Present: Dr Mehmet Kizil (in the Chair), Professor Andrej Atrens, Associate Professor Vaughan Clarkson, Associate Professor Lydia Kavanagh, Associate Professor Carl Reidsema, Associate Professor Martin Veidt, Associate Professor Mingxing Zhang, Mrs Lamb.

Apologies: Dr Matthew Cleary, Ms Cristina Ghiculescu, Professor Ross McAree, Professor Richard Morgan, Mr Doug Malcolm, Associate Professor Andrew Morrell.

Minutes: The minutes of the meeting held on 24 February 2011, having been previously circulated, were taken as read and confirmed.

Business arising out of the minutes

The following items were actioned from the meeting on 24 February –

- Congratulations were sent to course coordinators and their team for high overall results and high responses to question 8 were received.
- The CTQA was amended as discussed and submitted to the Faculty Teaching and Learning Committee.
- The Faculty was advised that members endorsed the view of the University’s Teaching and Learning Committee that all examination papers should be released for student access.

1. Changes to Programs and Courses

A key role of the School’s Teaching and Learning Committee was to oversee all major changes to the School’s courses, majors, fields of study and programs. Members considered changes to offerings for the following courses –

a. METR7203 - Advanced Topics in Control Engineering

The course, METR7203 - Advanced Topics in Control Engineering, was currently offered in the Master of Engineering (Engineering Science) as a Part C elective in Semester 2 each year. The course coordinator, Professor McAree, requested that the course be cancelled in Semester 2 2011 on the basis of low enrolment numbers (there were currently provisional enrolments and students would be advised to select another elective in its place) and that the course be offered again in Semester 2, 2012, and thereafter in even years only.

It was resolved to recommend that –

- METR7203 be cancelled in Semester 2, 2011;
- METR7203 be offered again in Semester 2 2012, and thereafter in even years only; and following approval, the School advise provisionally enrolled students of other electives to select.

b. MINE7057 – Introduction to Mining and Mineral Processing

The course, MINE7057 – Introduction to Mining and Mineral Processing, was offered to RHD students who enrolled through the Sustainable Minerals Institute (SMI). The course is part of a compulsory graduate certificate. Members considered a request from the SMI to amend the course schedule to include a year-long offering to better accommodate the course offering within the RHD programs. The course would be available as a semester long option in Semesters 1 and 2 as well as a year-long option which could be commenced in either Semester 1 or 2.

It was resolved to recommend that –

- MINE7057 be offered in Semester 2 2011 as a semester long course;
- from 2012, MINE7057 be offered in both Semester 1 and 2 as a semester long course; and
- a year-long option for be added from Semester 1 2012 (students commencing in Semester 1 would enrol in MINE7157; those commencing in Semester 2 would enrol in MINE7257).
1. Changes to Programs and Courses (cont’d)

c. MINE7059 – Applied Research Methods & Professional Skill Development

The course, MINE7059 – Applied Research Methods & Professional Skill Development, was offered to RHD students who enrolled through the Sustainable Minerals Institute (SMI). The course is part of a compulsory graduate certificate. Members considered a request from the SMI to amend the course schedule to include a year-long offering to better accommodate the course offering within the RHD programs. The course would be available as a semester long option in Semesters 1 and 2 as well as a year-long option which could be commenced in either Semester 1 or 2.

It was resolved to recommend that –

- MINE7059 be offered in Semester 2 2011 as a semester long course;
- from 2012, MINE7059 be offered in both Semester 1 and 2 as a semester long course; and
- a year-long option for be added from Semester 1 2012 (students commencing in Semester 1 would enrol in MINE7159; those commencing in Semester 2 would enrol in MINE7259).

2. Roles and Responsibilities of School Teaching and Learning Committees

At the meeting held on 24 February, it was agreed to review the document “Roles and Responsibilities of School Teaching and Learning Committees” to be sure that the School’s Teaching and Learning Committee was discharging its responsibilities in the categories of leadership, quality assurance and management.

Members considered the analysis set out in the table below and agreed that the activities of the Committee set out in the table below showed that the School was meeting these requirements.

**Leadership**

<table>
<thead>
<tr>
<th>Role</th>
<th>Activities</th>
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<tbody>
<tr>
<td>Providing leadership and support to staff to</td>
<td>• Implement recommendations from accreditation and school reviews</td>
</tr>
<tr>
<td>improve teaching effectiveness and student</td>
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<tr>
<td>learning in the context of University policy</td>
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<tr>
<td>Leading, supporting and promoting the</td>
<td>• Encourage others to and/or prepare applications for</td>
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<tr>
<td>adoption of best practice and innovation in</td>
<td>competitive teaching and learning funding (internal and</td>
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<tr>
<td>curriculum design, teaching and assessment</td>
<td>external)</td>
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<td></td>
<td>• Support applications for teaching awards (see also above)</td>
</tr>
<tr>
<td>Identifying emerging teaching and learning</td>
<td>• Review Central and Faculty agenda items and proactively</td>
</tr>
<tr>
<td>issues and opportunities of relevance to the</td>
<td>discuss at School meetings</td>
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<tr>
<td>School</td>
<td></td>
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<tr>
<td>Developing and implementing the School’s</td>
<td>• Contribute to the School Operational Plan and implement</td>
</tr>
<tr>
<td>Teaching and Learning Strategic Plan in</td>
<td>supporting activities</td>
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<tr>
<td>accordance with Faculty and University</td>
<td></td>
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<tr>
<td>planning in this area</td>
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<tr>
<td>Encouraging, recognising and rewarding high</td>
<td>• Identify staff to apply for teaching awards (see also above)</td>
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<tr>
<td>quality teaching and learning</td>
<td>• Congratulations notices to those who do well on SECaT</td>
</tr>
</tbody>
</table>
| Publicising teaching and learning achievements,initiatives and developments within the School, University and wider communities | • School Newsletter  
  • Faculty press releases  
  • School meetings  
  • Teaching and Learning Week |
2. Roles and Responsibilities of School Teaching and Learning Committees (cont’d)

**Quality Assurance**

<table>
<thead>
<tr>
<th>Role</th>
<th>Activities</th>
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<tbody>
<tr>
<td>Ensuring teaching and learning practices accord with University policy and University, Faculty and School procedures</td>
<td>• New policy directives are placed on the agenda as they arise; the Secretary and Chair proactively review copies of the University’s Teaching and Learning Committee agenda/minutes.</td>
</tr>
</tbody>
</table>
| Monitoring all aspects of assessment including assessment design, compliance with examination processes, moderation of results, and finalisation of grades | • Recommendations for final results, including moderation, are done as part of the examiners’ meetings held at the conclusion of each semester.  
• Compliance with examination processes is done as part of the Electronic Course Profile review. |
| Overseeing the checking of course profiles | • Done at divisional level by all academic staff on a rotational basis  
• Also need to ensure compliance with minimum presence requirements in Blackboard |
| Preparing for program, course, School reviews, and accreditation where appropriate | • Accreditation: 2012  
• School review: 2013 |
| Assisting with Curriculum and Teaching Quality Appraisal (CTQA) and Academic Program Review (APR) processes. | • CTQA: annual  
• APR: dons as part of BE accreditation  
• Postgraduate coursework programs require a review schedule. |

**Management**

<table>
<thead>
<tr>
<th>Role</th>
<th>Activities</th>
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<tbody>
<tr>
<td>Overseeing all major changes to the School’s courses, majors, fields of study and programs</td>
<td>• Regular agenda item; submissions from divisions</td>
</tr>
<tr>
<td>Providing the School with analysis and advice on pedagogical issues including teaching, curriculum design, assessment and evaluation</td>
<td>• Review, analyse and make recommendations to the Head of School on SECaT and CTQA outcomes</td>
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</tbody>
</table>
| Identifying and coordinating staff development needs to enhance the quality of teaching, learning and assessment, academic guidance and learner support | • Graduate Certificate in Higher Education (new staff are encouraged to enrol)  
• Learning and teaching development programs  
• Specialist seminars  
• Peer mentoring |
| Advising the Head of School where appropriate on resources required for teaching and learning, including the School’s teaching and learning budget and allocation of teaching loads | • Budget requests for teaching and learning are done at the divisional level and considered by the School’s Advisory Committee as part of the annual budget cycle.  
• Teaching loads are determined and monitored by Heads of Division. |
| Ensuring effective communication between academic and administrative staff in the area of teaching and learning | • The School Manager is the Secretary to the Committee; items affecting administrative staff and work practices are communicated during regular staff meetings and where required, training. |
| Ensuring effective communication between school, faculty and central committees/offices around teaching and learning | • The Chair is a member of the Faculty Teaching and Learning Committee. |

Another intention of this review was to identify actions where the Committee could proactively assist the School to address deficiencies or promote successes.

The Chair suggested that, as part of the upcoming curriculum review, it would be beneficial to do an holistic review of assessment design in courses offered by the School with a goal to ensure that students are adequately, but not over, assessed. This was supported by the Committee.
2. **Roles and Responsibilities of School Teaching and Learning Committees** (cont’d)

It was also agreed that it would be valuable to review the SECaT responses for all courses offered through the School in 2010. The Faculty Director of Teaching and Learning (Engineering) would chair a small subcommittee which would report back to the Teaching and Learning Committee at a future meeting.

Other initiatives included surveying enrolled students to determine their level of satisfaction with their program and a review of teaching spaces, particularly practical laboratory space.

3. **Report from the Director, First Year Engineering**

Associate Professor Kavanagh reported that the course, ENGG1000 – *Introduction to Professional Engineering* was being run this year as it might in 2012 by including a build component in the project; student feedback had been positive. There would be a demonstration day of the projects in the final week of semester.

The Director also reported on the “Teaching and Learning Development for Excellence” strategy that would be implemented by the Faculty. The focus was to provide relevant workshops for new staff, existing staff and contract teaching staff. The program had the supports of the heads of school.

4. **Report from the Faculty Teaching and Learning Committee**

Associate Professor Veidt represented the School at the Faculty’s Teaching and Learning Committee meeting on 10 February. At that meeting, members discussed criterion referenced learning, the availability of strategic funding for 2012 and the changes to the library.

5. **Report from the Director, Teaching and Learning (Engineering)**

Associate Professor Reidsema reported that funding from the Enhanced Student Charge (ESC) had been obtained to develop a learning space for late year engineering students. The space would be adjacent to the First Year Learning Centre on Level 1 of the Hawken Engineering Building; the space could also be used for teaching space.

The Director also reported that the Faculty had a new position to assist with fundraising and one of his responsibilities was to increase support for engineering education.

6. **School Operational Plan**

The School’s Operational Plan had been developed to aid the School to support the University’s strategic directions and the Faculty’s enabling operational plan. The draft plan had been circulated to all staff for comment in early 2011. The plan had been endorsed by the School Advisory Committee at its meeting on 9 March 2011.

Members reviewed the “Learning” section of the Plan (see table below) and noted that most of the goals and strategies were either in progress or planned. Members noted that the implementation of the new 5 year BE/ME was in progress with the School planning a staged introduction. The plans for the BE accreditation were underway; this was expected to occur in August or September, 2012.

The use of ‘Turnitin’ was strongly endorsed. It was also agreed that the School should review its undergraduate teaching space, particularly undergraduate practical space and to consider requesting central funding if appropriate.

Additional discussion on the plan would occur at future meetings.
### 6. School Operational Plan (cont’d)

<table>
<thead>
<tr>
<th>Goal</th>
<th>Strategies</th>
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</table>
| Effectively implement the new 5 year ‘integrated BE/ME’ program | - Review the undergraduate engineering curriculum and recommend relevant changes  
- Comply with UQ and faculty due dates for course/assessment changes and workload  
- Review anticipated staff/student ratios and other requirements |
| Renew accreditation for BE plans in the School for the 2012 accreditation visit by Engineers Australia | - Ensure all recommendations of the 2007 and 2009 accreditation visits  
- Prepare 2012 accreditation documentation |
| Attain or exceed the UQ threshold (average of at least 70%) on all courses in the Student Evaluation of Teaching and Courses (SETC) and attain Stage B for this indicator in the SBPF | - Investigate and improve the CEQ scores for mechanical engineering  
- Continue to encourage and support nominations for Teaching Awards  
- Offer peer assistance  
- Include exemplars in school meetings  
- Investigate improved ways to provide timely and helpful feedback to students |
| Improve opportunities to interact with students | - Identify and encourage greater interaction between staff and student societies  
- Plan for annual discipline lunches and other events well in advance  
- Continue to hold staff/student liaison meetings (at least one per semester in each division)  
- Increase engagement with Year 1 of the BE |
| Increase the proportion of undergraduate students who study overseas for one to two semesters | - Promote UQ Advantage mobility scholarships  
- Ensure academic advisers are up to date with exchange requirements (e.g. credit) |
| Increase the diversity of overseas student intake into coursework programs | - Expand participation by other overseas universities in the Master of Engineering (Engineering Science) program  
- Prepare a business case for coursework student scholarships  
- Explore opportunities for joint PhD students (e.g. via targeted institutions that regularly send Occupational Trainees)  
- Invite the Faculty’s Manager of International Development to key meetings  
- Ensure applications and credit assessments for international students are completed and returned to the Faculty within 10 business days of receipt |
| Improve the undergraduate practical laboratory experience | - Identify opportunities for external funding  
- Review undergraduate practicals and develop a plan to fund upgrades  
- Review teaching spaces and develop a plan to renovate and/or upgrade equipment |
| Review and develop postgraduate coursework awards | - Prepare a business plan for coursework awards to include the VC’s 2020 goals and to implement the 2010 review of postgraduate coursework awards |
| Enhance the student experience | - Ensure ResTeach applications are submitted in key areas  
- Ensure academic advisers are up to date with UQ policy and engineering program requirements (particularly new programs such as those with SCUT students)  
- Provide relevant and up to date information on work experience opportunities  
- Investigate ways to enhance large class teaching  
- Review field trips to ensure mining engineering students have access to appropriate facilities |
| Involve industry and other experts in the School’s teaching programs | - Consider the use of videoconferencing to bring experts in remote locations (e.g. mine sites) to the classroom  
- Include CEED in all BE programs offered through the School, particularly in the integrative masters program  
- Increase then maintain ALTC and other teaching awards |
| Implement the University’s revised misconduct statute and related policies | - TBA – Statute not yet revised  
- Investigate the effective use of ‘Turnitin’ and other plagiarism detection software (e.g. MOSS)  
- Submit undergraduate theses via ‘Turnitin’ |
7. Proposed new program: Bachelor of Engineering & Master of Engineering

The Faculty of Engineering, Architecture and Information Technology have proposed that a 5-year integrated program ‘Bachelor of Engineering & Master of Engineering’ be introduced from 1 January 2012.

The changes to be introduced in 2012 include a revised first year as well as some BE specialisations offering the ability for current students to enter the new program from Year 4 (e.g. those offered through the School of Chemical Engineering). The School of Mechanical and Mining Engineering planned to offer the new program in a staged manner, following the completion of an holistic review of years 2-4 of current programs offered through the School.

Course requirements – Year 1

From 2012, Year 1 students would be required to take four compulsory courses (Part A), at least #2 from Part B and the balance (up to #6) from parts C and D or other courses approved by the executive dean. A major would be #50 and courses in Part D were high school prerequisite equivalents and could only ‘count’ as a free elective.

<table>
<thead>
<tr>
<th>Part A</th>
<th>Part B</th>
<th>Part C</th>
<th>Part D</th>
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</thead>
<tbody>
<tr>
<td>ENGG1100</td>
<td>Electronics &amp; Electrical Systems</td>
<td>BIOL1040</td>
<td>CHEM1090</td>
</tr>
<tr>
<td>ENGG1200</td>
<td>Engineering Thermodynamics</td>
<td>CHEM1020</td>
<td>MATH1050</td>
</tr>
<tr>
<td>MATH1051</td>
<td>Mechanics</td>
<td>CSSEE1001</td>
<td>PHYS1171</td>
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<tr>
<td>MATH1052</td>
<td></td>
<td>ERTH1501</td>
<td>PHYS1002</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SCIE1010</td>
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</tbody>
</table>

Students who were undecided would be encouraged to study more than #2 from part B. It was required that the School specify which courses from Part B would be compulsory (all #8 from part A and at least #2 from part B were to be listed as compulsory in all plans). This information was required to be submitted to the Faculty in early May.

Members noted that the Mechanical, Mechanical & Aerospace and Mechanical & Materials plans would require all three courses from Part B. The School was undergoing discussions with the School of Information Technology and Electrical Engineering regarding the requirements for Mechatronic Engineering. Mining Engineering was being discussed and would be finalised shortly.

The representative from the School of Information Technology and Electrical Engineering (ITEE), Associate Professor Vaughan Clarkson, reported on ITEE’s plans. The School planned to introduce the 5 year program into some of its fields and retain the 4 year program in.

Proposed Rules

The Faculty sought comment on the proposed program rules for the Bachelor of Engineering & Master of Engineering. The University’s Legal Office would draft the rules for approval by the University’s Senate on advice from the Faculty as to the intention of each rule. There would remain a separate rule set for the four year program (Bachelor of Engineering). Students entering the 5 year program would not be eligible to undertake a dual degree program.

A summary of the intention of the draft rules follows:

- **Rule 1: Program rules dictionary** - defines terms used in the rule set which were not otherwise defined in Schedule 1 to the General Award Rules.
- **Rule 2: Field of study** - This rule required all students to take out the award in a named field (i.e. BE specialisation).
7. Proposed new program: Bachelor of Engineering & Master of Engineering (cont’d)

- **Rule 3: Program Requirements** – the combined program required #80 (standard requirements for a 5 year program). The 4 year BE would be retained and governed by a separate rule set. The intention is that while it would be usual that the BE and ME will be in the same field, there would be permissible combinations (e.g. BE (Chemical); ME (Chemical & Materials)). The restriction on the number non-BE electives would be tightened and the limit on year 1 courses would apply to all fields. It would be difficult (or not possible) to undertake a dual degree program with the BE&ME; those options would be retained in the four year BE.

- **Rule 4: Maximum credit for other study** – This rule was consistent with University and Engineers, Australia requirements.

- **Rule 5: Award of the Bachelor of Science** - There would be an exit point to the BSc for students who complete #48 of the BE including all compulsory Year 1-3 courses. Students who entered the BE/ME and wished to take out the 4 year program would need to apply to transfer to the BE and meet all requirements of the BE. The inclusion of this rule in the BE/ME may not be required; this was under discussion. The subrules included under this rule enabled the student to meet the requirements for a BSc.

- **Rule 6: Honours** – Honours would be calculated as weighted GPA in both the BE and BE/ME. For the BE, GPA would be weighted as follows: Year 1: 10%, Year 2: 20%, Year 3: 30%, Year 4: 50%. For the BE/ME, the weighting for Years 1-4 would count for 50% and Year 5 courses will count toward 50%.

**Issues identified with the rules**

It was agreed that an ‘enrolment requirement rule’ was required to express the intention that to enter the BE/ME, students must have completed #48 toward the BE, including all compulsory courses in their field, and have a GPA of 5.0 or higher. Students who were interested would need to apply to enter the BE/ME based on these criteria.

8. University Teaching Awards

Members noted that the University’s annual teaching awards had a closing date of 21 April 2011. It was agreed that staff should be invited to apply and that those who were awarded School awards in 2010 should be encouraged to lodge an application.

The Director, Teaching and Learning (Engineering) commended the School’s practice of proactively identifying potential nominees and the assistance and encouragement it gave to staff members to apply.

9. Errors in Examination Papers – Semester 2 2010

At meetings of the School’s Teaching and Learning Committee held on 16 September 2009, 31 March 2010 and 13 September 2010, members discussed reports that had been received from the University’s Examination Section (via the Assessment Subcommittee) regarding errors in examination papers for previous semesters.

Suggestions to reduce errors have included –

- The submission of late papers could be remedied by ensuring that all papers are submitted by the due date;
- Formatting errors could be reduced by more careful review of the paper prior to submission;
- Reducing the unclear instructions – those picked up in Examinations Section were likely to be more administrative in nature; however, consultation with academic staff would be required if School staff identify a possible issue;
- Missing information (e.g. graph paper, formula sheets) could be remedied by careful review of the paper prior to submission. However, what was required will need to be clearly identified on the cover sheet;
- Ensure each Division had nominated a Chief Examiner who had a key role in checking papers thoroughly;
9. **Errors in Examination Papers – Semester 2 2010 (cont’d)**

- Review by another member of staff; and
- Lodge model answers with each paper.

Members discussed the reports on errors in Semester 2 2010 examination and noted that the School was in the top three schools in the University for high error rates (third after Pharmacy and Civil Engineering).

In summary, the School submitted 22 examination papers for the end of semester examination period in Semester 2 2010. There were 6 errors identified prior to printing –

- MECH2410: error with formulae sheet
- MECH2700: error with Question 4
- MECH3305: perusal time not listed on the coversheet (administrative check)
- MINE2101: incorrect header (administrative check)
- MINE3124: incorrect header (administrative check)
- MINE3125: incorrect header including incorrect course name (administrative check)

Four of these 6 errors could have been corrected prior to submission by more thorough administrative checks.

Of the 22 papers, there were 6 errors identified during the examination –

- AERO3000: incorrect question (formula error)
- MECH2410: discrepancy of marks available (? Administrative check)
- MECH3305: incorrect question (symbol)
- MECH4301: incorrect question
- MECH4460: incorrect question (formula)
- MINE3124: incorrect question

The School Manager would implement additional administrative checks. Members agreed that the previous idea to have a senior tutor or colleague attempt all examinations prior to submission of the paper with the goal to reduce non-administrative errors be reaffirmed and that this be raised at the next School Advisory Committee meeting.

10. **Review of SECaT responses**

Professor Atrens had undertaken to investigate the low SECaT scores on two postgraduate coursework award courses offered in Semester 1 2010. He had spoken with the course coordinators who had offered some explanation. Members agreed that additional discussion might be needed to determine if these reasons alone accounted for the low responses. In addition, some suggestions to help these courses improve were made and these would be followed up with the respective course coordinators.

Members also reviewed the SECaT responses that had been received from course coordinators for courses offered in Semester 2 2010. Approximately half of course coordinators had responded by the due date. It was noted that the submissions with most detail came from course coordinators where the SECaT scores were high and it was suggested that these might be used as exemplars for other staff to follow.

It was also agreed to establish a subcommittee to undertake an analysis of responses for the calendar year 2010; the subcommittee would report back to the Teaching and Learning Committee at a future meeting.

11. **Academic Integrity Tutorial**

Members noted that the University now required that all students complete an on line ‘Academic Integrity’ tutorial, which was accessible from mySI-net.