MEMBERS OF THE EDUCATION COMMITTEE OF THE FACULTY ENGINEERING, COMPUTING AND MATHEMATICS

Deputy Dean (Education), Professor Michael Johns (Chair)
Chair of the Faculty Academy for the Scholarship of Education, Professor Caroline Baillie
Programme Chair, Chemical Engineering, Professor Hui Tong Chua
Programme Chair, Civil Engineering, Associate Professor Tongming Zhou
Programme Chair, Computer Science and Software Engineering, Dr Chris McDonald
Programme Chair, Electrical and Electronic Engineering Professor Roberto Togneri
Programme Chair, Mathematics and Statistics, Dr Des Hill
Programme Chair, Mechanical Engineering, Professor Adam Wittek
Programme Chair, Mining, Professor Richard Durham
MPE Coordinator, Dr Cosimo Faiello
Engineering Science Coordinator, Dr Nicole Jones
Manager, Student and Academic Support, Ms Lisa Beckley
Library Manager, Ms Merrilee Albatis
Undergraduate Student Representative (Engineering), Ms Laura Pecorari

INVITED
Professor Grady Venville, Dean of Coursework Studies (Item 4)
Mr Maxwell Keeble, APS Project Officer (Item 4)
Dr Dianne Hesterman (Item 5)

EDUCATION COMMITTEE

The next meeting of the Education Committee (incorporating the Teaching and Learning Committee) will be held in the Billings Room, third floor, Electrical and Electronic Engineering Building from 2:00-4:00pm on 17 February 2016.

Part 1 of the agenda has items of communication to be dealt with en bloc. Part 2 of the agenda is items for decisions to be dealt with en bloc by motion of the Chair. Part 3 is for discussion and decision. A member may request the removal of an item from Parts 1 or 2 to Part 3.

Mr John Doyle
Executive Officer

1. MINUTES – REF: F35038

The Chair recommends: that the Education Committee minutes of meeting held on 18 November 2015 be approved.

2. DECLARATION OF POTENTIAL FOR CONFLICT OR PERCEIVED CONFLICTS OF INTEREST – REF: F35039

The Chair will invite members to declare the potential for or perceived conflicts of interest with regards to the items on the agenda.

3. ITEMS/BUSINESS IN PROGRESS FOR NOTING SINCE PREVIOUS MEETING

PART 1 – ITEMS OF COMMUNICATION TO BE DEALT WITH EN BLOC

PART 2 – ITEMS FOR DECISION TO BE DEALT WITH EN BLOC
PART 3 – ITEMS FOR DISCUSSION AND DECISION

4. PRESENTATION BY DEAN COURSEWORK STUDIES

Professor Grady Venville, Dean of Coursework will give a presentation to the members of the Education Committee from 2:00-3:00pm. The presentation will include:

- New policy on Assessment
- Developing new curriculum proposals – key principles
- Managing changes to curriculum
- Curriculum mapping
- 2017 submission deadlines; and
- CAIDI updates

A copy of the presentation is listed at Attachment A.

For discussion

5. PROFESSIONAL PRACTICUM MARKING SHEET

A new marking sheet has been developed to reflect recent changes to the requirements of the professional practicum and its assessment. A copy of the Professional Practicum Marking Sheet is listed at Attachment B.

For discussion and approval

6. EXTENSION OF THE ENGINEERING SCIENCE MAJOR

The Deputy Dean, Education has met with Heads of School and Programme Chairs to discuss the possibility of extending each of the Engineering Science major specialisations by two units to allow additional content in the major.

The changes will be proposed as part of Annual Course Review and would be active as of 2017. The Deputy Dean (Education) will provide a brief update on the proposal.

<table>
<thead>
<tr>
<th>Specialisation</th>
<th>Unit 1</th>
<th>Unit 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Engineering</td>
<td>ENSC3018 Process Synthesis and Design</td>
<td>ENSC3019 Unit Operations and Unit Processes</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>ENSC3012 Data Collection and Analysis or ENSC3013 Environmental Systems</td>
<td>ENSC3011 Resource Extraction Technologies</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>ELEC5502 Analogue Electronics (level change)</td>
<td>ELEC4403 Digital and Embedded Systems (level change)</td>
</tr>
<tr>
<td>Environmental Engineering</td>
<td>ENSC3011 Resource Extraction Technologies</td>
<td>BIOL1130 Frontiers in Biology</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>ENSC3007 Heat and Mass Transfer</td>
<td>MATH2501 Mathematical Methods</td>
</tr>
<tr>
<td>Mining Engineering</td>
<td>ENSC3003 Fluid Mechanics</td>
<td>ENSC3013 Environmental Systems</td>
</tr>
<tr>
<td>Software Engineering</td>
<td>CITS2200 Data Structures and Algorithms</td>
<td>CITS3200 Professional Computing</td>
</tr>
</tbody>
</table>

For discussion

7. OTHER BUSINESS
Developing and Managing Your Curriculum

2017 Faculty Information Session

Content includes

- New policy on Assessment
- Developing new curriculum proposals – key principles
- Managing changes to your curriculum
- Curriculum mapping
- 2017 submission deadlines
- CAIDI updates
New UWA Assessment Policy

‘The new policy is a great opportunity to reduce your workload by doing less assessment and to learn how to utilise digital approaches to assessment’

Phase 1: January – December 2016

• Mostly includes things we already do!
• University administered exams – two-hour exams only

Phase 2: January 2016 – December 2017

• Adjustments to approved units and will require all unit coordinators to utilize some digital aspects of assessment
• Two years for unit coordinators and other University teaching staff to redesign their units where necessary and become adept at the required technology

For further details see:
New UWA Assessment Policy: Cheat Sheet – Handout

Developing a Phase 1 proposal (Concept Plan) – key criteria

1. Why offer the course?
Provide a rationale for offering the course

2. Strategic and Operational Priorities
Demonstrate alignment

3. Market Research and Analysis
Provide evidence of demand

4. Competitor Analysis
National and International benchmarking

5. Risk Management
Identify any risk including financial risk

Who can provide help?
For guidance and help when completing these sections contact your Faculty Marketing Office and Brand, Marketing and Recruitment
Undergraduate Degree requirements

Undergraduate Degree requirements = 24 units (144 points)

<table>
<thead>
<tr>
<th>Single Major</th>
<th>Plus</th>
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<tbody>
<tr>
<td>2 plus Level 1</td>
<td>Level 1</td>
</tr>
<tr>
<td>2 plus Level 2</td>
<td>Level 2</td>
</tr>
<tr>
<td>4 L3 L3 L3 L3</td>
<td>4 Broadening units (at least 1 Cat A)</td>
</tr>
<tr>
<td></td>
<td>+ Max of 4 Complementary units (if necessary)</td>
</tr>
<tr>
<td></td>
<td>+ Electives</td>
</tr>
</tbody>
</table>

Developing a new major proposal (Phase 2) – key criteria

1. Structure
   Major sequence including uniqueness of major

2. Developmental Progression
   Sequential progression of units within the major sequence

3. Mapping
   Unit learning outcomes to those of the major

4. Embedding Research and communication skills

5. Educational Principles
   Embedded in the major

6. Complementary Units
   Necessary adjuncts to degree-specific major

Permit the possibility of at least one semester of Study Abroad

Reference:
UP 12/20 University Policy on: Undergraduate Degree Courses
Developing a new honours specialisation – key criteria

1. Structure
   - 48 points value

2. Coursework Component

3. Research Component

4. Mapping
   - Unit learning outcomes to those of the honours

5. Embedding Educational Principles

6. Entry Requirements

- Research dissertation (24 pts)
- Four standard units (24 pts)

Reference:
UP07/123 University Policy on: Honours Award

Progression from Honours to Master’s coursework courses

A master’s degree course may be developed to allow for a student to progress from honours to a master’s course, provided:

- the progression occurs prior to graduation from honours
- honours course provides appropriate foundation for units in the master’s course
- content of honours coursework and dissertation is directly related to the master’s
- at least 50% of total units to complete the master’s are at Level 5

Reference:
UP15/7 University Policy on: Courses – Postgraduate Coursework
Developing a new Postgraduate coursework course – key criteria

1. Structure and Volume of Learning
2. Learning Outcomes Developed in line with AQF specific criteria
3. Mapping Unit learning outcomes to those of the course
4. Articulation Upward or downward
5. Educational Principles Embedded in the course
6. Admission requirements

Reference: UP15/7 University Policy on: Courses – Postgraduate Coursework

Developing a new unit – key criteria

1. Unit Content Academic objectives
2. Unit rules Prerequisites, corequisites and incompatibilities
3. Learning Outcomes Mapped to outcomes of relevant course(s)
4. Assessment Items In line with new policy
5. Service Learning
6. Broadening Category (Undergraduate units only)

Reference: UP11/46 University Policy on: Changes to Units
Curriculum Mapping

In line with policy, the sequence of units must demonstrate development progression by way of mapping their learning outcomes to those of the major / honours or postgraduate coursework course

- Mapping documents must demonstrate how:
  - a student develops the discipline’s knowledge, skills and dispositions and how they are taught and assessed
  - the requirements of UWA’s new courses including communication skills, research skills and embedding educational principles, are met

- A mapping document should be formulated as part of the development of a new proposal and updated when changes are made to all approved curriculum

Reference:

Change to final approving body – Curriculum proposals

Summary of key changes

- New Phase 1 proposals (market analysis) for majors and postgraduate coursework courses require Academic Council approval (previously Dean, Coursework Studies)
- Changes to approved curriculum only require Curriculum Committee approval (previously Academic Council)
- Rescission of units only requires Curriculum Committee approval (previously Academic Council)

For further details see:
Curriculum Management – Why Change?

- New academic developments
- New appointment bringing new ideas
- Performance of students (high fail rates)
- Being responsive to student feedback (e.g. SURF, SPOT)
- Carpe Diem workshop
- Continuous Improvement

Curriculum Management – Opportunities for Change

- **Annual Change**: Opportunity to review and submit planned change to courses and units
- **Fast-track change**: Opportunity to submit late urgent changes to units prior to each Semester
- **September updates**: Final updates to unit availability and other minor edits
- **Unforseen circumstances**: Accommodates unplanned / last minute critical change to courses and units
2017 Curriculum Timelines

‘Timelines for proposals are planned to ensure that amendments are approved in time to meet all UWA internal process and Government reporting deadlines.’

- Marketing (International and Domestic)
- TISC
- ACIR – The Good Universities Guide
- CRICOS registration
- Government reporting
- UWA Open Day
- Enrolments
- Timetabling
- UWA Handbook

CAIDi updates — Assessment policy

The CAIDi unit form detects compliance with the policy and requires users to enter justifications for any exemptions, e.g.

- where there is only one assessment item;
- where there is more than three assessment items;
- where an item has a weighting below 10% or above 70%;
- where there is an exam worth less than 40%;
- where group work exceeds 30%; or
- where failed components exceed 70%.

Supplementary assessment statements have also changed slightly to conform to the new policy.
CAIDi updates – Postgraduate course types

**AQF degree type** is now gathered by default

- Master's (Coursework)
- Graduate Certificate
- Graduate Diploma
- Honours (Coursework)
- Master's (Extended)
- Master's Research
- Doctoral Degree
- Professional Doctorate/Master's Coursework

**UWA degree type** is only gathered where there are variations within the AQF level

- Master's by Coursework
- Master's by Coursework and Dissertation
- Master's by Coursework or Coursework and Dissertation
- Professional Practica Master's Degree

Questions?
Guidance on recent changes (that were introduced in late 2015) to the professional practicum can be found at http://www.ecm.uwa.edu.au/students/professional-practicum. These changes affect the types of activities students can claim as practicum experiences and also the minimum number of hours they need to spend in an engineering work environment.

Please complete and return this form to your school office within two weeks of receipt

Assessment Criteria
Please assess the attached report against the following criteria. Before marking the report, check that all sections are included. If the report is missing one or more sections, the student will need to amend and then resubmit their report. Assessment criteria have been taken from: http://www.ecm.uwa.edu.au/students/professional-practicum#Assessment

Reports should include the following: Please tick if included & satisfactory

1. A table on the reverse side of the Professional Practicum Coversheet that summarises how the student has completed the required number of practicum hours.
2. Certificates of Work Performed and other evidence attached as appendices to confirm the types of activities undertaken and the number of hours claimed. Practicum experiences should be checked to ensure they are suitable according to the guidelines on the Professional Practicum web page.
3. An introduction that offers an overview of the report
4. A section on each practicum placement (including any volunteer work) that briefly describes:
   - How the student obtained the work
   - The employer’s business and organisation
   - Projects that the student was involved with and what s/he contributed to those projects
   - Observations of inter-professional relationships
   - Where appropriate, observations of management and labour relationships
5. A critical assessment of the value of the practicum experiences and their contribution to the student’s professional development. Where appropriate, this should refer to the competencies outlined in the Engineers Australia Stage 1 Competency Standard for Professional Engineer.
6. Title page, table of contents, correct referencing (where appropriate), page numbers, headings
7. A4 layout, 2cm margins, 12pt Times or Times Roman, double-spaced lines
8. A length of approximately 2000 words with the level of English at an acceptable standard

Complete reports are awarded either an Ungraded Pass (UP) or Ungraded Fail (UF). Unsatisfactory reports (including incomplete reports) must be resubmitted until a grade of UP is awarded.

Report is ☐ complete ☐ incomplete
Grade ☐ UP ☐ UF

Additional comments:

Marker’s Name ____________________________ Date: _____________