



The University of Southern Queensland

Course specification

Description: Research Practice and Ethics B

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
SCI	4406	34324	2, 2004	ONC	1.00	TWMBA

Academic group:	FOSCI
Academic org:	FOS002
Student contribution band:	2
ASCED code:	019999

STAFFING

Examiner: Mark Sutherland

Moderator: Michael Kotiw

RATIONALE

In the contemporary world, science and technology are increasingly seen as fundamental for human progress and survival. As the power of technology has increased, ethical considerations in the practice of science have become a critical component in the interaction between science and society. Additionally, the limited ability of society to support scientific research has led to ever increasing competition for these resources and emphasised the need for skills in both scientific communication and information technology. This course is designed to allow students to appreciate the role of philosophy and ethics in the practice of science and to be aware of, and develop, a range of communication skills required to successfully pursue a career in scientific research.

SYNOPSIS

This course is designed to build on scientific communication skills previously developed in Research Practice and Ethics A. The modular structure of the course is designed to allow the student to investigate a number of major contemporary issues in science including: the role of criticism and debate, ethics in science, scientific fraud, patenting and other legal issues. In addition, students are given an understanding of the principles involved in obtaining funding for scientific research.

OBJECTIVES

On successful completion of this course students will be able to:

1. demonstrate skills in verbal and written presentation and critique of scientific data;
2. demonstrate an awareness of contemporary ethical issues in science;
3. demonstrate skills in the preparation and presentation of research grant applications;

4. use computerised data base searching facilities.

TOPICS

Description	Weighting (%)
1. The course will consist of up to six modules of which four will be assessed. Modules to be undertaken, from the following list, will be designated by the course examiner at the commencement of the semester. Each module will normally consist of two 2 hour sessions led by a module coordinator. 1. Database searching and referencing	10.00
2. Powerpoint presentations	10.00
3. Criticism in Science/Peer Review Exercises	20.00
4. Ethical Issues in Science (I): Animal Ethics and Medical Research (Informal assessment)	20.00
5. Ethical Issues in Science (II): Legal Issues (Informal assessment/discussion)	20.00
6. Funding Science	20.00

TEXT and MATERIALS required to be PURCHASED or ACCESSED:

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at <http://bookshop.usq.edu.au> click 'Semester', then enter your 'Course Code' (no spaces).

REFERENCE MATERIALS:

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

Booth, V 1993, *Communicating in Science, Writing a Scientific Paper and Speaking at Scientific Meetings*, 2nd edn, Cambridge University Press, Cambridge.

Briscoe, MH 1996, *Preparing Scientific Illustrations - A Guide to Better Posters, presentations and publications*, 2nd edn, Springer-Verlag, New York.

Daly, J 1996, *Ethical Intersections, Health Research methods and Researcher Responsibility*, Allen & Unwin Publishers, Sydney.

Day, RA 1998, *How to Write and Publish a Scientific Paper*, 5th edn, Cambridge University Press, Cambridge.

Englehardt, HT 1996, *The Foundations of Bioethics*, Oxford University Press, New York.

Eunson, B 1995, *Writing Technical Documents*, John Wiley, Brisbane.

Kimmel, AJ 1996, *Ethical Issues in Behavioural Research*, Blackwell, Cambridge.

Lobban, CS and Schefter, M 1992, *Successful Laboratory Reports; A manual for science students*, Cambridge University Press, Cambridge.

Oldroyd, D 1986, *The Arch of Knowledge*, New South Wales University Press, Kensington.

Oldroyd, D 1982, *Science and Ethics*, New South Wales University Press, Kensington.

Riggs, RJ 1992, *Whys and Ways of Science: Introducing Philosophical and Sociological Theories of Science*, Melbourne University Press, Carlton.

Sides, CH 1999, *How to Write and Present Technical Information*, 3rd edn, Cambridge University Press, Oakleigh.

STUDENT WORKLOAD REQUIREMENTS:

ACTIVITY	HOURS
Private Study	140.00
Tutorial	20.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg(%)	Due date
MODULE 1: POWERPOINT INTRO	1.00	0.00	20 Jul 2004
MODULE 2: LIBRARY ORIENTATION	1.00	0.00	20 Jul 2004
MODULE 3: ASSIGNMENT	1.00	25.00	20 Jul 2004
MODULE 4: ASSIGNMENT	1.00	25.00	20 Jul 2004
MODULE 5: SEMINAR	1.00	25.00	20 Jul 2004
MODULE 6: DISCUSSION	1.00	25.00	20 Jul 2004 (see note 1)

NOTES:

1. Further details about the due dates and assessments for Modules 3 - 6 will be provided by the Examiner.

IMPORTANT ASSESSMENT INFORMATION

1 Attendance requirements:

It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, tutorials, laboratories and practical work) scheduled for them, and to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.

- 2 Requirements for students to complete each assessment item satisfactorily:
To complete each of the assessment items satisfactorily, students must obtain the one mark available for that assessment item.
- 3 Penalties for late submission of required work:
If students submit assignments after the due date without prior approval then a penalty of 5% of the total marks available for the assignment will apply for each working day late.
- 4 Requirements for student to be awarded a passing grade in the course:
To be assured of a passing grade, students must demonstrate, via the summative assessment items, that they have achieved the required minimum standards in relation to the objectives of the course by satisfactorily completing all summative assessment items.
- 5 Method used to combine assessment results to attain final grade:
As P is the only passing grade available for this course, all students who are qualified for a passing grade as in Assessment 4 will be given a grade of P. Other students will be given either a Failing grade or an Incomplete grade.
- 6 Examination information:
There is no examination in this course.
- 7 Examination period when Deferred/Supplementary examinations will be held:
There will be no Deferred or Supplementary examinations in this course.
- 8 University Regulations:
Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL <http://www.usq.edu.au/corporateservices/calendar/part5.htm> or in the current USQ Handbook.