveness of Mathematics

Cat.: A (3) Technological

What is mathematics? (Is it more than a language? How does manipulating marks on paper let us know about and plan the world? What are its limitations? Why are mathematical models used in more and more fields? Why do people find mathematics so hard?) How exactly is mathematics so effective? Case studies will be drawn from technology (eg.

paths through networks, computer simulations) and the physical and social sciences (eg. predicting orbits, evaluating historical data). No technical knowledge of mathematics is assumed.

26.4501 Australian Urban Studies

Cat.: A (4) Built and Planned

The subject is an introduction to urban studies, focussing on urban politics and urban change. It will review various theories and research relating to urban development, design and planning, urban government, urban problems and the range of responses to such problems. There will be an emphasis on issues of contemporary concern and public debate.

26.4504 Global Crisis: The Transition to a Sustainable Society

Cat.: A (4) Built and Planned

The subject examines the argument that our society's commitment to economic growth and affluent living standards is generating a number of critical global problems, such as resource and energy scarcity, destruction of the environment, the gap between rich and poor countries and the underdevelopment and poverty of the Third World, international conflict, unemployment, waste and quality of life issues. Most attention is given to the view that our society is unsustainable and that fundamental change is required to a more simple and self-sufficient way of life. Alternative lifestyles, technologies and movements are discussed. Films, 'games' and a visit are involved.

26.4506 Harnessing Energy: The Arrow of Time and the Temperature of the Sun

Cat.: A (3) Technological

Energy is all pervasive! This course will address the concept of energy, the relationship between energy, work and heat, and the balancing of energy accounts in nature. Topics to be covered include the harnessing of energy from chemical reactions, the energetics of biological systems, atmospheric systems, the development of energy technology, and the role and importance of our choices of energy sources in the economic and political aspects of modern life.

26.4507 Mass Media and Communication

Cat.: A (6) Information and Communication

Major developments in (mass) communication and the media in the 20th century. Introduction

to basic concepts and theoretical perspectives, and analysis of newspapers, magazines, radio and TV programmes. Topics include: the nature and function of communication, the role of the media in contemporary society, changes in media technology, ownership and control of the media, media and politics, images of women, advertising, alternative media, news and current affairs, the politics of programming, aspects of audience reception.

Textbooks: Windshuttle K., *The Media*, Penguin; Meyvowitz J., *No Sense of Place: The Impact of Electronic Media on Social Behaviour*, OUP.

26.4508 Measuring up the Universe: The Development of Scientific Instruments

Cat. A (3) Technological

The development of the instruments and apparatus used in physical science will be discussed, and an attempt will be made to show how contemporary technical skills influence the course of science. Lectures will be supplemented by experience in using some of the equipment in the School of Chemistry's Museum of the History of Science.

26.4509 Modern Cosmology

Cat. A (1) Physical

Recent developments in astrophysical observations and their impact on our understanding of the nature of the observable universe. The relation of mathematical models to the physical world and our observations of it. A cosmological model involving an assumption of light propagation in our universe; its implications for relativity and gravitation, and for the nature of matter and of life. Students should have an interest in the nature of the world around us. Mathematical descriptions are employed but the emphasis is on their meaning rather than on mathematical manipulations.

Textbooks: Prokhovnik S.J., *The Logic of Special Relativity*, UNSW Press.

26.451 Women, Science and Society

Cat. B (V) Gender and Society

Social and historical background to the participation of women in science and technology. Explanations of Women's low participation and strategies for its increase. What science has said about women and women's response. How do social values/interests 'get into' science? Is a feminist science possible? What is the relationship

between gender and technology? Strategies for change from EEO to sci-fi.

26.4510 Multicultural Societies

Cat. A (5) Social and Economic

To examine, using a broadly comparative approach, the nature and consequences of European settlement and immigration in a number of societies, with special emphasis on Australia. Relations between settlers and indigenous peoples; relationships between ethnicity, class, status and power; and contrasts in the rates and nature of assimilation and mobility of different groups, are emphasised.

Textbooks: Bell R., *Multicultural Societies: A Comparative Reader*, Sable.

26.4511 Religion, Social Conservation and Social Change

Cat. A (7) Symbolic and Expressive

Religion, in one form or another, continues to be both a phenomenon in and an influence on the larger society. This subject will examine the variety of ways in which religious organizations and movements affect, directly or indirectly, structures of stability and the dynamics of change, as well as configurations of values in a society.

Textbooks: Schaeffer F.A., *How Then Should We Live - The Rise and Decline of Western Thought*, Flemming h. Rivell Co., 1976.

26.4513 Development and Underdevelopment: The Role of Australia

Cat. A (5) Social and Economic

A study of the paradox of 'poverty in the midst of plenty'. What are the causes of underdevelopment? What part does Australia play in either promoting or hindering development in the Asia-Pacific region? What does 'development' mean to an Aborigine in Australia? Is Australia in danger of becoming a 'banana republic'? What part can UNSW graduates play in promoting ecologically and socially equitable development in Australia and the world?

Textbooks: Donaldson P., *Worlds Apart* (2nd ed.), Penguin.

26.4514 Evolution of the Built Environment

Cat. A (4) Built and Planned

The intention is to develop an understanding of the relevance of Man's "culture" (that thing which his social, economic political, religious and physical environment gives rise to) to the

nature of the buildings and settlements which he devises, and an appreciation of the architecture and building (in particular in terms of materials and construction) of those cultures which can be seen to be providing the line to modern "western" building from as far back as "the stone ages".

26.4515 From Alchemy to DNA: Observations and Experiments in Chemistry [Part I]

Cat.: A (1) Physical

This course develops an appreciation of the contemporary chemical sciences, and of the people and issues associated with chemicals and their properties. This is done by description of a series of episodes which illustrate the essential themes of chemical science and involve some of the major names of 20th Century chemistry. Prior knowledge of chemistry is not assumed.

26.4516 From Alchemy to DNA: Observations and Experiments in Chemistry [Part II]

Cat.: A (1) Physical

This subject will focus on the chemistry of living systems, the chemistry of DNA, speculation on the chemistry of the origin of life, medicine and drugs, natural products and folk medicines. Emphasis will be on the search for correlations between chemical structure and activity, the beneficial and detrimental effects of chemicals, environmental effects and other chemical issues. Some chemical knowledge will be assumed either from Part I of "From Alchemy to DNA", HSC Chemistry, or the equivalent.

26.4517 The French Speaking World: The International Experience

Cat.: A (5) Social and Economic

An introduction to the reasons for and the nature of the extension of French political, economic and cultural influence to other parts of the world. This subject will consider the distinctive character and long-term effects of the French colonization of Canada, Indo-China, the West Indies, parts of Africa and the Pacific. Special attention will be given to the relations between France and Australia arising from French policy and influence in the Pacific.

26.4518 The French Speaking World: The Metropolitan Experience

Cat.: A (5) Social and Economic

An introduction to the political and social

systems of modern France. This subject will consider the distinctive character of French language, political institutions, social structure and intellectual and cultural life. Special attention will be given to movements for regional autonomy, the feminist movement and nuclear policy. Students will be asked to draw comparisons with the systems, institutions and character of their own society.

Textbooks: Ardagh J., *France Today*, Secker & Walburg, London, 1987; Zeldin T.H., *The French*, Fontana.

26.4519 The Influence of Theatre and Television on Young People

Cat.: A (7) Symbolic and Expressive

This course proposes to investigate the influence of theatre and television on young people, from the point of view of the historical development of the two media forms in view of developing strategies of critical media analysis. Four specific areas will be covered: 1) Adventure - fantasies (from Peter Pan to Inspector gadgety); 2) Fairy Tales (from Perrault to Disney); 3) Theatre-in-Education and Children's Television (current Australian examples), 4) the alternate concept of an 'emancipatory' theatre for young people (GRIPS Theatre Berlin). One key concept to be explored throughout the seminars is 'imagination' (play/fantasy as a 'child-generic' concept, fantasy as escapism, social imagination, imagination as a force of production).

Textbooks: Australian Theatre Workshop, *One Act Pkays - Series 2*, Heinman, 1983; Young D., *Eureka*, Currency Press, Sydney, 1978; Zipes J. (ed.), *Political Plays for Children* Telos Press, St Louis, 1976; Hewett D., *Golden Valley/Song of the Seals*, Currency press, Sydney, 1985.

26.452 The World of Light

Cat.: A (1) Physical

A general non-mathematical introduction to the nature of light and its manifold interactions with the world around us. Lectures will consider various phenomena associated with visual perception. They will also show how the different interactions between light and matter can produce several atmospheric phenomena of great beauty. The possible influence of the increasing comprehension of the behaviour of light upon the history of the visual Arts will also be treated.

26.4521 Aboriginal Australia : A View of its Past, Present and Future

Cat.: A (5) Social and Economic

This subject is offered in order to provide an Aboriginal perspective on Aboriginal society as it was in the past, as it is at present and its prognosis for the future. It is designed to provide an equi-ponderate account where previously the Aboriginal contribution was either misstated, misinterpreted or completely ignored. In presenting a broad overview of Aboriginal Australia from antiquity to the present day, contemporary Aboriginal issues such as land rights, political movements, and relationships between Aboriginal and the law, can be addressed from an evolutionary context rather than from reactive judgement based solely on the face value of the end product.

Textbooks: Broome H. *Aboriginal Australians: Black Response to White Domination, 1788 - 1980*. Allen & Unwin.
 Reynolds H. *Frontier*. Penguin.

26.4522 Consumer Chemistry in the Market Place

Cat.: A (3) Technological

This course aims to give participants a better understanding of the chemical effects, uses and hazards of products available in the market place in a consumer society. It will endeavour to provide appropriate general chemical background and information to enable consumers to select chemical products which are right for a wider variety of applications in the workplace and the home.

Textbooks: Selinger B., *Chemistry in the Market Place*, (3rd ed.) HBJ Publications 1988

26.4523 Science and Governments in Historical Perspective

Cat.: A (3) Technological

For good or ill, Modern science is today heavily dependent on the patronage of government. The object of this course is to draw attention to some of the contemporary implications of the situation by considering its historical origins. The course will proceed by way of a series of case studies which will include the following governments and scientific exploration from the Endeavour onwards, French Acadmie des Sciences, the French Revolution and the beginnings of organised government support for scientific research, the state, industrialization and

sciences in Europe in the nineteenth century, the foundation of government instrumentalities for scientific research e.g., the British DSIR or the CSIRO, and scientists of two world wars.

26.4524 The Nuclear Arms Debate

Cat.: A (3) Technological

The nuclear arms debate is perhaps the greatest issue of our time. Can we learn to live together in reasonable harmony on this planet, or will the human race extinguish itself in some future nuclear catastrophe? In this course, we will discuss the principles upon which nuclear weapons are constructed, the likely effects of their use, and strategic doctrines governing their deployment. The treaties and institutions attempting to control nuclear arms will be outlined. Some contentious issues will be debated, including the U.S. Strategic Defence Initiative program, and Soviet and U.S. installations and deployments in the Pacific region.

26.4525 The Making of Australians

Cat.: A (7) Symbolic and Expressive

How did Australians develop the repertoire of collective habits of thinking and acting which shape and give meaning to the existence and behaviour of particular groups and to the whole society? Australian culture has been formed by a wide range of historical events and experiences in a specific geographical setting. This subject will examine both the collective habits and the key historical experience of Australia and ask whether they need to be changed for this society to survive and flourish in the future.

Textbooks: Horne D., *The Public Culture*; Horne D. *Think - Or Perish! Towards a Confident and Productive Australia*; Horne D. *The Lucky Country Revisited*.

26.4527 An Introduction to Australian Ecosystems and their Management

Cat.: A(2) Biological

This subject will provide an introduction to the principles, practice and issues of the biological science of ecology. It will be developed in the context of, and with reference to, the Australian ecosystems and their management. The major component of the subject will be field work at the University's field station at Smiths Lake.

Textbooks: Colinviaux P.A. *Ecology*, 2nd ed. Jacaranda Wiley, Sabath M.D. & Quinnett S., *Ecosystems: Energy and Materials*, Longman Cheshire, 1981; Recher H.F., Lunney D & Dunn

I., *A Natural Legacy. Ecology in Australia*. (2nd ed.) Pergamon.

26.4528 Cultural Influences in Contemporary Society

Cat.: A (7) Symbolic and Expressive

A study of contemporary culture (high and popular, mainstream and alternative, folk and mass culture) and its historical evolution. Includes fiction, film, television, drama, romance, comedy, music, sport, minority cultures and recreational activities, with emphasis on popular forms. The course introduces basic concepts and major theoretical perspectives, such as the relationship of (mass) culture to the electronic media, economic and social aspects in the production and consumption of culture, the politics of culture. Focuses on the Australian context but includes global developments.

26.454 Music in its Social Contexts

Cat.: A (7) Symbolic and Expressive

Music as signals in secular and religious ceremonies, drama, advertising and magic; vocal melody and its origins; instruments as tools and signs; tribal music and its organisation; traditional musics and their study; social meaning in the Western concert industry, opera and the rock industry; musical notation and its effect on music and musicians; the notion of copyright; transplanted peoples and their musics.

26.455 Technology and Regional Change

Cat.: A(3) Technological

The impact of technological change on the spatial organization of human activities and regional development and disparities. The implications of technological change on population distribution, resource utilization, and settlement patterns are examined at different scales emphasizing the social consequences at the community and regional level. Examples are taken from Third World and modernized countries, with particular reference to Australian case studies, and are set within the context of neoclassical and structural theories of development and underdevelopment. The relationship between appropriate technologies and development, and the mode of production and the means of production (technology) will be examined, with particular reference to social and environmental impacts.

Textbooks: Smith D. *Where the Grass is*

Greener, Penguin, Harmondsworth. Haggett P., *Geography. A Modern Synthesis*, Harper & Row.

26.457 Australia and the World Economy

Cat.: A (5) Social and Economic

Australia's changing relationship with the world economy since Federation in 1901. Topics covered include:- the growth and development of the international economy; capital inflow and foreign ownership in Australia; causes and consequences of migration to Australia; growth of Australia's foreign trade; impact of two world wars and the Great Depression on Australia; the post second world war boom; Australian economic relations with the 'great powers' (Britain, United States, Japan); the world economy in the 1970s and 1980s; Australia's trade protection; the future of Australia's standard of living.

26.458 Theatre and Society in the Twentieth Century

Cat.: A (7) Symbolic and Expressive

A study of some of the major directions taken by theatre in the twentieth century and ways in which these developments have been shaped by, or have become expressions of significant social, political and cultural movements of the period.

Textbooks: Strindberg A., *Six Plays*. (ed E Sprigge); Willett J. (ed), *Brecht on Theatre*. Methuen; McGrath J. *A Good Night Out*, Methuen; Artaud A., *The Theatre and its Double*, Doubleday.

26.459 The World Of Colour

Cat.: A (2) Biological

The nature of light and colour. Physiological, psychological and psychophysical aspects of colour and colour vision. Colour vision theories, colour vision defects and their assessment. Colour in television and films. Colour in industry including colour coding, road and air transport and safety, and the paint, textile and printing industries. Colour in nature, design and the arts. The role of colour in professions e.g., dentistry, medicine, pharmacy, optometry and armed forces. Colour vision of other species including insects, invertebrates, vertebrates, and primates.

Textbooks: Hunt R.W.G., *The Reproduction of Colour*, London Fountain Press, 1975; Chamberlin G.J. & Chamberlin D.G., *Colour Its Measurement, Computation and*

Application, 1980; Voke J., *Colour Vision Testing in Specific Industries and Professions*, London, Keeler, 1980

26.460 The Minerals Game: Nature Sets the Rules

Cat.: A (3) Technological
Civilization sustains itself by consumption of the earth's minerals and energy resources. The course examines the inherent difficulties and uncertainties that control the detection, extraction and processing of such resources and reviews these problems in the light of Australia's present and future role as a major supplier of primary commodities. Techniques for development of a resource are governed by the specific nature and location of that resource within the earth's crust. The course critically examines the attitudes and approaches taken by scientists and engineers towards possible solutions to this situation.

Textbooks: *Perspectives of the Earth*, Australian Academy of Science, Canberra; Sweet KA, *Mining I*, Technical Publication Trust, Perth, 1984; Selected papers and general readings from *Scientific American*, *World Coal*, *World Oil*, etc.

26.461 Human Rights and the International Community

Cat.: A (5) Social and Economic
Human Rights Law is concerned with the protection of individuals (and groups) against the abusive use of state power. Existing legal protection systems (international, regional and domestic) will be examined, as will be their historical development, the wider international legal and political systems in which they must operate; on the mechanisms, formal and alternative, which exist for their enforcement. The protections offered to some specific groups (eg. refugees, children) and some issues of particular concern (eg. disarmament, interference with the independence of the judiciary, the use of states of emergency) will be used as vehicles for consideration of the wider system.

Textbooks: The major international human rights instruments; Sieghart P., *The Lawful Rights*, OUP, 1985; Robertson A K., *Human Rights in the World*, Manchester UP, *Human Rights in International Law: Legal and Policy Issues*, 2 vols. Clarendon Press, Oxford, 1984.

26.503 Changing Conceptions of the Scientific Method

Cat.: B (V) Knowledge, Science and Belief
Traditionally, scientific growth is supposed to have occurred through deriving theories by induction from careful observation. However, some recent theorists have argued that scientific growth has resulted from guesses, that theories precede observations and are used to interpret the results of observations, and that the History of Science contains revolutions which undermine the most fundamental achievements of previous scientists. Subject examines both conceptions of scientific growth and draws out the social consequences of each conception.

Textbooks: Chalmers A.F., *What Is This Thing Called Science?*, QUP.

26.504 Computers, Logic and Thought

Cat.: B (v) Knowledge, Science and Belief
An introduction to the recent use of computers as a medium for modelling some human abilities. The course includes an introduction to logic and its role in reasoning and representing knowledge. The philosophical and psychological implications of computing and artificial intelligence are critically discussed.

Textbooks: Burton M. & Shadbolt N., *POP-11 Programming for Artificial Intelligence*, Addison-Wesley.

26.505 Individual and Social Psychology

Cat.: B (II) Conceptions and Knowledge of Human Nature.
This subject will emphasise the functioning of the individual as a whole and particularly the interplay of biological and social influences on cognitive and emotional states, and on both the onset and the amelioration of abnormal or maladaptive behaviour. Another major focus will be the nature and measurement of individual differences in the areas of abilities, personality, attitudes and values. The course will emphasise rigorous analysis of psychological concepts and systematic research, rather than speculative approaches.

Note: This subject is the Session 1 component of 12.100 Psychology 1. Students who have already completed 12.100 are excluded from this subject.

Textbooks: Carlson N.R., *Psychology, The Science of Behaviour*, Allyn and Bacon.

26.506 Knowledge and Belief in the Sciences

Cat.: B (IV) Knowledge, Science and Belief
An introduction to the philosophy and sociology of scientific knowledge. The way in which beliefs about the natural world become accepted as knowledge in various cultures, and especially in modern scientific culture. Topics are organised historically and include: oral traditions and the introduction of writing; the impact of the invention of printing; the origins and development of the experimental method; the effect of the political and social environment on scientific thought; rhetoric and rationality in scientific controversies; the nature of progress and theory change in the sciences; the relations between science and technology as forms of theoretical and practical knowledge.

Textbooks: Farrall L. *Unwritten Knowledge*, Deakin UP; Albury R., *The Politics of Objectivity*, Deakin UP; Charlesworth M., *Science, Non Science and Pseudo-Science*, Deakin U.P.; Turnbull D., *Knowledge Making* (available from lecturer).

26.507 Language and Society

Cat.: B (III) Language, Symbols, Images and Society
A study of the reflexive relationship between language and society, with special reference to the way in which language is appropriated for different purposes by different social groups. The subject will examine how language operates to convey attitudes and values, frequently in a covert way, and how an understanding of this process increases an individual's control over life, arms us against our manipulative and exploitative verbal environment, and enriches our appreciation of the literary uses of language. The subject will consider language as a vehicle for literature, for scientific discussion, for advertising, for political propaganda, for bureaucracy.

26.508 Moral Dilemmas About Life and Death

Cat.: B (IX) Conceptions and Models of Moral and Legal Systems
The advance of scientific knowledge and the development of technological prowess have given the human race greater power over life and death and thus raised new ethical problems and dilemmas. The issues raised by in vitro fertilization, experimentation of human embryos, genetic engineering and organ transplantation among others have extended older

debates about abortion, eugenics and euthanasia and raised new questions. This subject will study the nature of these questions and the various kinds of moral reasoning used in addressing them.

26.509 The Origin and Development of Economic Ideas

Cat.: B (VII) Conceptions and Models of Social Systems

A broad analysis of the philosophical origins and developments of economic thought from mercantilism to the present day with particular reference to the works of Adam Smith, Malthus, Ricardo, J. C. Mill, Marshall, Keynes and modern economists. The parallel progress of socialist thought is examined by considering the contributions of the Ricardian socialists, Karl Marx and the Fabian socialists, et. al.

Textbooks: Barber W.J., *A History of Economic Thought*, Pelican

26.512 Language and Learning, Seeing the World Through Different Systems

Cat.: B (III) Language, Symbols, Images and Society

This course is an introduction to language study which aims at creating an awareness of the complexity of language systems and a sensitivity to the different ways reality is interpreted by different cultures. A series of lectures will present current views of linguistic systems, their relation to society, and aspects of language learning. Language classes will provide direct practical experience of the issues discussed. These can be taken in French, German or Spanish.

Textbooks: Masoliver, Hakanson & Beeck, *ESO ES Student Book 1*, Longmans; Masoliver, Hakanson & Beeck, *ESO ES Workbook 1*, Longmans.

26.516 Conceptions of Human Nature

Cat.: B (II) Conceptions and Models of Human Nature

From the early development of both philosophical and scientific theories the concept of nature and, in particular, of human nature have been central. An understanding of human nature has been taken to be integral to explaining human behaviour and theories about what is essential to being a person have not only played a large role in the development of the human sciences but also have been determinative in underpinning social structures and moral and political systems and values.

This subject involves the study of classical and recent seminal discussions of the issues that arise in attempts to explore what might be essential to being human.

Textbooks: Set of readings (available from Co op Bookshop).

26.517 Order, Chaos, Entropy

Cat.: B (I) Conceptions and Models of the Universe

The course will study how simple mathematical techniques give precision to concepts of order (such as symmetry, in art and in crystal structure) and disorder (in tables of random numbers, random sampling, entropy) and will examine the need for variety (eg. in town planning).

26.5501 Conceptions of Physical Reality

Cat.: B (I) Conceptions and Models of the Universe

Physics and Metaphysics: linguistic and cultural aspects of conceptualising phenomena: regularity as a feature of physical reality. Concepts and difficulties with absolute time and space-simultaneity and its relation to physical reality. Determinism vs Indeterminism. Einstein-Podolski Rosen paradox. Hidden variables; Philosophical dilemmas and implications of Bell's theorem. The arrow of time, origin of the universe and physical significance of "nothingness".

26.5502 The Expected Roles of Scientists and Engineers in Contemporary Australia

Cat.: B (X) Defining and Questioning Social Roles

What sorts of ideas and influences are currently shaping science and engineering in Australia? What changes have occurred? What could happen in the future? What could this mean for individual scientists and engineers? What could it mean for other people? Differences between Australia and other nations. The professional functions of scientists and engineers; the influence of teachers, peers, employers, politicians and others; the expectations of various groups in society. Changing attitudes towards professionals; the socialisation of scientists and engineers; the origins and consequences of conflict.

26.5509 The Clockwork Universe and the Age of Modern Technology

Cat.: B (I) Conceptions and Models of the Universe

This subject traces the development of the modern Philosophy of Technology from the 'mechanical world-view' based on the invention of precision timekeepers and other automatic instruments to the present time in which technological developments seem to be undermining this world-view. The mechanical clock, in uniting science with the design of machines, took on archetypal significance which resulted in the idea of technological 'progress'. The subject will explore the ways in which 'the clockwork universe' is now being questioned and examine the new models or archetypes currently being proposed.

26.5510 Beliefs, Values and Ideologies

Cat.: B

This subject examines the ways in which the systems of belief and the configurations of values of a society often work against the interests of many people in the society. They often perpetuate patterns of discrimination and subordination among different social groups and thus function as ideologies. This subject will look at the ways in which some nations and social groups accept the subordinate roles dictated by their beliefs and values.

26.5512 From Literature to Film:

Reading Film as a Media

Cat.: B (III) Language, Symbols, Images and Society

Focus on the basic problems of adaption, such as interpreting a literary work from a certain point of view, transformation of narrative structures into visual sequences, shortening, restructuring, modernizing of narratives. The discussion will focus on questions such as: how does it work? Why was a particular film produced at its particular time? Which are the assumptions made regarding audiences? Films screened will include: *Crime and Punishment*, *Picnic at Hanging Rock*, *All Quiet on the Western Front*, *The Drover's Wife* etc.

Textbooks: Rilla P., *The Writer and the Screen*, Lindsay J., *Picnic at Hanging Rock*, Lawson H., *The Drover's Wife*; Remarque E.M., *All Quiet on the Western Front*; Dostojewsky F., *Crime and Punishment*; Buchner, *Woyzeck*.

26.5513 Values Ideologies and Nuclear Technology

Cat.: B (VI) Beliefs, Values and Ideologies

Why is nuclear power such a contentious issue? Why can't the opposing sides of the debate ever agree on the "facts"? This

subject will consider the development of nuclear technology, the ideology of its advocates, the fears of its opponents, the myths, the propaganda and the impact on the production of knowledge itself.

Textbooks: Albury R., *The Politics of Objectivity*, Deakin UP, 1983. Barnes B. & Edge D., *Science in Context*, Open UP., 1982. Dickson D., *The New Politics of Science*, University of Chicago Press, 1984. Mackenzie D. & Wajeman J., *The Social Shaping of Technology*, Open UP, 1985. Wynne L., *The Whale and the Reactor*, University of Chicago Press, 1985. Wynne B., *Rationality and Ritual*, British Society for the History of Science, 1982.

26.5515 The Nature of the Conditions for Human Creativity

Cat.: B(II) Conceptions and Models of Human Nature

Most modern societies are placing an increasing emphasis and value upon the development of creativity in all of its forms and dimensions. This subject will attempt to clarify what is meant by creativity and to investigate and describe the conditions necessary for its development. It will compare and contrast creativity in the fields of art, science and technology and seek to determine the steps which need to be taken for Australia to realise its creative potential.

26.5516 Writing Computing and Influence

Cat.: B (III) Language, Symbols, Images and Society

The course, which welcomes students without knowledge of computing will look at ways which the writers seek to influence readers. Arguing that all writing is propaganda, the course will look at basic techniques of the writing process and analyse ways in which ideas are manipulated. By this analysis, which will use computers as convenient tools and as important means of defamiliarizing the writing process, students will gain understanding of the concepts involved in the persuasion, and (as a by-product) improve their own ability to manipulate ideas and influence others through the written word.

Textbooks: Jowett & O'Donnell, *Propaganda and Persuasion*; Bate, *Essay Method and English Expression*, Harcourt & Brace, 1979.

26.5517 Perceptions of Science, Scientists in Literature and the Media/Session

Cat.: B (X) Defining and Questioning Social Roles

Since 1945 the power of science, and hence of scientists, over entire populations has become obvious and public attitudes to science and scientists have become more complex and intense. Those attitudes have been shaped, not only by actual events, but by the interpretation of them in literature, the press and film. The alchemist, Faustus, Frankenstein, the space hero and Dr Strangelove underlie many current responses to ethical problems raised by science and technology today. To understand and assess our society's attitudes to science and scientists, we need to be aware of how they arose.

Textbooks: Shelley M. *Frankenstein*, Oxford UP, Wells H.G., *The Island of Doctor Moreau*, Penguin; Huxley A., *Brave New World*, Penguin; Brecht B., *Galileo*, Methuen; Leguin U., *The Dispossessed*, Granada.

26.5518 Gender and Political Theories of Equality

Cat.: B(V) Gender and Society

An examination of leading ideas in the philosophical tradition in light of contemporary issues of sex and gender. The material covered in the course will include extracts from the philosophy of Hume, Plato, Mill, Marx and de Beauvoir; literary extracts from the works of Dorothy Hewett and Virginia Woolf; and information on contemporary social issues such as the ordination of women, equal opportunity, abortion, IVF, and women and trade unions.

Textbooks: A set of readings will be provided.

26.5519 Sexual Representation and Gender Discrimination

Cat.: B (V) Gender and Society

This subject will examine how our language about and ideas and images of the human body and human sexuality affect the issue of gender. It will address the social issues of pornography, discrimination, sexist language and violence and explore the ways in which these issues are dealt with in literature and film. The theories of Freud, Foucault and others will be examined to see how they

illuminate the relationships between gender, language, representation and sexuality.

Textbooks: A set of readings will be provided.

26.5520 Gender Ambivalence and Literature

Cat.: B (V) Gender and Society

An introduction to the ways in which writers deal, through the medium of fiction, with stereotypical gender expectations and role models. This subject makes a critical reading of several seminal texts which set out to redefine the boundaries of gender limitations. We shall examine, from a historical perspective, how these works not only reflect a different reality but attempt to transform our perception of it.

Textbooks: Woolf V., *Orlando*, Grafton Books; Leguin U., *The Left Hand of Darkness*,

Panther Books; Russ J., *The Female Man*, Virago; White P., *The Twyborn Affair*, Penguin

26.5521 The Forms and Patterns of Matter

Cat.: B(I) Conceptions and Models of the Universe

The mass and energy forms of matter, the patterns and laws of their interaction. Galileo's and Newton's views on the laws and nature; Einstein's development of these views, The 'clock paradoxes'; their resolution and cosmological link. Our understanding of space, time and matter; mass-energy systems and their various forms. Living systems and their evolutions; human beings - as individuals with 'free-will', as social beings.

Textbooks: Prokhovnik S.J., *The Logic of Special Relativity*, UNSW Press; Gould S.J. - books on life and evolution - available in paperback.

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