Description: Research Project Part 1

Subject  Cat-Nbr  Class  Term  Mode  Units  Campus
ENG      4111    24614  2, 2003  ONC    1.00   TWMBA

Academic Group: FOENS
Academic Org: FOENSV
HECS Band: 2
ASCED Code: 039999

STAFFING
Examiner: Nigel Hancock
Moderator: David Dowling

OTHER-REQUISITES
It is recommended that students in BEng, BSurv and BTech(GIS) undergraduate programs should have completed the course ENG3902 prior to undertaking this course.

RATIONALE
Project work undertaken by individuals is a central part of engineering and surveying practice. At the professional level project work routinely involves research in the sense that there are non-standard requirements to be met and non-standard problems to be overcome. This course, combined with ENG4112 Research Project Part 2, prepares the student for professional-level technical project work. With the guidance of supervisor/s, the student will augment, integrate and demonstrate skills spanning both the technical and non-technical dimensions of engineering and surveying, including GIS, at the professional level. The project (ENG4111 Research Project Part 1 immediately followed by ENG4112 Research Project Part 2) will develop and test the ability to define and analyse the problem, to develop solutions to the problem, to make the necessary decisions, convert ideas into useful outcomes and to cope with the unexpected problems encountered in testing and evaluation. All of this must be accomplished in a tight timeframe, within resource limitations and with due regard for safety, social and ethical considerations. In short, the individual project is a good indicator of overall professional ability.

SYNOPSIS
The project (comprising ENG4111 Research Project Part 1 immediately followed by ENG4112 Research Project Part 2) is intended to integrate and augment the student's total formal knowledge by means of its application to a real problem at the appropriate professional level. This program (comprising the first half of the project) will comprise firstly
the selection, negotiation and approval of a project topic appropriate to the student's major study. Following this the student will (i) research the background, context and literature, (ii) develop an appropriate methodology, (iii) demonstrate a sound appreciation of the overall task and its constraints by formal reporting, and (iv) make substantial progress in the execution of the work.

OBJECTIVES

On completion of this course, students should be able to:

- commence and make appropriate progress in a major technical task;
- find, critically review and report on published literature and other contextual information appropriate to a major technical task;
- identify sustainability, safety and ethical issues associated with a major technical task;
- determine an appropriate methodology, realistic timelines and resource requirements for the execution of a major technical task;
- interact appropriately with a designated senior colleague (the supervisor) during all phases of a major technical task;
- provide an appropriately structured report at any phase in the execution of a major technical task.

TOPICS

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
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<tbody>
<tr>
<td>1. Project work in which students will plan, commence and make substantial progress in an individual, generally open-ended task which will encompass a range of technical skills appropriate to the student's major study. These will include ALL of the following: literature research and evaluation; determination of consequences; and planning and self management.</td>
<td>30.00</td>
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<tr>
<td>2. Project work tasks will also include some (and often many) of the following: planning and management; feasibility assessment; experimental work and trialing; fieldwork; data analysis; design; prototype construction and testing; simulation and modelling; financial analysis.</td>
<td>40.00</td>
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<td>3. Project work will be undertaken with the guidance of a supervisor or supervisors, at least one of whom will be appointed from the academic staff of the Faculty. Sponsors and associate supervisors external to the Faculty may also be involved.</td>
<td>10.00</td>
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<tr>
<td>4. Report writing.</td>
<td>20.00</td>
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TEXT and MATERIALS required to be PURCHASED or ACCESSED:

Books can be ordered by fax or telephone. For costs and further details use the 'Book Search' facility at http://bookshop.usq.edu.au by entering the author or title of the text.

ENG4111/4112 Project Reference Book, USQ Publication,
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.

The project will require full use of the resources of the Library and via the Internet, including literature searches, research papers, journals and trade literature files.

STUDENT WORKLOAD REQUIREMENTS

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS</th>
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</thead>
<tbody>
<tr>
<td>Private Study</td>
<td>20</td>
</tr>
<tr>
<td>Project Work</td>
<td>90</td>
</tr>
<tr>
<td>Report Writing</td>
<td>30</td>
</tr>
<tr>
<td>Supervisor Consultation</td>
<td>15</td>
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</tbody>
</table>

ASSESSMENT DETAILS

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks Out of</th>
<th>Wtg(%)</th>
<th>Required</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSIGN 1 TOPIC ALLOCATION</td>
<td>1.00</td>
<td>0.00</td>
<td>Y</td>
<td>01 Aug 2003</td>
</tr>
<tr>
<td>ASSIGN 2 PROJECT SPECIFICATION</td>
<td>1.00</td>
<td>0.00</td>
<td>Y</td>
<td>12 Aug 2003</td>
</tr>
<tr>
<td>ASSIGN 3 PROJECT APPRECIATION</td>
<td>1.00</td>
<td>0.00</td>
<td>Y</td>
<td>07 Oct 2003</td>
</tr>
<tr>
<td>ASSIGN 4 PROGRESS ASSESSMENT</td>
<td>100.00</td>
<td>100.00</td>
<td>Y</td>
<td>31 Oct 2003</td>
</tr>
</tbody>
</table>

NOTES:

. Refer to Assessment Note 2 in the Assessment Notes of the Course Specification.
. Refer to Assessment Note 3 in the Assessment Notes of the Course Specification.
. Refer to Assessment Note 4 in the Assessment Notes of the Course Specification.
. Refer to Assessment Note 5 in the Assessment Notes of the Course Specification.

IMPORTANT ASSESSMENT INFORMATION

1. Attendance requirements:
   Students must attend the start of semester introductory session/s and must attend project supervision meetings (normally weekly) as negotiated with or directed by their nominated supervisor/s.

2. Requirements for students to complete each assessment item satisfactorily:
   To complete each of the assessment items satisfactorily students must meet the requirements of the item as setout in the ENG4111/2 Project Reference Book.
3 Penalties for late submission of required work:
If a student submits Assignment 1 after the due date without prior approval then that student will normally be dropped from the course.

4 Requirements for student to be awarded a passing grade in the course:
To be assured of a passing grade a student must FIRSTLY complete each of the four (4) assessment items satisfactorily (which will result in the temporary grade of IIP (Incomplete In Progress) being awarded for this course); and SECONDLY, in the semester immediately following, satisfactorily complete the course ENG4112 Research Project Part 2. The passing grade awarded will then be the same for both ENG4111 and ENG4112. Students who do not complete course ENG4112 in the semester immediately following (as above) will be regraded FNC (Fail - Did Not Complete) in course ENG4111.

5 Method used to combine assessment results to attain final grade:
The final grade for students will be assigned on the basis of the aggregate project work undertaken in this course together with course ENG4112 Research Project Part 2.

6 Examination information:
There is no examination in this course.

7 Examination period when Deferred/Supplementary examinations will be held:
Not applicable.

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/SECARIAT/calendar/Part5/ or in the printed version of the current USQ Handbook.

ASSESSMENT NOTES

1 Students who, for medical, family/personal, or employment-related reasons, are unable to complete an assignment or to sit for an examination at the scheduled time may apply to defer an assessment in a course. Such a request must be accompanied by appropriate supporting documentation. The following temporary grade will then be awarded IDM (Incomplete Deferred Make-up).

2 TOPICS AND SUPERVISORS. (i) Students who have not indicated topic preferences or made an acceptable topic proposal (as set out in the ENG4111/2 Project Reference Book) by the date indicated above will normally be dropped from the course. (ii) Both project topics and supervisors will be allocated by the examiner on the advice of one of the assistant examiners and will depend on the student's major study, staff availability for supervision and, as far as practicable, student preferences. (iii) It is the responsibility of students to maintain regular communication with the supervisors, normally weekly or as required by the supervisor/s, and to keep whatever records of progress the supervisor/s may require (eg a log book).

3 PROJECT SPECIFICATION (Assessment No. 2). (i) An individual project specification will be developed by the student and supervisor for each project (spanning ENG4111 Research Project Part 1 and ENG4112 Research Project Part
2), endorsed by both the student and the supervisor, and lodged with the FOES Project Administrator. (ii) A revised project specification will be written during the program of the project if the work diverges significantly from the original project conception. (iii) The project specification will be used for management and assessment purposes throughout the duration of the project, ie including course ENG4112 Research Project Part 2.

4 PROJECT APPRECIATION (Assessment No. 3). (i) The Project Appreciation shall be submitted in accordance with the guidelines and requirements set out in the ENG4111/4112 Project Reference Book. (ii) An Appreciation which is unsatisfactory, in part or as a whole, must be reworked and resubmitted until satisfactory, as directed by the Examiner. (iii) Students whose Project Appreciation is not satisfactory by the Progress Assessment Due Date will be graded IDM (Incomplete Deferred Make-up) or F (Fail)

5 PROGRESS ASSESSMENT (Assessment No. 4). (i) A progress assessment will be conducted by the supervisor/s and may comprise an interview and/or a demonstration and/or a written report at the discretion of the supervisor. The result of the assessment will be lodged with the FOES Project Administrator. (ii) Where the Project Specification (Assessment No. 2) has not been lodged and/or the Project Appreciation (Assessment No. 3) has not been completed to a satisfactory standard by the progress assessment date, then the progress assessment will automatically be recorded as "unsatisfactory". (iii) Students who have participated but have not made satisfactory progress in their project work will be given the temporary grade of IDM (Incomplete Deferred Makeup). (iv) Students who have not participated to the satisfaction of the Examiner will be graded F (Fail). (v) Students graded IDM then be re-assessed early in Semester 1 (of the following year) with regard to their eligibility to undertake continuation of their project work in ENG4112 Research Project Part 2. Students judged to have made satisfactory progress by the make-up deadline will be regraded IIP. Students judged to have still not made satisfactory progress will be regraded F and will not be permitted to undertake course ENG4112 Research Project Part 2. (vi) Where unsatisfactory progress is the result of factors beyond the control of the student shall be recorded.

OTHER REQUIREMENTS

1 ENROLMENT. Students will normally undertake the project courses (ENG4111 Research Project Part 1 followed by ENG4112 Research Project Part 2) in the same calendar year; and this is normally expected to be their final year of enrolment in their degree program.