Present: Associate Professor Mehmet Kizil (in the Chair), Professor Andrej Atrens, Ms Yonna Cowan, Ms Miranda Mariette, Professor Ross McAree, Associate Professor Carl Reidsema, Ms Lauren Smith, Associate Professor Martin Veidt, Mrs Lamb.

Invited: Professor Caroline Crosthwaite.

Apologies: Associate Professor Lydia Kavanagh Mr Doug Malcolm, Professor David Mee, Professor Richard Morgan, Dr Surya Singh, Associate Professor Mingxing Zhang.

Minutes: The minutes of the meeting held on 18 October 2012, having been previously circulated, were taken as read and confirmed.

Welcome: The Chair welcomed Ms Lauren Smith to the Committee. Ms Smith replaced Dr Terry Maybury who left the SMI at the end of 2012.

Business arising out of the minutes

The following items were actioned from the meeting on 18 October 2012 and subsequently approved by the Board of Studies in Engineering –

- Insertion of quota for MECH4500/4501 – Engineering Thesis
- Request to offer MECH7350 – Rotating Machinery in Teaching Period 5
- Change of contact hours for MECH2305 – Introduction to Engineering Design

The following items were actioned from the meeting on 18 October 2012

- Teaching awards (Dr Hooman, Associate Professor Rowan Truss)

Items outstanding

- Changes to courses and programs – Mineral Resources suite of programs

2. Changes to Courses and Programs

a. Request to offer “Introduction to Fire Safety Engineering” as an elective in the BE (Mechanical Engineering).

The Head of School of Civil Engineering requested that a new course “Introduction to Fire Safety Engineering” be inserted into the Bachelor of Engineering (Mechanical Engineering) elective list from 2014. It would be a Year 3 course with no prerequisites. The semester of offer was not yet known. The course was intended to provide the basic knowledge required to understand fire safety including the basic tools related to fluid mechanics, heat transfer and combustion. Topics include a general overview of the discipline including fire, fire safety and fire protection systems.

Members agreed that the course could be inserted into the Bachelor of Engineering (Mechanical Engineering) List B2 – Advanced Electives from 2014.

Changes to the course list would be submitted for consideration by the Committee at the next meeting.

b. Changes to Assessment Methods ENGG7602 – Advanced Engineering Laboratory Techniques

Members endorsed the proposal to change to assessment methods listed in the course catalog for ENGG7602 – Advanced Engineering Laboratory Techniques to take effect Semester 1 2013. The assessment, as specified in the Electronic Course Profile, included 5 reports worth 20% each.

It was noted that this proposal might not contravene the University’s assessment policy provided that it could be demonstrated that other methods of assessment were not appropriate for this type of course.
Changes to Courses and Programs (cont’d)

MINE7042 – Incident Investigation & Analysis

The Sustainable Minerals Institute requested the following changes to MINE7042 to take effect from Semester 1 2013.

- Delivery method: change to external delivery (from flexible)
- Prerequisites: add HUFA7500 (Human Factors in the Minerals Industry) and MINE7033 (Minerals Industry Risk Management)
- Semester of Offer: change from Semester 1 to Semester 2.

Members endorsed the changes.

MINE7041 – Mine Occupational Health & Safety Management

The Sustainable Minerals Institute requested the following changes to MINE7041 to take effect from Semester 1 2013.

- Delivery method: change to external delivery (from flexible)

Members endorsed the changes.

Discontinuation of the field “Mineral Resources Risk Management” within the Graduate Diploma and Master of Mineral Resources

Members endorsed the discontinuation of the field “Mineral Resources Risk Management” within the Graduate Diploma and Master of Mineral Resources from Semester 2 2013 and noted that no new enrolments were accepted into the programs in Semester 1 2013. The rationale to discontinue this field of study in the Graduate Diploma and Master of Mineral Resources was due to low enrolments. The field would be retained within the Graduate Certificate of Mineral Resources.

Structural amendments: Graduate Diploma and Master of Mineral Resources – field of “Mineral Resources Risk Management”

Members endorsed the proposed structural amendments to the “Mineral Resources Risk Management” within the Graduate Diploma and Master of Mineral Resources to take effect from Semester 2 2013. The amendments facilitated students currently enrolled in the program to complete their studies.

Changes to Assessment Methods MINE4120 – Mine Geotechnical Engineering

Members noted that executive approval had been given to change the assessment methods in the course MINE4120 – Mine Geotechnical Engineering from Semester 1 2013. The tutorial exercise was dropped.

*From*
Assessment methods: Assignments, Practical, Tutorial Exercise, End of Semester Examination

*To*
Assessment methods: Assignments, Practical, End of Semester Examination
2. Changes to Courses and Programs (cont’d)

h. Change to course description MECH4480 – Computational Fluid Dynamics

Members noted that executive approval had been given to change the course description of MECH4480 – Computational Fluid Dynamics from Semester 1 2013.

From
Computational fluid dynamics (CFD) as it relates to engineering by bringing together the knowledge gained in one or more of the following disciplines: fluid mechanics, thermodynamics, heat/mass transfer & numerical methods in order to develop computational techniques for analysis of complex engineering processes.

To
Computational Fluid Dynamics (CFD) for engineering applications. Development of computational techniques for analysis of complex engineering processes by bringing together the knowledge gained in one or more of the following disciplines: fluid mechanics, thermodynamics, heat/mass transfer & numerical methods.

i. Change to semester of offer MATE7001 – Environmental Performance of Materials

Members noted that executive approval has been given to change the semester of offer for MATE7001 – Environmental Performance of Materials from Semester 1 2013. The course had been offered in various semesters for the past two years to accommodate the SSP arrangements of the course coordinator. The course was now offered in Semester 1 only.

j. Change of course description

Members are asked to note that executive approval has been given to change the course description of MECH2305 - Introduction to Engineering Design & Manufacturing from Semester 1 2013.

From
In this course students will be introduced to the strong interactions between manufacturing and engineering design processes. The course builds on the engineering problem solving activities of ENGG1200 and continues to explore the roles of computational modelling in design and materials behaviour in manufacturing. Students will learn that the design process involves the creation and prescription of the shape and characteristics of a product or machine within manufacturing and material performance constraints. Common and emerging manufacturing processes will be introduced. Professional engineers working in both engineering design and manufacturing will deliver guest lectures into the course in order to locate key concepts within real world contexts. Students will engage in a number of Computer Aided Manufacturing exercises including CNC machining and forming of components which they have modelled using CREO computer aided design software. Students will also be introduced to the role of process simulation and modelling in manufacturing. The primary technical learning outcomes will be addressed through a combination of learning strategies including online resources, traditional lectures, active learning CAD exercises and a project based learning assignment.

To
In this course students will be introduced to the strong interactions between manufacturing and engineering design processes. The course builds on the engineering problem solving activities of ENGG1200 and continues to explore the roles of computational modelling in design and materials behaviour in manufacturing. Students will learn that the design process involves the creation and prescription of the shape and characteristics of a product or machine within manufacturing and material performance constraints. Common and emerging manufacturing processes will be introduced. Professional engineers working in both engineering design and manufacturing will deliver guest lectures into the course in order to locate key concepts within real world contexts. Students will engage in a number of Computer Aided Design and Manufacturing exercises including CNC machining of components. Students will also be introduced to the role of process simulation and modelling in manufacturing. The primary technical learning outcomes will be addressed through a combination of learning strategies including online resources, traditional lectures, active learning CAD exercises and a project based learning assignment.

Members agreed that a longer description would assist students and suggested that all course coordinators review course descriptions to make them more informative.
4. SECaT Outcomes – Semester 2 2012 courses

Members discussed the SECaT report for courses offered through the School in Semester 2 2012. It was noted that the average student response to Question 8 of the SECaT for undergraduate courses increased to nearly 80% (79.7%) from 74.9% in Semester 2 2011 and 71.9% in Semester 1 2012.

While these results were pleasing, the scores for Question 6 (provision of helpful feedback) continued to be lower than expected with four courses scoring <3.0. One suggestion was for course coordinators to preface discussion by stating categorically that they were about to provide feedback. It might also be important for this to come from the academic staff, rather than casual teaching staff.

Feedback from staff SWOT analyses suggested that the course organisation, inexperienced casual teaching staff, unclear marking criteria and lack of helpful feedback contributed to lower scores.

The Faculty’s Teaching and Learning Development Program offered a workshop “Giving & Receiving Helpful Feedback”. The workshop was scheduled for 30 October 2013 and would be open to all teaching staff.

Members also noted that Dr Micah Nerhing and Dr Bo Feng’s results were markedly improved in 2012 and agreed that they both should be congratulated.

5. 2013 CTQA Report

Members discussed the 2013 CTQA report which had been circulated to members on 12 March 2013.

One item of interest was the shift in grades for international students from 4-5 over the past few years and agreed it warranted further investigation. It was also noted that the School’s grade distribution correlated well with that of the University’s overall distribution.

Members also discussed ways to improve the English language communication skills of all students from non-English speaking backgrounds. This was happening in ENGG1200 where writing skills were being evaluated through reflective writing exercises. The Associate Dean (Academic) informed members that the DVC (International) was looking at English language proficiency issues including how the development of English language skills might be reflected into graduate attributes. Students could also have assistance from Student Services.

Members endorsed the 2013 CTQA report for onforwarding to the Faculty.

6. School Operational Plan

At the meeting held on 18 October 2012, members had agreed to establish a working party to review the Learning Section of the School’s Operational Plan. Associate Professors Mehmet Kizil and Lydia Kavanagh met on 26 November 2012 to review the plan and the revised draft was considered by members.

The Associate Dean (Academic) suggested that the School might consider options of double degrees with overseas institutions. It was agreed to invite Associate Professor Aleksandar Rakic from the School of Information Technology and Electrical Engineering and Mr Brendon Lutwyche from the Faculty to the next meeting to discuss options.

The learning section of the Operational Plan was endorsed.

7. Course Profile Audit

At the meeting on 18 October 2012, members considered the establishment of a working party “Course Profile Audit” be established with the following terms of reference –

- To implement relevant recommendations from the Assessment Review and Graduate Attributes Subcommittees
- To ensure that recommendations for improvement from SECaT course reviews are routinely included in subsequent course profiles
- To implement relevant recommendations from the recent Engineers Australia accreditation visit.
7. Course Profile Audit (cont’d)

It was agreed that an administrative review be done in the first instance. The administrative review was done for Semester 1 2013 courses and would be done for Semester 2 courses as part of the publication process.

Members agreed this could be done by a working party as part of the implementation of the Engineers Australia recommendations and the review of the program to meet the Level 8 Australian Qualification Framework standards.

8. Engineers Australia Accreditation Recommendations - Implementation

The final report from Engineers Australia was circulated widely following receipt and an implementation plan has been developed and circulated with the agenda papers. An extension has been requested for recommendations requiring mapping to outcome competencies of Engineers Australia with a revised due date of 30 November 2013.

There was a software tool under development which could facilitate the process of linking learning objectives and learning outcomes to the Stage 1 competencies. Further work on the Electronic Course Profile at the University level was also required.

Members noted that a number of responses were due by 30 June and that the implementation plan would be discussed at the Board of Studies in Engineering.


Members noted student misconduct outcomes for cases heard by the Head of School between September 2011 and September 2012. A total of 71 cases were heard with 41 students found guilty of misconduct, 15 found not guilty and 14 given an official warning. There was one case where no further action was taken. Most cases in 2012 were from students working together for an experiment (which was permitted) then not finishing the assessment individually (as required).


Each semester the University’s Assessment Sub-Committee reviewed errors in examination papers and referred them to faculties and schools for review. The School’s administration team reviewed the errors in these papers and have done what we could to reduce the error rate that can be picked up by the administrative team. There were 5 errors in Semester 1 2012 -

- MECH2300 was a query on the size and colour of a figure which was resolved by us answering a question. (2 errors)
- METR3200/7200: an error was discovered and the paper replaced before the exam.
- MINE3120: an error was discovered and the paper replaced before the exam.
- MINE3121: error regarding instructions of material to be brought into the examination.
- MECH2410: part of a formula was missing.
- MECH3200: errors found before exam: replacement paper sent.
- MECH3305: MCQ instructions not clear, correction made during exam to wording of question.
- MECH3750: error in an equation.
- MECH4301: correction made during exam.
- MINE3123: needed to print the paper in the school.

In Semester 2, three was a higher error rate - 20 central papers, 9 errors (45%).

- There was one late paper (AERO3000) and the Staff member’s ACA account was charged for printing costs.
- MECH2100: one question with 6 MCQ answers.
- MECH2210: error found during the exam and corrections supplied. There were issues with image colour and handwritten note limits also. The admin team will watch out for this.
- MECH2410: part of a formula was missing.
- MECH3200: errors found before exam: replacement paper sent.
- MECH3305: MCQ instructions not clear, correction made during exam to wording of question.
- MECH3750: error in an equation.
- MECH4301: correction made during exam.
- MINE3123: needed to print the paper in the school.
10. Examination Paper Errors and Issues: Semester 2 2012 (cont’d)

An analysis showed that most of these were errors that should have been picked up by a more careful read of the paper prior to submission. More than 50% of errors were related to the questions on the exam papers such as the wrong symbol, missing a factor, wrong unit, etc. which cannot readily be picked up by the chief examiner or the administrative staff.

As far as good practice was concerned, the School adopted the following process:

- Staff brings paper to school
- There is an administrative review
- The chief examiner reviews it
- A senior RHD student or another staff member is asked to attempt the paper (not sure how well this works or if everyone did it)

There was no evidence that late papers had more errors than those submitted earlier. The new examinations system has helped to reduce errors related to pagination, etc.

11. School Review

Members noted that the School Review was scheduled for the period 29 July – 2 August 2013 and that the section of the submission to the review was being prepared. Members would be asked to comment on the section prior to it being circulated more widely for comment around the School. Most of the information to provide was listed in the CTQA Report.

12. Teaching and Learning Development Program

Members noted the Teaching and Learning Development Program (TLDP) program in 2013.

13. Report from the Library

Members noted the report from the Library. The report would be attached to the next School Newsletter.