Present:  Associate Professor Mehmet Kizil (in the Chair), Professor Andrej Atrens, Dr Michael Kearney, Ms Miranda Mariette, Mr Doug Malcolm, Professor David Mee, Associate Professor Paul Meehan, Mrs Kim Lamb.

Invited:  Professor David Brereton, Ms Amelia Stuckey for item 1.

Apologies:  Ms Yonna Cowan, Associate Professor Lydia Kavanagh, Ms Kylie Pettit, Associate Professor Carl Reidsema, Professor Mingxing Zhang.

Minutes:  The minutes of the meeting held on 10 April 2014, having been previously circulated, were taken as read and confirmed.

Business arising out of the minutes

Changes to courses and programs

- METR4201/7200 – Introduction to Control Systems
- Course list changes: Mining Engineering
- Course list changes: Mining and Geotechnical Engineering
- Course list changes: Mechanical and Aerospace Engineering
- Transfer of Faculty: Postgraduate coursework suite of programs in Community Relations
- Change to course lists: Mineral Resources (Environment) field of study
- Variation to the Academic Calendar: MECH7650 – Regulation, Compliance & Safety
- Change to course description: MATE7013 – Advanced Manufacturing
- Change to course description: MINE7052 – Community Aspects in Mineral Resource Development
- Cancellation of course: MINE7059 – Applied Research Methods & Professional Skill Development
- Change of semester of offer: HUFA7501 – Human Factors Engineering
- Cancellation of course: HUFA7500 – Human Factors in the Minerals Industry
- Change of semester of offer: METR7203 – Advanced Topics in Control Engineering
- Change of assessment: METR3100 – Sensors & Actuators
- Change to class contact: MECH2305 – Introduction to Engineering Design & Manufacturing
- Change to assessment: MECH4470 – Hypersonics & Rarefied Gas Dynamics
- Change to assessment and course description: MINE4122 – Mining Research Projects I
- Change of semester of offer: MINE3106 – Minerals Industry Visits
- Change of prerequisite and contact hours: MINE3120 – Resource Estimation
- Change to course description: ENGG4011 – Professional Engineering Project

The following items were actioned from the meeting on 10 April 2014

- Establishment of a working party: MECH3600 – Engineering Management & Communication
- SECaT results – Semester 2 2013
- Exemption from assessment items for students repeating a course
- e-Learning information
- Library report

1.  Introduction of a New Suite of Postgraduate Coursework Awards and Consequential Changes to the Mineral Resources Postgraduate Suite of Awards

   Professor David Brereton and Ms Amelia Stuckey were invited to the meeting to present the case for the new suite of postgraduate programs and associated consequential changes.

   The Sustainable Minerals Institute (SMI) currently offered a suite of postgraduate coursework programs in Mineral Resources in the fields of: Environment, Mineral Industry Risk Management, and Exploration. The field of Exploration was offered through the Faculty of Science and the fields of Environment, Mineral Industry Risk Management, and Sustainable Development were managed by the Faculty of Engineering, Architecture and Information Technology through the School of Mechanical and Mining Engineering.

   In addition, the SMI offered a suite of Postgraduate Coursework Programs in Community Relations which had been transferred to the Faculty from 1 January 2014 following the disestablishment of the (then) Faculty of Social and Behavioural Sciences.
1. **Introduction of a New Suite of Postgraduate Coursework Awards and Consequential Changes to the Mineral Resources Postgraduate Suite of Awards** (cont’d)

As part of the University’s Academic Program Review policy (PPL 3.30.05), the SMI undertook a review of the suite of programs in Mineral Resources and proposed the following to take effect from 1 January 2015 –

- Introduce a new suite of postgraduate coursework programs in “Responsible Resource Development” with the fields of Health and Safety, Environment, and Community Relations available in the Graduate Certificate, Graduate Diploma and Masters programs.
- Discontinue the programs including the fields from the existing Mineral Resources suite of postgraduate coursework awards:
  - Graduate Certificate: Environment, Minerals Industry Risk Management, Sustainable Development
  - Graduate Diploma: Environment
  - Master: Environment.
- Transfer the Mineral Resources suite of programs to the Faculty of Science as the Exploration field would be maintained. The field of Exploration was managed by the Faculty of Science.
- Discontinue the suite of postgraduate coursework awards in Community Relations.

There had been consistently good enrolments (an average of 30 new students a year) in the Community Relations programs since their introduction in 2007. However, enrolments in the Mineral Resources suite of programs (fields of Environment, Risk Management, and Sustainable Development) were too low to be viable.

The restructure presented an opportunity for SMI’s coursework offerings to be consolidated, and reinvigorated as part of a new program. Based on feedback from obtained from industry and current and past students, SMI believed the new suite of programs in Responsible Resource Development would be more attractive to potential markets because it provided a more integrated set of offerings and the opportunity for students to engage with professionals from other disciplines. The restructure would also be used as an opportunity to revise on line course delivery, drawing on contemporary thinking and practice around ‘blended learning’.

Currently enrolled students would be able to complete their program of study. The new programs would be available on a part time basis only and would be available to international students (a student visa was not required as courses are on line).

The salient features of the new suite of programs were -

- All courses (except CONS7008 – Ecological Survey & Analysis) would be delivered on line to accommodate the needs of professionals in the resources industry, both in Australia and overseas (no CRICOS code would be required). There would be a 5 day residential requirement for some courses.
- CONS7008 – Ecological Survey & Analysis was an elective and would only be available to students who could attend on campus.
- A minimum enrolment quota of 5 was proposed for electives in the Risk Management field of study (HUF67500, MINE7032, MINE7033, MINE7041, and MINE7042).
- At the Graduate Certificate level, students would be introduced to the general concepts and challenges of sustainable development in the mining industry. Students could then choose from three fields of specialisation (environment, safety, and community relations). The AQF specification would be Level 8.
- At the Graduate Diploma level, students operationalised the principles of Sustainable Development in an evidence-based and practical way. The AQF specification would be Level 8.
- The Masters level offered students the opportunity to undertake an eight unit research project related to their field of specialisation. The AQF specification would be Level 9.
- There would be one new course introduced – MINE7032 – Integrated Risk Management.
- There would be a number of courses no longer offered from 2015.

Members noted support had been provided by the Library and the Executive Dean, Faculty of Humanities and Social Services. Support from the Faculty of Science was yet to be received; however, support has been sought. A business case, which will be submitted to the University Senior Management Group, had been prepared. Courses would also be available for those interested in continuing professional education, rather than through formal enrolment.

It was resolved to recommend that -
1. Introduction of a New Suite of Postgraduate Coursework Awards and Consequential Changes to the Mineral Resources Postgraduate Suite of Awards (cont’d)

- the suite of programs in Responsible Resource Development be approved for offer from Semester 1 2015;
- the fields of Environment, Risk Management, and Sustainable Development within the Mineral Resources suite of programs be discontinued from Semester 1 2015;
- ownership of the Mineral Resources suite of programs be formally transferred to the Faculty of Science from Semester 1 2015;
- the suite of postgraduate programs in Community Relations be discontinued from Semester 1 2015;
- the course, MINE7032 - Sustainable Management of Risk in Industry - An Integrated Systems Approach, be approved for offer from Semester 1 2015;
- a minimum enrolment quota of 5 apply to electives in the Risk Management field of study within the suite of programs in Responsible Resource Development (HUFA7500, MINE7032, MINE7033, MINE7041, and MINE7042) to take effect from Semester 1 2015.

2. Changes to Courses

a. Change to assessment – MECH7650 – Regulation, Compliance & Safety

Members noted that executive approval was granted on 17.6.2014 to change the assessment in MECH7650 – Regulation, Compliance & Safety to take effect from Semester 2 2014:

- From – Assignments and Exams.
- To - Case study, Assignment and Presentation.

b. Change to Course Description – ENGG7701 Engineering Grand Challenges

Members recommended the following change to the course description of ENGG7701 – Engineering Grand Challenges to take effect from Semester 2 2014:

Implications of being a professional engineer in the 21st century through active engagement with technical, socio-economic and political aspects. Each student will focus on the 14 National Academy of Engineering Grand Challenges in an enquiry based approach requiring an in-depth framing of the problem, including identification of innovative opportunities and the necessary conditions for developing a solution that is scalable and can be applied at a global level. Student will also examine disruptive technologies, and carry out a critical analysis of environmental policy. Students will act as consultants and advisors to the newly formed “UQ Engineering Global Innovations Centre” (a fictitious organisation) and be required to demonstrate their leadership skills in developing a network of collaborators from the relevant disciplines within the UQ research community, as well as industry and the community. Key lectures provide supporting technical / social / political / cultural / economic issues around the challenges and technologies, developing networks within communities, leadership, planning and persuasive communication. Students will be required to demonstrate their understanding of the issues in persuasive arguments to the relevant stakeholders. Critical peer review is an integral part of the course. Each assessment item will be evaluated by peer assessment, providing opportunities for the fair and critical evaluation of the efforts of peers.

c. Change to course description and incompatible courses – MECH4480 – Computational Fluid Dynamics

Members recommended the following changes to MECH4480 – Computational Fluid Dynamics as the material presented in MECH2700 – Engineering Analysis I and MECH3410 – Fluid Mechanics is material for MECH4480 to take effect from Semester 1 2015:

- Add Pre: MECH2700
- Add Comp: MECH3410 (to be taken prior to, or concurrently with, MECH4480)

d. Change to contact hours and incompatible courses METR4201 – Introduction to Control Systems

Members recommended the following change to METR4201 – Introduction to Control Systems to take effect from Semester 1 2015:

- Change contact hours from 2L1T1P or lab hour to 3L1T1P or lab hour
Meeting 2/2014 11 July 2014 Not for general publication

- Add Inc: of METR7200

e. Change to contact hours and incompatible courses METR7200 – Introduction to Control Systems

   Members recommended the following change to METR7200 – Introduction to Control Systems to take effect from Semester 1 2015:
   - Change contact hours from 2L1T1P or lab hour to 3L1T1P or lab hour
   - Delete Inc: METR7200
   - Delete comment (No longer offered from 2014. Replaced by METR4201)

- Change to course title MINE7009/MINE7010/MINE7029

   Members recommended the following changes to MINE7009/7010/7029 – Project or Thesis V to take effect from Semester 1 2015:
   - Change course title from Project or Thesis V to Thesis
   - Amend course coordinator: Add Professor David Cliff, Delete Andre Morrell

f. Change of delivery mode and offer date – MINE7053 – Sustainable Development in the Minerals Industry Context

   Members recommended the following changes to MINE7053 – Sustainable Development in the Minerals Industry Context
   - Delivery Mode: on line (external)

- Change in delivery mode and offer date – MINE7061 - Sustainable Development in the Minerals Industry – Tools and Integration

   Members recommended the following changes to MINE7061 - Sustainable Development in the Minerals Industry – Tools and Integration to take effect from Semester 1 2015.
   - Delivery Mode: on line
   - Not offered in 2015 (next offered in 2016).

- Inactivation of courses

   Members recommended that the following courses be inactivated to take effect from Semester 1 2015:
   - HUFA7501 – Human Factors Engineering
   - LAWS7911 – Mining Environmental Regulation
   - MECH7601/MECH7602 - Advanced Project in Mechanical Engineering
   - MINE7004 – Special Topics IV
   - MINE7006 – Project or Thesis II
   - MINE7007/7027 – Project or Thesis III
   - MINE7008 - Project or Thesis IV
   - MINE7022 – Mining Environmental Risk Management
   - MINE7034 – Minerals Industry Risk Analysis
   - MINE7043 – Special Project II in Minerals Industry Risk Management
   - MINE7051 – Mining Environmental Management Processes
   - MINE7054 – Cleaner Production in the Minerals Industry
   - MINE7057 – Introduction to Mining and Mineral Processing
   - MINE7059 – Applied Research Methods & Professional Skill Development
   - MINE7063 – Sustainable Development in the Minerals Industry – Advanced Tools & Integration
   - MINE7065 – Sustainable Development Projects
   - PLAN7142 – Mining Environmental Planning

3. School Operational Plan – Learning

   The School revised its Operational Plan each year to keep track of progress and to ensure alignment with University and Faculty objectives. The Teaching and Learning Committee has responsibility for a number of actions (Table 1).
3. School Operational Plan – Learning (cont’d)

Table 1. Teaching and Learning Committee responsibilities (School Operational Plan)

<table>
<thead>
<tr>
<th>Plan</th>
<th>Target date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully implement the BE/ME in the mechanical engineering plans</td>
<td>2014-2015</td>
</tr>
<tr>
<td>Implement the recommendations of the 2013 review of postgraduate coursework awards (not yet completed)</td>
<td>2014-2015 (suggest omit and insert when this is available).</td>
</tr>
<tr>
<td>Review the use of MCQ in examinations as part of the implementation of the 2012 Engineers Australia accreditation visit (R5)</td>
<td>November 2014</td>
</tr>
<tr>
<td>Review peer and group assessment as part of the implementation of the 2012 Engineers Australia accreditation visit (R6)</td>
<td>November 2014</td>
</tr>
<tr>
<td>Consider the introduction of a reflective journal in key final year courses as part of the implementation of the 2012 Engineers Australia accreditation visit (Mechanical/Mechatronics, point 10)</td>
<td>May 2015</td>
</tr>
<tr>
<td>Continue to support the Faculty’s Teaching and Learning Development Program</td>
<td>ongoing</td>
</tr>
<tr>
<td>Review School-managed teaching spaces and develop a business plan to fund regular renovations and/or upgrades</td>
<td>September 2015</td>
</tr>
<tr>
<td>Support Faculty and University initiatives and identify relevant courses so students gain inclusive perspectives through Indigenous knowledge and experiences</td>
<td>May 2015</td>
</tr>
<tr>
<td>Use the Stage 1 competency mapping (2012 Engineers Australia accreditation visit, M2) to drive course and program improvement (EA, R1)</td>
<td>2017</td>
</tr>
<tr>
<td>Investigate ways to enhance large class teaching</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Explore further opportunities for rationalise courses</td>
<td>Completed</td>
</tr>
<tr>
<td>Enhance opportunities for more students to take an industry-based thesis through increased interaction with industry and using the larger thesis component in the BE/ME</td>
<td>2014-2016</td>
</tr>
<tr>
<td>Review the research activities in capstone theses an design projects, as well as other design courses throughout the BE and BE/ME, to ensure that the research component of the BE degrees will adequately satisfy the AQF Level 8 requirements and the BE/ME degrees will adequately satisfy the AQF Level 9 requirements (2012 Engineers Australia accreditation visit, R7)</td>
<td>Completed</td>
</tr>
<tr>
<td>Develop a culture amongst and commitment from academic staff to ensure adequate treatment of ethics, sustainability and engineering professionalism throughout the degree programs, embedding them as essential components in all relevant courses as part of the implementation of the (2012 Engineers Australia accreditation visit, M3 and Mining point 3)</td>
<td>October 2014 (note led by the Faculty)</td>
</tr>
</tbody>
</table>

Members discussed the recommendations from Engineers Australia regarding the use of multiple choice questions and mechanisms for peer review in courses where group work was undertaken. It was noted that it was agreed at the Semester 1 2014 examiners meeting to include peer assessment in any assessment where group work was permitted.

A reflective journal was included in the final year thesis course in mechanical engineering.

Data on the use of MCQ in examinations was required.
5. School Teaching Awards

Each year the School called for nominations for teaching awards in the categories of “Excellence in Teaching” and “Citation for Outstanding Contributions to Student Learning”. Winners in the School were automatically forwarded to the Faculty for the corresponding Faculty awards. Winners were given a $2500 prize with funds transferred to their consulting accounts. A new stipulation for the 2013 awards was that the funds need to be spent in the year of award as there were budget implications should the funding be carried over from one year to the next.

In 2013, the Committee considered three staff nominations for teaching awards in 2013 and noted that two applicants were new staff with 1-2 years' experience at UQ. While both applicants had excellent results during their tenure, there was not yet a demonstrated, sustained track record as required in the criteria. The third applicant was a long standing member of staff. The application highlighted good performance in some courses; however, there were other courses where there had been lower results. It was agreed that no awards would be made in 2013 and that the scheme be reviewed for 2014.

In 2013, members had also agreed that there should be some sort of award for new staff who made a more immediate impact yet who did not yet meet the criteria for the current awards. In addition, consideration might be given to providing an award to longstanding members of staff who performed well which might include input via student nomination.

Members noted the University had an internal awards scheme and while the School is not bound by these criteria for its own awards, it might be difficult to progress award winners to the Faculty automatically. The University’s awards were as follows:

**Awards for Teaching Excellence**
These awards gave recognition to teachers renowned for the excellence of their teaching, which was supported by evidence of their broad and deep contribution to enhancing the quality of learning and teaching at The University of Queensland. There were five awards, with a prize value of $10,000 each.

**Awards for Programs that Enhance Learning**
These awards recognised learning and teaching support programs and services that made an outstanding contribution to the quality of student learning and the quality of the student experience at The University of Queensland. There were up to four awards, with a prize value of $10,000 each.

**Citations for Outstanding Contributions to Student Learning**
These awards recognised and reward individuals or teams who made a significant contribution to student learning in a specific area of responsibility over a sustained period, and who were widely acknowledged for their achievements within a faculty or the wider university community, and who have received strong endorsements within their area. Successful nominations would receive a grant of $4,000.

It was noted that in the past few years, the School has had minimal success in attracting applicants for the “citation for outstanding contributions to student learning”. The School has relied on criteria for the University (and Faculty) awards since 2009. Applicants were asked to submit a 1-2 page case for the award.

It was proposed that the School offer the following:

1. **Awards for Teaching Excellence**
   Category A: as per the University requirements.
   Category B: for staff, Levels A-D in their first three years of appointment.

2. **Awards for Programs that Enhance Learning**
   As per the University criteria, but at the School/Faculty Level.

3. **Citations for Outstanding Contributions to Student Learning**
   As per the University criteria, but at the School/Faculty Level (this was the appropriate award for longstanding members of staff who performed well).
5. **School Teaching Awards (cont’d)**

   Members agreed that –
   - Up to three awards should be available each year.
   - The due date would remain at 30 August annually, with funds made available in January of the subsequent year (with expenditure required to be made in that calendar year).
   - New staff who submitted nominations in 2013 be invited to reapply.

6. **Engineers Australia – December 2014 Visit**

   Members noted that Engineers Australia (EA) would visit the University on 1-3 December, 2014.

   The following would be sought at as part of the EA visit.

   **Continuing full accreditation** –
   - Bachelor of Engineering (Civil and Environmental Engineering)
   - Bachelor of Engineering (Civil and Geotechnical Engineering)
   - Bachelor of Engineering (Mining and Geotechnical Engineering)
   - Bachelor of Engineering/Bachelor of Science with the three above programs
   - Bachelor of Engineering/Master of Engineering (Chemical Engineering)
   - Bachelor of Engineering/Master of Engineering (Chemical and Biological Engineering)
   - Bachelor of Engineering/Master of Engineering (Chemical and Materials Engineering)

   **Provisional accreditation** –
   - Bachelor of Engineering/Master of Engineering (Mechanical Engineering)
   - Bachelor of Engineering/Master of Engineering (Mechanical and Aerospace Engineering)
   - Bachelor of Engineering/Master of Engineering (Mechanical and Materials Engineering)
   - Bachelor of Engineering/Master of Engineering (Mechatronic Engineering)

   The Head of School chaired the Accreditation working group which was comprised of representatives from the School, the Faculty and the School of Chemical Engineering and the School of Civil Engineering.

   The submission was required to be sent to Engineers Australia on or before 6 October 2014.

7. **UQ Library Guides**

   A number of Library Guides were available for student use from the Library's website. Links would be placed in the School's newsletter. Links might also be included in the Electronic Course Profile.