## Unit Information

<table>
<thead>
<tr>
<th>Title:</th>
<th>Professional Practicum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level:</td>
<td>5</td>
</tr>
<tr>
<td>Type:</td>
<td>Postgraduate - Professional Practice Masters;</td>
</tr>
<tr>
<td>Faculty:</td>
<td>Engineering, Computing and Mathematics</td>
</tr>
<tr>
<td>Contact:</td>
<td>Professor Cara MacNish (<a href="mailto:cara.macnish@uwa.edu.au">cara.macnish@uwa.edu.au</a>)</td>
</tr>
<tr>
<td>Proposed:</td>
<td>14/12/2011</td>
</tr>
<tr>
<td>Code alpha prefix:</td>
<td>GENG</td>
</tr>
<tr>
<td>First year of offer:</td>
<td>2013</td>
</tr>
<tr>
<td>Credit points:</td>
<td>0</td>
</tr>
<tr>
<td>Why other than 6:</td>
<td>Unit has 0 points value (row 48 does not enable this inclusion). It is not a coursework unit and will be added to a student’s enrolment once the professional practicum report has been assessed as being satisfactorily completed (UP) by the School.</td>
</tr>
<tr>
<td>Workload hours per 6 points:</td>
<td>450</td>
</tr>
<tr>
<td>Why other than 150:</td>
<td>37.5 hours per week for 12 weeks as the student will participate in and contribute to the day-to-day operations of a company.</td>
</tr>
</tbody>
</table>

## Academic information

### Unit Content:
This unit comprises (1) a minimum of 12 weeks’ practical experience in an engineering-related workplace that is relevant to the student’s degree; and (2) a written report between 1500 and 2000 words. For further information about the structure of the report and other documents required for submission and completion by the employer, refer to http://www.ecm.uwa.edu.au/35442. Students with suitable previous employment may be granted advanced standing for the practicum. Students are expected to find their own employment to fulfil the professional practicum requirements; however sources of assistance are listed on the Faculty website.

### Outcomes:
On completion of this unit, students will be able to (1) contact and liaise with employers to organise work experience; (2) develop an understanding of future roles as a professional engineer; (3) reflect on work experience and articulate professional benefits; (4) constructively criticise workplace practices; (5) communicate these ideas concisely and articulate them in the report; and (6) perform satisfactorily as assessed by an employer in a discipline-related work environment.

### Assessment items:
1) A written report following the completion of the professional practicum

### Justification for having only one form of assessment:
The written report must demonstrate clear logical construction of sentences and paragraphs; concise and precise presentation of detail; correct spelling and grammar; considered objective separation of fact and opinion; and professional presentation (well spaced headings, paragraphs and visuals). As for the content, the written report must address the above learning outcomes (3), (4) and (5).

Reports are awarded either an Ungraded Pass (UP) or Ungraded Fail (UF). Unsatisfactory reports must be resubmitted until a grade of UP is awarded. Work experience that is deemed to be unsuitable for the student’s discipline results in a grade of UF.

Supplementary Assessment is not available in this unit.

### Teaching and Learning Practices:
This unit comprises employment in a professional environment that is usually, although not always, undertaken off-campus.

### Technologies:
No data available.

Please note that this unit is not yet approved.
Assessment and grading

Supplementary Assessment Exemption requested: Yes, proposed exemption to normal supplementary assessment rule (available to students with a mark of 45 to 49 inclusive in the unit where it is the only remaining unit to pass to complete course).

Justification provided:
The work experience must be completed and the report completed to the satisfaction of the School.

Ungraded pass/fail: Ungraded pass/fail, category A: Units where the involvement of external assessors makes it difficult to compare students' performance in an equitable manner and provide appropriately graded results for the units (for example, in-country units, cross-institutional enrolments and practicum units such as practical experience unit and work experience in industry).

Offerings

Quota: No quota proposed.

Teaching Period | Location | Mode | Estimated enrolment
--- | --- | --- | ---

Unit rules

Prerequisites: Nil.

Corequisites: Nil.

Incompatibilities: Nil.

Advisable Prior Study: Nil.

Teaching Responsibilities

<table>
<thead>
<tr>
<th>%</th>
<th>Teaching Org</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>ECM Office</td>
<td>Proposing faculty.</td>
</tr>
</tbody>
</table>

Accommodation requirements

Summary: 

Further details:

Funding and resources

Source: Faculty/School funds

Details: No details provided.

Consultations

Library: ☐ Library Form Approved

In the context of preparing this submission, the Faculty has liaised with the Science Library (Acting Associate Manager Jenny Smith), and an agreement was reached that library consultation forms for all MPE units will be completed and submitted by the Faculty later in the year. This decision was made in order to avoid the duplication of a large administrative task for both parties, as the information required in the library consultation form is not yet finalised for all units.

To give an indication as to whether a large number of new titles will need to be ordered, however, the Science Library has been advised that many of the new MPE units will make use of existing texts and research papers.

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>International Centre</td>
<td>A range of meetings and correspondence have taken place with the International Centre during the planning for the MPE and MPE Prelim, including meetings with the Directory, Kelly Smith, the Manager International Quality Assurance, Anthony Turner, and the Manager International Postgraduate Students, Fiona Birt. These have included issues such as the timing and availability of courses, admissions, credit, joint offers/articulation and ESOS compliance.</td>
</tr>
<tr>
<td>Employer Group</td>
<td>Industry Advisory Board, Panels and Foundations</td>
<td>Industry Advisory Board, Panels and Foundations</td>
</tr>
</tbody>
</table>
The Faculty has undergone regular consultation with accreditation bodies including Engineers Australia (EA), the Australian Computer Society (ACS), and the Institution of Chemical Engineers (iChemE), during the development of its New Courses. This has culminated in a joint accreditation visit by EA and ACS in November 2011 at which all MPE programmes were recommended by the Joint Board for provisional accreditation subject to further reporting against recommendations in 2012. A visit from iChemE is anticipated in 2012.

Discussions with the Admissions Centre have included entry requirements for the MPE and MPE Prelim, and the use of an assured pathway to the MPE in the TISC publications.

The Faculty has an early adoption/feedback group working with the Moodle team. The Faculty already makes extensive use of CMO and Lecture Capture. Members of the Faculty are in consultation with members of CATL, including the Director, Denise Chalmers, and the Higher Education Development officer, Lee Partridge, on a range of issues including the induction and training of staff and in particular, in regard to the MPE, ensuring teaching and assessment can be demonstrated to be at the appropriate level for the masters programme.

### Committee endorsements and approvals

<table>
<thead>
<tr>
<th>Review committee</th>
<th>Status</th>
<th>Resolution</th>
<th>Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Board</td>
<td>Endorsed</td>
<td>Pending (Faculty Board approval is currently being sought via circular)</td>
<td>30/05/2012 10:55:08 AM</td>
<td>Imported from the excel New Unit Proposal form.</td>
</tr>
<tr>
<td>Board of Coursework Studies</td>
<td>Not yet endorsed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Council</td>
<td>Not yet approved</td>
<td></td>
<td></td>
<td></td>
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</table>

30/05/2012 10:55:08 AM
Master of Professional Engineering (61550)

Applicability of the Student Rules, policies and procedures

1.(1) The Student Rules in the Student Procedures, Rules and Policies section apply to students in this course.

(2) The policies and procedures in the Student Procedures, Rules and Policies section apply except as otherwise indicated in the rules for this course.

Academic Conduct Essentials module

1.A(1) Except as stated in (2), a student who enrols in this course for the first time irrespective of whether they have previously been enrolled in another course of the University, must undertake the Academic Conduct Essentials module (the ACE module).

(2) A student who has previously achieved a result of Ungraded Pass (UP) for the ACE module is not required to repeat the module.

(3) A student who has not achieved a result of Ungraded Pass (UP) for the ACE module when their progress status is assessed will not have made satisfactory progress even if they have met the other requirements for satisfactory progress in the rules for this course.

(4) A student who does not make satisfactory progress in terms of (3) is assigned the progress status of 'On Probation'.

Admission

2. To be considered for admission to this course an applicant must have—

(a) a bachelor’s degree of this University with a major in Engineering Science or Computer Science including the relevant pathway for the chosen specialisation, or equivalent as recognised by the Faculty;

or

(b) a Bachelor of Engineering or Bachelor of Computer Science or equivalent from a university other than this University with a weighted average mark of 65 per cent and suitable preparation for the chosen specialisation as recognised by the Faculty;

or

(c) a bachelor’s degree with a weighted average mark of 65 per cent and completion of, or concurrent enrolment in, the Master of Engineering Preliminary programme at this University.

Articulation

3. The Bachelor of Science (Honours) in Engineering Science, Bachelor of Science (Honours) in Computer Science and Software Engineering, Bachelor of Philosophy (Honours) in Engineering Science, and Bachelor of Philosophy (Honours) in Computer Science and Software Engineering articulate with this course.
Course structure

4. The course consists of units to a total value of 96 points comprising—

(a) all units in Table a (Master of Professional Engineering core units)—24 points

and

(b) for the specialisation in Chemical Engineering—

(i) all units in Group A in Table b (Chemical Engineering specialisation)—24 points

and

(ii) all units in Group B in Table b (Chemical Engineering specialisation)—24 points

and

(iii) two units from Group C1 in Table b (Chemical Engineering specialisation)—12 points

and

(iv) two units from Group C2 in Table b (Chemical Engineering specialisation)—12 points

or

(c) for the specialisation in Civil Engineering—

(i) all units in Group A in Table c (Civil Engineering specialisation)—24 points

(ii) all units in Group B in Table c (Civil Engineering specialisation)—24 points

and

and

(iii) four units from Group C in Table c (Civil Engineering specialisation)—24 points

or

(d) for the specialisation in Electrical and Electronic Engineering—

(i) all units in Group A in Table d (Electrical and Electronic Engineering specialisation)—24 points

(ii) all units in Group B in Table d (Electrical and Electronic Engineering specialisation)—24 points

and and
(iii) three units from Group C1 in Table d (Electrical and Electronic Engineering specialisation)—18 points

and

(iv) one unit from Group C1 or one unit from Group C2 in Table d (Electrical and Electronic Engineering specialisation)—6 points

or

(e) for the specialisation in Environmental Engineering—

(i) all units in Group A in Table e (Environmental Engineering specialisation)—24 points

and

(ii) all units in Group B in Table e (Environmental Engineering specialisation)—36 points

and

(iv) two units from Group C in Table e (Environmental Engineering specialisation)—12 points

or

(f) for the specialisation in Mechanical Engineering—

(i) all units in Group A in Table f (Mechanical Engineering specialisation)—24 points and

(ii) all units in Group B in Table f (Mechanical Engineering specialisation)—36 points and

(iii) two units from Group C in Table f (Mechanical Engineering specialisation)—12 points

or

(g) a specialisation in Mining Engineering comprising—

(i) all units from Group A1 in Table g (Mining Engineering specialisation)—12 points

(ii) two units from Group A2 in Table g (Mining Engineering specialisation)—12 points

and and
(iii) all units in Group B in Table g (Mining Engineering specialisation)—48 points

or

(h) for the specialisation in Software Engineering—

(i) all units in Group A1 in Table h (Software Engineering specialisation)—18 points

and

(ii) one unit from Group A2 in Table h (Software Engineering specialisation)—6 points

and

(iii) all units in Group B in Table h (Software Engineering specialisation)—48 points

Note: students who are concurrently enrolled in the Master of Professional Engineering Preliminary must have successfully completed that course before proceeding to the final 48 points of this course.

Satisfactory progress

5. (1) To make satisfactory progress in a calendar year a student must pass units to a value of at least half the total value of units in which they remain enrolled after the final date for withdrawal without academic penalty.

(2) A student who fails a unit twice is not permitted to enrol again in that unit unless the relevant board approves otherwise

Progress status

6. (1) A student who makes satisfactory progress is assigned the status of 'Good Standing'.

(2) Unless the relevant board determines otherwise because of exceptional circumstances—

(a) a student who does not make satisfactory progress for the first time is assigned a progress status of 'On Probation';

(b) a student who does not make satisfactory progress for the second time is assigned a progress status of 'Suspended';

(c) a student who does not make satisfactory progress for the third time is assigned a progress status of 'Excluded'.

Attachment U7
Award of degree with distinction

7. To be awarded the degree with distinction a student must achieve a course weighted average (WAM) of at least 80% in—

(a) all units attempted as part of the course that are awarded a percentage mark; and

(b) all relevant units undertaken in articulating courses of this University that are awarded a final percentage mark.

Award of Graduate Certificate/Diploma in Engineering

8. (1) A student who withdraws from the course before completing the course requirements but after completing 24 points may apply to be awarded the Graduate Certificate in Engineering.

(2) A student who withdraws from the course before completing the course requirements but after completing 48 points may apply to be awarded the Graduate Diploma in Engineering.

Professional practicum

9. (1) Students are required to complete at least 12 weeks' practical experience (GENG5000 Professional Practicum) in an a suitable engineering environment as approved by the Faculty.

(2) Students are required to make their own arrangements for practical experience.

(3) The Faculty may, on written application by a student and on production of satisfactory evidence, accept work completed by the student prior to acceptance into the course as fulfilling the requirements of Rules 9 (1).

(4) Students must submit a report on work completed for the practical experience (GENG5000 Professional Practicum) required under Rule 9 (1) or on work accepted by the Faculty under Rule 9 (3) and a Certificate of Practical Work Performed.

(5) In exceptional circumstances, the Faculty may vary the requirements for practical experience if satisfied that such practical experience cannot be obtained or undertaken.

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1. Students do not enrol in the professional practicum units. Upon successful completion, the appropriate unit is added to their enrolment and the result released together with the results for the other enrolled units for the semester.

2. To facilitate their efforts, students should seek advice from members of the Faculty and register with the Careers Centre.

3. Students do not enrol in the professional practicum units. Upon successful completion, the appropriate unit is added to their enrolment and the result released together with the results for the other enrolled units for the semester.
### Table a—Master of Professional Engineering core units

All units have a value of six points unless otherwise stated.

- Engineering Design Project 1
- Engineering Design Project 2
- Engineering Research Project 1
- Engineering Research Project 2

### Table b—Chemical Engineering specialisation

All units have a value of six points unless otherwise stated. Not all units are available each year.

**Group A**
- Control Engineering (L4)
- Numerical Methods & Modelling (L4)
- Project Management & Engineering Practice (L5)
- Risk, Reliability and Safety (L5)

**Group B**
- Advanced Thermodynamics (L4)
- Particle mechanics and Solids Handling (L4)
- Reaction Engineering (L4)
- Transport Phenomena (L4)

**Group C1**
- Advanced Reaction Engineering and Catalysts (L5)
- Combustion Science and Technology (L5)
- Gas Processing 1 - Natural Gas Processing (L5)
- Gas Processing 2 - LNG Production (L5)

**Group C2**
- Advanced Engineering Mathematics (L4)
- Contaminant Fate and Transport (L4)
- Extractive Metallurgy (L4)
- Modern Control Systems (L5)
- Petroleum Engineering (L5)
- Process Instrumentation and Control (L5)
- Renewable Energy (L5)

### Table c—Civil Engineering specialisation

All units have a value of six points unless otherwise stated. Not all units are available each year.

**Group A**
- Finite Element Methods (L5)
- Numerical Methods and Modelling (L4)
- Project Management and Engineering Practice (L5)
- Risk, Reliability and Safety (L5)

**Group B**
- Applied Geomechanics (L4)
- Civil Hydraulics (L4)
- Structural Concrete (L4)
- Structural Steel (L4)

**Group C**
- Coastal and Offshore Engineering (L5)
- Environmental Geotechnics (L5)
- Hydrology (L4)
- Structural Dynamics (L5)
- Transportation Engineering (L5)
- Underground Construction (L5)
Table d—Electrical and Electronic Engineering specialisation

All units have a value of six points unless otherwise stated. Not all units are available each year.

**Group A**

Advanced Engineering Mathematics (L4) Control Engineering (L4) Project Management and Engineering Practice (L5) Risk, Reliability and Safety (L5)

**Group B**


**Group C1**


**Group C2**

Artificial Intelligence and Adaptive Systems (L4) Computer Vision (L4) Finite Element Methods (L5) Mobile and Wireless Computing (L4) Numerical Methods and Modelling (L4)

Table e—Environmental Engineering specialisation

All units have a value of six points unless otherwise stated. Not all units are available each year.

**Group A**

Advanced Engineering Mathematics (L4) Numerical Methods and Modelling (L4) Project Management and Engineering Practice (L5) Risk, Reliability and Safety (L5)

**Group B**

Contaminant Fate and Transport (L4) Eco-engineering (L4) Environmental Modelling (L5) Hydrology (L4) Fluid Transport, Mixing and Dispersion (L4) Water Resources: Supply, Treatment and Reuse (L5)

**Group C**

Table f—Mechanical Engineering specialisation

All units have a value of six points unless otherwise stated. Not all units are available each year.

Group A

Control Engineering (L4) Numerical Methods and Modelling (L4) Project Management and Engineering Practice (L5) Risk, Reliability and Safety (L5)

Group B


Group C

Advanced Vibration and Sound (L5) Coastal and Offshore Engineering (L5) Design and Failure Analysis of Materials (L5) Engineering Tribology (L5) Modern Control Systems (L5) Particle Mechanics and Solid Handling (L4) Petroleum Engineering (L5) Renewable Energy (L5) Transport Phenomena (L4)

Table g—Mining Engineering specialisation

All units have a value of six points unless otherwise stated. Not all units are available each year.

Group A1

Project Management and Engineering Practice (L5) Risk, Reliability and Safety (L5)

Group A2

Extractive Metallurgy (L4) Numerical Methods and Modelling (L4) Resource Economics (ECON8501) (L5)

Group B

Environmental Geotechnics (L5) Geotechnology of Mine Waste (L4) Mineral Resources (L4) Mining Management (L5) Rock Mechanics (L4) Surface Mining (L5) Underground Mining 1 (L4) Underground Mining 2 (L5)

Table h—Software Engineering specialisation

All units have a value of six points unless otherwise stated. Not all units are available each year.

Group A1

Digital and Embedded Systems (L4) Project Management and Engineering Practice (L5) Risk, Reliability and Safety (L5)
Group A2
Control Engineering (L4) Numerical Methods and Modelling (L4) Robotics (L5)

Group B