Description: Research Practice and Ethics

<table>
<thead>
<tr>
<th>Subject</th>
<th>Cat-nbr</th>
<th>Class</th>
<th>Term</th>
<th>Mode</th>
<th>Units</th>
<th>Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCI</td>
<td>4405</td>
<td>67002</td>
<td>2, 2007</td>
<td>ONC</td>
<td>1.00</td>
<td>Toowoomba</td>
</tr>
</tbody>
</table>

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

STAFFING

Examiner: Joachim Ribbe
Moderator: Alfio Parisi

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 allow students to appreciate the role of communication skills required in the successful pursuit of a career in scientific research and to appreciate the role of philosophy in science. The modular structure of the course is designed to allow the student to develop skills in particular aspects of scientific communication. Topics include: computer based information retrieval, experimental design and analysis, verbal and written scientific communication skills (debates, seminars, posters and papers) and, the interaction between science and society with an emphasis on the philosophy of science.

OBJECTIVES

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

1. demonstrate skills in verbal presentation of scientific data (Module 8 - Seminar);
2. demonstrate skills in the written presentation of scientific data (Module 2 - Assignment);
3. demonstrate skills in the preparation and presentation of research grant applications (Module 3 - Assignment);
4. use computerised data base searching facilities (Module 8 - Seminar);
5. demonstrate an understanding of the varieties of scientific method and their historical evolution (Module 3 - Assignment).

### TOPICS

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Database Searching andReferencing</td>
<td>5.00</td>
</tr>
<tr>
<td>2. Scientific Writing</td>
<td>15.00</td>
</tr>
<tr>
<td>3. Criticism in Science/Peer Review Exercises</td>
<td>15.00</td>
</tr>
<tr>
<td>4. Ethical Issues in Science I</td>
<td>10.00</td>
</tr>
<tr>
<td>5. Ethical Issues in Science II</td>
<td>10.00</td>
</tr>
<tr>
<td>6. Funding for Research</td>
<td>10.00</td>
</tr>
<tr>
<td>7. Experimental Design and Analysis</td>
<td>10.00</td>
</tr>
<tr>
<td>8. Conference Presentation</td>
<td>15.00</td>
</tr>
<tr>
<td>9. Philosophy of Science</td>
<td>10.00</td>
</tr>
</tbody>
</table>

**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.

- American journal of bioethics,


Oldroyd, D 1986, *The arch of knowledge*, University of NSW Press, Kensington.


The Australian and New Zealand Council for the Care of Animals in Research and Teaching ’’ (Available: www.rsnz.org/advisory/anzcart/).

STUDENT WORKLOAD REQUIREMENTS

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Study</td>
<td>140.00</td>
</tr>
<tr>
<td>Tutorials</td>
<td>20.00</td>
</tr>
</tbody>
</table>

ASSESSMENT DETAILS

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks out of</th>
<th>Wtg(%)</th>
<th>Due date</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODULE 2: ASSIGNMENT</td>
<td>1.00</td>
<td>33.00</td>
<td>23 Jul 2007</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(see note 1)</td>
</tr>
<tr>
<td>MODULE 3: ASSIGNMENT</td>
<td>1.00</td>
<td>33.00</td>
<td>23 Jul 2007</td>
</tr>
<tr>
<td>MODULE 8: SEMINAR</td>
<td>1.00</td>
<td>34.00</td>
<td>23 Jul 2007</td>
</tr>
</tbody>
</table>

NOTES

1. Further details about the due dates and assessments for Modules 2, 3 and 8 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 they can expect 
to be given a Fail grade for the course.

4 Requirements for student to be awarded a passing grade in the course:
   To be assured of receiving a passing grade a student must achieve at least 50% of the total 
weighted marks available for the course.

5 Method used to combine assessment results to attain final grade:
   All students who satisfy the requirements of the course will be given a grade of P. Other 
students will be given either a Fail 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.