Description: Professional Issues in Science and Technology

<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>MSC</td>
<td>3001</td>
<td>63083</td>
<td>1, 2007</td>
<td>ONC</td>
<td>1.00</td>
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**Academic group:** FOSCI
**Academic org:** FOS003
**Student contribution band:** 2
**ASCED code:** 029999

**STAFFING**
Moderator: Ron House

**RATIONALE**
Computer Scientists, Mathematicians and Statisticians, as practising professionals, need to be aware of issues wider than their mere theoretical and practical knowledge. For example, knowledge of local and global legislations (environmental requirements, Cyber crime, health and safety, etc) which affect the work; an understanding of the industrial relations and responsibility to the profession. The professionals also have to work in a responsible and effective manner in conjunction with their colleagues both from similar and from dissimilar disciplines or backgrounds. The challenge of working effectively with others in the workplace is considerable and in many cases this aspect of workplace practise will prove critical to a person's effectiveness.

**SYNOPSIS**
This course explores key contemporary professional issues for practicing ICT professionals, mathematicians and statisticians. The course relates the profession with the society by highlighting the social implications of current technology, gender related issues and globalisation. Assumptions and values are identified to make and evaluate ethical arguments. Students will learn about standards of ethical and professional behaviour, risks and liabilities of computer-based systems and computer crime. Intellectual property, privacy, civil liberties, career and project management issues in computing will be considered. Access to Internet is required.

**OBJECTIVES**
On completion of this course students will be able to:
1. describe social implications of ICT, Mathematics and Statistics; (Exam)
2. explain globalization issues; (Exam)
3. describe techniques of effective career management; (Exam)
4. explain the functions of and roles in different workplace organisations; (Exam)
5. discuss important issues in professional application of ICT, Mathematics and Statistics in any local or international workplace; (Assignment 2)
6. identify ethical issues in private and public sectors; (Assignment 2)
7. relate law to computer crime; (Assignment 3)
8. explain safety issues in the workplace; (Exam)
9. describe issues related to taking personal and community responsibility in the workplace; (Exam)
10. describe issues related to the protection and respect of privacy; (Assignment 3)
11. apply Professional Codes of ethics and conduct; (Assignment 2)
12. avoid risks during the practice of the profession; (Exam)
13. identify implications of technological advances on the society. (Exam)
14. explain the issues of project management in computing. (Exam)

**TOPICS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
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<tbody>
<tr>
<td>Practising Mathematics, Computer Science and Statistics</td>
<td>10.00</td>
</tr>
<tr>
<td>Team work</td>
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</tr>
<tr>
<td>Workplace Safety</td>
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<tr>
<td>Computer Misuse and the Criminal Law</td>
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<tr>
<td>Ethics</td>
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<td>Intellectual Property</td>
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<tr>
<td>Privacy</td>
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<td>Professional Codes of Practice</td>
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<tr>
<td>Project Management</td>
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<tr>
<td>Social Issues</td>
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</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).

Website of the course is available at: http://www.sci.usq.edu.au/moodle


**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.

http://onlineethics.org/

'Information Technology Professionals Association' (Available: http://www.itpa.asn.au/).


Loader, B & Thomas, D (eds) 2000, *Cybercrime: law enforcement, security and surveillance in the information age*, Routledge,

Murch, R 2000, *Project management: best practices for IT professionals*, Prentice-Hall,

Northcutt, S 2004, *IT ethics handbook: right and wrong for IT professionals*, Syngress Publishing,

**STUDENT WORKLOAD REQUIREMENTS**

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS</th>
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<tbody>
<tr>
<td>Assessment</td>
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<td>Examinations</td>
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<tr>
<td>Lectures</td>
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<tr>
<td>Private Study</td>
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<td>Tutorials</td>
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**ASSESSMENT DETAILS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks out of</th>
<th>Wtg(%)</th>
<th>Due date</th>
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<tbody>
<tr>
<td>ASSIGNMENT 1</td>
<td>100.00</td>
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<tr>
<td>ASSIGNMENT 2</td>
<td>100.00</td>
<td>16.00</td>
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<td>ASSIGNMENT 3</td>
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**NOTES**

1. Examination dates will become available during the semester. Please refer to the examination timetable when published.

**IMPORTANT ASSESSMENT INFORMATION**

1   Attendance requirements:
   It is the student’s 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:
   Not applicable.

3   Penalties for late submission of required work:
If students submit assignment after the due date without prior approval then a penalty of 20% of the total marks gained by the student 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 receiving a passing grade a student must submit all of the summative assessment items, achieve at least 50% in the examination and at least 50% of the available weighted marks for the summative assessment items.

5 Method used to combine assessment results to attain final grade:
The final grades for students will be assigned on the basis of the weighted aggregate of the marks (or grades) obtained for each of the summative assessment items in the course.

6 Examination information:
Students whose first language is not English, may, with the Examiner's approval, take an appropriate non-electronic translation dictionary (but not technical dictionary) into the examination. Students who wish to use a translation dictionary MUST request and receive written approval from the Examiner at least one week before the examination date. Translation dictionaries will be subject to perusal and may be removed from the candidate's possession until appropriate disciplinary action is completed if found to contain material that could give the candidate an unfair advantage.

7 Examination period when Deferred/Supplementary examinations will be held:
Any Deferred or Supplementary examinations for this course will be held during the examination period at the end of the semester for the next offering of 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.

ASSESSMENT NOTES

9 The due date for an assignment is the date by which a student must despatch the assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the Examiner.

10 Students may be required to provide a copy of assignments submitted for assessment purposes. Such copies should be despatched to the USQ within 24 hours of receipt of a request to do so.