

Engineering

Jury Report: ENGINEERING COURSE 29 August 2007		
No. of JURORS: 10. FACILITATOR: Dr Marie Martin SCRIBE: Rebecca Martin		
<i>What are the issues that have emerged relating to the ENGINEERING COURSE and its implementation?</i>	<i>What recommendations does this jury make to address the issues identified?</i>	Please identify timeframe: (see below)
Content		
<i>Engineering course is too broad, and contains too much: it cannot be completed in 55 hours of class time.</i>	<ul style="list-style-type: none"> • 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. • Decision of which field to offer will be made at a school level, sensitive to school facilities and teacher skills. 	2008
<i>Resources – the imposition of the exam makes it necessary to ensure that all schools are working from comparable resources, information and material.</i>	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> ○ This resource must include worked examples of calculations, scientific terminology and core content. ○ Printed versions must be made available to schools without internet access. • 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. • Minimum facilities necessary to teach the field-specific aspect of the course should be held by each school teaching the unit and professionally maintained. 	2008 – website 2009 – textbook and workbook 2009 2008

Assessment		
<i>Difference between levels and grades are confusing.</i>	<ul style="list-style-type: none"> Grade descriptors for each outcome and each unit to be completed and released ASAP with student work samples demonstrating the grades. 	ASAP
<i>Weighting ranges are too broad, creating worries about comparability.</i>	<ul style="list-style-type: none"> Weighting ranges to be reduced to a 10% variance rather than a 20% variance. 	2008
Exam		
<i>Exam covers material and terminology not studied in some contexts, e.g. Questions 8 & 10 in the core content of the existing Exam 3 are field specific, and not core content.</i>	<ul style="list-style-type: none"> The exam should contain only the knowledge, language and contexts that are contained in the syllabus. 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. 	2008
<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>	<ul style="list-style-type: none"> 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. 	2007
Pathways		
<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>	<ul style="list-style-type: none"> Universities to be lobbied to include Engineering as a course prerequisite for Engineering courses. 	Start lobbying now.

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