

<p><b><i>What are the issues that have emerged relating to the ENGINEERING COURSE and its implementation?</i></b></p>	<p><b><i>What recommendations does this jury make to address the issues identified?</i></b></p>	<p><b>Possible Actions</b></p>
<p><b>Content</b></p>		
<p><i>Engineering course is too broad, and contains too much: it cannot be completed in 55 hours of class time.</i></p>	<ul style="list-style-type: none"> <li>• Outcomes 1 and 4 (design process and engineering in society) are the core content of the Engineering course – these need to be broadly phrased, requiring no specialist field knowledge. Outcomes 2 and 3 are to be field-specific for Mechanical, Electrical, and Systems and Controls.</li> <li>• Decision of which field to offer will be made at a school level, sensitive to school facilities and teacher skills.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>The response will be to remove the Core content Common engineering principles, structures and systems and integrate the respective the Specialist engineering fields January 25th 2008 Short Term</b></li> <li>• <b>The decision about which field to offer has always been a school decision</b></li> </ul>
<p><i>Resources – the imposition of the exam makes it necessary to ensure that all schools are working from comparable resources, information and material.</i></p>	<ul style="list-style-type: none"> <li>• There needs to be a common resource for each unit which is aligned with the syllabus and available to all schools, e.g. an information and resource website compiled and maintained by the Curriculum Council and student workbooks, to ensure that the versions of formulae, etc. are shared between students.</li> <li>• This resource must include worked examples of calculations, scientific terminology and core content.</li> <li>• Printed versions must be made available to schools without internet access</li> </ul>	<ul style="list-style-type: none"> <li>• <b>The material that is produced will be made available on the CC website. This will include worked examples that will be collected as part of the development of grade descriptors</b></li> <li>• <b>Worked examples of calculations, scientific terminology and core content will be included</b></li> </ul>

	<ul style="list-style-type: none"> <li>• Teachers need to be offered content-based up-skilling in order to teach this new course during school time, e.g. a TAFE unit, recognised training or competencies. Funding needs to be provided for this.</li> <li>• Minimum facilities necessary to teach the field-specific aspect of the course should be held by each school teaching the unit and professionally maintained.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>This is a system/sector responsibility</b></li> <li>• <b>This is a system/sector responsibility</b></li> </ul>
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### **Assessment**

<i>Difference between levels and grades are confusing.</i>	<ul style="list-style-type: none"> <li>• Grade descriptors for each outcome and each unit to be completed and released ASAP with student work samples demonstrating the grades.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>This work is being done. Outcome 1 being worked on at present. Other outcomes will be ready as specified by deadlines given in Council Updates. This means the Grade Descriptors will be completed, following the recommendation by December 7th 2007 It should be noted that in their final version grades will be linked to stages Short term</b></li> </ul>
<i>Weighting ranges are too broad, creating worries about comparability.</i>	<ul style="list-style-type: none"> <li>• Weighting ranges to be reduced to a 10% variance rather than a 20% variance.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>ARM panel will implement these changes by January 25th 2008 Short term</b></li> </ul>

### **Exam**

<i>Exam covers material and terminology not studied in some contexts, e.g. Questions 8 &amp; 10 in the core content of the existing Exam 3 are field specific, and not core content.</i>	<ul style="list-style-type: none"> <li>• The exam should contain only the knowledge, language and contexts that are contained in the syllabus.</li> <li>• Exam should contain two sections, A and B. Section A is a general area, with questions drawn only from Outcomes 1 and 4, which are core material. Section B should draw from Outcomes 2 and 3, and be streamed for the three fields within the course: Mechanical, Electrical, and Systems and Controls.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Exam design brief to confirm its appropriateness and the examination QA processes will ensure that the examination is a fair and valid test of the syllabus Medium term</b></li> <li>• <b>Existing sample papers will be modified to reflect changes to the content organisation. The ARM panel will oversee this process. January 25th 2008 Short term</b></li> </ul>
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<p><i>Marking schemes are vague. Students should possess “an understanding”. When levels were going to be assessed, this was appropriate. With the imposition of an exam, it is not.</i></p>	<ul style="list-style-type: none"> <li>• The extent to which students are expected to understand things should be specified. Specific examples for each unit would be the simplest way to do this.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Work will be completed in order to make specific reference to each point in the content. Content will be rewritten, streamlined, and made more specific for each unit with key phrases that exemplify the requisite degree of understanding that is intended/required. 25th January 2008</b> <b>Short term</b></li> </ul>
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**Pathways**

<p><i>Engineering is not currently recognised as a prerequisite for university level Engineering courses, leading higher-level students to avoid the course as an option.</i></p>	<ul style="list-style-type: none"> <li>• Universities to be lobbied to include Engineering as a course prerequisite for Engineering courses.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>This matter has been raised at the University Forum</b></li> </ul>
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Submission authors called: No Submissions received

Curriculum writer called: Yes Curriculum writer and Director of Curriculum

**Time Frames: Short term** = before end of 2007, **Medium term** = prior to June PD day 2008, **Longer term** = past June 1 PD day 2009