

# Design and Technology

## Stage 6 Draft Syllabus Package

### Consultation Report

#### 1. Background

The preparation of the **Design and Technology** Stage 6 Draft Syllabus Package took into account the instructions described in the writing brief approved by the Board **in December 1998**.

The **Design and Technology** Stage 6 Draft Syllabus Package has been distributed widely for comment over the period **15<sup>th</sup> March 1999 – 23<sup>rd</sup> April 1999**. Additionally, consultations on the **Design and Technology** Stage 6 Draft Syllabus Package have involved meetings with the following:

- ⇒ school sector representatives
  - Department of Education and Training
  - Catholic Education Commission
  - Association of Independent Schools
  
- ⇒ tertiary representatives
  - Phillip Bassett – TAFE
  - Keiko Yasukawa – University of Technology, Faculty of Education/Engineering
  - Douglas Tomkin - University of Technology, Design and Building
  - Ron Newman – University of New South Wales, Faculty of Design
  - Kathryn Grushka – University of Newcastle, Faculty of Education
  
- ⇒ **Professional associations**
  - Institute of Technology Education
  - Technology Educators Association
  
- ⇒ the Board Curriculum Committee for **Design and Technology**.

Modifications to this draft, following widespread consultations, will enable the syllabus package to be finalised for submission to the Board Curriculum Committee, and the Board.

**84** written responses to the consultation progress report in **Design and Technology** were received. The sample profile is as follows:

### 79 Individual responses

Teachers	77			
Rural	39			
Government	28	Catholic	6	Independent 5
Metropolitan	38			
Government	16	Catholic	12	Independent 10
Academics	2			
Others	0			

### 5 Institution/group responses

#### Organisation details:

#### Schools:

Moderate (<500)		Medium (500 – 800)		Large (>800)	
Government		Catholic		Independent	

#### Tertiary/post-school:

Universities	2	TAFE		Industry/training	
--------------	---	------	--	-------------------	--

#### Special Interest:

Parent Groups	0	School Sectors	0	Other (BCC)	1
Teacher/professional associations			2		

## Key Issues

<b>Summary of Key Issues for Stage 6 Industrial Technology arising from the consultation process:</b>	<b>Summary of action taken as a result of these Key Issues:</b>
<ul style="list-style-type: none"><li>• Insufficient clarity and links between the aim, objectives, outcomes, course structure and content</li><li>• Insufficient detail of depth of study in the content sections</li></ul>	<ul style="list-style-type: none"><li>• An expert group of teachers, the BCC and the writers have reviewed these areas and made amendments to the syllabus</li><li>• Depth of study has been clarified in the “students learn about” and “students learn to” section of the content</li></ul>

### 3. Analysis

#### 3.1 Quantitative Analysis

##### 3.1.1 Design and Technology in the Stage 6 Curriculum

Nil Response	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
6	22	41	2	2	0
8.2%	30%	56%	2.7%	2.7%	0%

##### 3.1.2 Pathways for Design and Technology Stage 6 Students

Nil Response	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
6	35	28	1	3	0
8.2%	48%	38.4%	1.4%	3.1%	0%

##### 3.1.3 Aim

Nil Response	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
6	24	35	4	2	2
8.2%	32.9%	48%	5.5%	2.7%	2.7%

##### 3.1.4 Objectives

Nil Response	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
6	20	39	5	3	0
8.2%	27.4%	53.4%	6.8%	4.1%	0%

*The response rate in the unsure category can be attributed to respondents who indicated that there was not always a clear link between the objectives, outcomes and content. An expert group of teachers, the writers and the BCC have addressed these areas to clarify the links*

##### 3.1.5 Course Structure

Nil Response	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
7	20	32	10	2	2
9.6%	27.4%	43.9%	13.7%	2.7%	2.7%

*The relatively high response rate in the unsure category can be attributed to respondents who believed that there was not always a clear link between this section and the content section. An expert group of teachers, the writers and the BCC have addressed these areas to clarify the links.*

3.1.6 Outcomes

3.1.6a Preliminary course outcomes

<b>Nil Response</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Unsure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<b>5</b>	<b>19</b>	<b>40</b>	<b>4</b>	<b>4</b>	<b>1</b>
<b>6.8%</b>	<b>26%</b>	<b>54.8%</b>	<b>5.5%</b>	<b>5.5%</b>	<b>1.4%</b>

*The response in both the unsure and disagree categories can be attributed to respondents who felt that these were not clearly articulated and linked to the content. An expert group of teachers, the writers and the BCC have addressed these areas to clarify the links*

3.1.6b HSC course outcomes

<b>Nil Response</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Unsure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<b>8</b>	<b>19</b>	<b>38</b>	<b>3</b>	<b>4</b>	<b>1</b>
<b>11%</b>	<b>26%</b>	<b>52%</b>	<b>4.1%</b>	<b>5.5%</b>	<b>1.4%</b>

*Refer to above comments*

3.1.7 Content

<b>Nil Response</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Unsure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<b>7</b>	<b>20</b>	<b>35</b>	<b>9</b>	<b>1</b>	<b>1</b>
<b>9.6%</b>	<b>27.4%</b>	<b>48%</b>	<b>12.3%</b>	<b>1.4%</b>	<b>1.4%</b>

*The high response rate in the unsure category can be attributed to respondents who felt that the depth of the course had not been clarified in some sections. An expert group of teachers, the writers and the BCC have addressed these areas to clarify the depth.*

3.1.8 Assessment Components, Weightings and Tasks

<b>Nil Response</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Unsure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<b>5</b>	<b>36</b>	<b>29</b>	<b>2</b>	<b>1</b>	<b>0</b>
<b>6.8%</b>	<b>49%</b>	<b>40.1%</b>	<b>2.7%</b>	<b>1.4%</b>	<b>0%</b>

3.1.9 Design and Technology Stage 6 HSC Examination Specifications

<b>Nil Response</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Unsure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<b>8</b>	<b>17</b>	<b>31</b>	<b>10</b>	<b>6</b>	<b>1</b>
<b>11%</b>	<b>23.3%</b>	<b>42.5%</b>	<b>13.7%</b>	<b>8.2%</b>	<b>1.4%</b>

*The relatively high response in the unsure and disagree categories can be attributed to respondents who felt that the wording needed to alter to clarify requirements and that exactly what was going to be assessed in the exam needed to be clarified. These issues have been addressed by the writers.*

3.1.10 Post-School Opportunities

3.1.10a Links between courses and training packages

<b>Nil Response</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Unsure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<b>11</b>	<b>25</b>	<b>34</b>	<b>0</b>	<b>3</b>	<b>0</b>
<b>15%</b>	<b>34.2%</b>	<b>46.7%</b>	<b>0%</b>	<b>4.1%</b>	<b>0%</b>

*The relatively high response rate in the “disagree” category can be attributed to respondents who commented on the need for greater accreditation into TAFE and the need for recognition into the appropriate training packages.*

*The post-school opportunities section has been re-written. TAFE credit transfer will be communicated in a separate document, not in the syllabus.*

3.1.10b Links between courses and VET opportunities

<b>Nil Response</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Unsure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<b>9</b>	<b>9</b>	<b>34</b>	<b>12</b>	<b>7</b>	<b>0</b>
<b>12.3%</b>	<b>12.3%</b>	<b>46.6%</b>	<b>16.4%</b>	<b>9.6%</b>	<b>0%</b>

*Comment as above for 3.1.10a*

3.1.11 Design and Technology Stage 6 Sample HSC Assessment Items

<b>Nil Response</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Unsure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<b>8</b>	<b>17</b>	<b>40</b>	<b>4</b>	<b>4</b>	<b>0</b>
<b>11%</b>	<b>23.3%</b>	<b>54.8%</b>	<b>5.4%</b>	<b>5.5%</b>	<b>0%</b>

*The response rate in both the “unsure” and “disagree” categories can be attributed to respondents who felt that the range of questions did not cater for all ability levels. A full specimen exam paper has been developed which caters for all students ability levels.*

3.1.12 Design and Technology Stage 6 Draft Performance Bands

<b>Nil Response</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Unsure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<b>11</b>	<b>13</b>	<b>40</b>	<b>6</b>	<b>2</b>	<b>1</b>
<b>15%</b>	<b>17.8%</b>	<b>54.8%</b>	<b>8.2%</b>	<b>2.7%</b>	<b>1.4%</b>

*The response rate in the “unsure” category can be attributed to respondents who felt that the terminology needed to be clarified and that the performance bands needed to be modified in line with any changes to the syllabus. The performance bands have been checked by the writing team against the syllabus changes.*

3.1.13 Overall Evaluation

<b>Nil Response</b>	<b>Excellent as is</b>	<b>Good, with fine-tuning</b>	<b>Acceptable with re-working</b>	<b>Unsure</b>	<b>Unsatisfactory in issues treatment</b>
<b>9</b>	<b>15</b>	<b>35</b>	<b>11</b>	<b>0</b>	<b>3</b>
<b>12.3%</b>	<b>20.5%</b>	<b>48%</b>	<b>15%</b>	<b>0%</b>	<b>4.1%</b>

3.2 Issues Raised and Writing Team Action

Syllabus Item	Issues	Source/s	Action
<p><b>Design and Technology</b> in the Stage 6 Curriculum</p>	<ul style="list-style-type: none"> <li>• The purpose of the course is clearly explained</li> <li>• The effect of technology in terms of sustainability go beyond 'depletion of resources' e.g. health and ecological risks.</li> <li>• Some respondents indicated that the wording of this section needed to be altered for clarification of intended meaning</li> <li>• Some respondents indicated that other references could be included in this section. For example, the future health</li> </ul>	<ul style="list-style-type: none"> <li>• 10 respondents</li> <li>• AHISA</li> <li>• DET</li> <li>• Cameron Tonkin Eco-Design Foundation</li> <li>• 6 respondents</li> <li>• Independent Sector Professional Development Working Group</li> <li>• BCC Manufacturing</li> <li>• DET</li> <li>• 4 respondents</li> </ul>	<ul style="list-style-type: none"> <li>• Noted</li> <li>• The student “learn about” column will reinforce this concept (p15)</li> <li>• Agreed. The writers have made alterations to the text to improve clarity of intended meaning (p6)</li> <li>• Design and Technology is one of a number of subjects that provides</li> </ul>

	<p>of the Australian economy, the economic necessity for Australians to become more entrepreneurial, student satisfaction and gain in confidence in producing an MDP and the need to emphasise provision of critical thinking skills</p> <ul style="list-style-type: none"> <li>• I am concerned about the extent 'innovation' may drive the syllabus, outcomes and assessment and the ability of schools to cope with "emerging and computer-based technologies"</li> <li>• Concern that the "intellectual processes may take over the practical "hands on" processes.</li> <li>• Some respondents indicated that the depth of meaning wasn't clear in some parts of this section in relation to what students have to actually do</li> </ul>	<ul style="list-style-type: none"> <li>• Philip Huthnance Blue Mountains Christian School</li> <li>• William Simmons St John's College</li> <li>• 3 respondents</li> </ul>	<p>opportunities for students to gain insight into a range of issues which may impact on the future of the Australian economy. There are also opportunities for students to develop critical thinking skills and to develop satisfaction in their project work and these opportunities are explicit throughout the syllabus</p> <ul style="list-style-type: none"> <li>• Any current syllabus about Design and Technology must relate to innovation, emerging and computer based technologies. The support document will provide references to these areas to support teachers in the delivery of these sections</li> <li>• The "learn to" column will articulate the depth and relationship of "hands on" experiences (p16)</li> <li>• The "learn to" column will clarify depth and demonstrate the relationship between skills, knowledge and attitudes and values throughout the document</li> </ul>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<ul style="list-style-type: none"> <li>• Students are only able to apply these learnings creatively if a range of facilities and resources are available to them which isn't always the case in many schools due to lack of funding or teaching experience.</li> <li>• Have we overcome the perception of the general public and academic institution that this subject is more than just 'woodwork' etc? Design tech has not achieved this!! Please note that the Key Competencies are a major part of the course. The skills acquired are relevant to ALL occupations.</li> </ul>	<ul style="list-style-type: none"> <li>• Dimitra Papadopoulou Scholastica's College St</li> <li>• Fred Gregson Pennant Hills High School</li> </ul>	<ul style="list-style-type: none"> <li>• A range of current facilities and resources will still be applicable to the revised syllabus. The support document will also provide a list of references that can be accessed by both teachers and students</li> <li>• Design and Technology allows students to experience designing and producing using a range of technologies. The key competencies are embedded throughout the outcomes (p13)</li> </ul>
<p>Pathways for <b>Design and Technology</b> Stage 6 Students</p>	<ul style="list-style-type: none"> <li>• It is a clear and concise diagram showing the K-12 continuum. A pathway of the nature described is important and the links between each step must be well understood by students and the community, particularly the "employers".</li> </ul>	<ul style="list-style-type: none"> <li>• 6 respondents</li> <li>• DET</li> <li>• AHISA</li> </ul>	<ul style="list-style-type: none"> <li>• Noted</li> </ul>

	<ul style="list-style-type: none"> <li>Some respondents indicated that the diagram could be improved by altering the layout, adding extra information and changing some words</li> </ul>	<ul style="list-style-type: none"> <li>AHISA</li> <li>10 respondents</li> <li>Independent Sector Professional Development Working Group</li> </ul>	<ul style="list-style-type: none"> <li>This diagram is standard format across all syllabus documents</li> </ul>
Aim	<ul style="list-style-type: none"> <li>Concise and relevant.</li> <li>Some respondents indicated that the aim could be improved by altering some of the wording</li> <li>I have concern about the ability to effectively deal with innovation and entrepreneurial activity in the school setting e.g. lack of contacts/resources/isolation of school.</li> <li>The aim does not really specify the potential or possibility of achieving across a range of contexts/courses as mentioned. Rewording e.g.</li> </ul>	<ul style="list-style-type: none"> <li>7 respondents</li> <li>AHISA</li> <li>Independent Sector Professional Development Working Group</li> <li>DET</li> <li>11 respondents</li> <li>Cameron Tonkin Eco Design Foundation</li> <li>Philip Huthnance Blue Mountains Christian School</li> <li>Kathryn Hayes St Johns Park High School</li> </ul>	<ul style="list-style-type: none"> <li>Noted</li> <li>The aim, objectives and outcomes were reviewed by an expert group of teachers and the writers in response to consultation (p9)</li> <li>The support document will provide references to support teachers in the delivery of this course</li> <li>This has been articulated in the objectives and outcomes (p12)</li> </ul>

	"designing, producing and evaluating across a range of contexts, enabling them to meet needs..."		
Objectives	<ul style="list-style-type: none"> <li>• Clear and easy to understand</li> <li>• Many respondents suggested altering the objectives to clarify meaning and to ensure clear links to the content</li> <li>• Need for new resources to support the teaching of the course</li> <li>• Will creativity be assessed? If so, how?</li> </ul>	<ul style="list-style-type: none"> <li>• 10 respondents</li> <li>• 8 respondents</li> <li>• AHISA</li> <li>• DET</li> <li>• Independent Sector professional Development Working Group</li> <li>• 2 respondents</li> <li>• Mulwaree High School</li> </ul>	<ul style="list-style-type: none"> <li>• Noted</li> <li>• Expert group consisting of teachers, the writers and the BCC has reviewed and re written these to better reflect the intent of the course. The objectives also act as "organisers" for the more detailed outcomes statements (p12)</li> <li>• The current support document will still provide useful references for teachers and an additional document will supplement the new syllabus</li> <li>• Yes, this is specifically mentioned in the marking criteria for the MDP</li> </ul>
Course Structure	<ul style="list-style-type: none"> <li>• Very good, clear and concise information about what content is to be taught in the preliminary and HSC course. Useful for planning and developing teaching programs. Draws things together well as an overview. Good to see the old 3 unit content incorporated.</li> <li>• There is no reference to core and options in the document</li> </ul>	<ul style="list-style-type: none"> <li>• 8 respondents</li> <li>• AHISA</li> <li>• 3 respondents</li> </ul>	<ul style="list-style-type: none"> <li>• Noted</li> <li>• Agreed. There are no core or options in this course. This was a</li> </ul>

	<ul style="list-style-type: none"> <li>• Ecological Impact and Sustainable Development and Ecodesign should be explicit parts of the course structure.</li> <li>• A reference to global technologies and enterprise needed.</li> <li>• Some respondents indicated that the wording could be clarified to better communicate the structure</li> <li>• Some responses indicated in some cases, the course structure and content don't match up</li> <li>• Current needs to be clarified (students' lifetime?)</li> <li>• The preliminary structure of the</li> </ul>	<ul style="list-style-type: none"> <li>• Cameron Tonkin Eco Design Foundation</li> <li>• Jody Ziesel TARA Anglican School for Girls</li> <li>• 10 respondents</li> <li>• DET</li> <li>• Independent Sector Professional Development Working Group</li> <li>• 3 respondents</li> <li>• AHISA</li> <li>• AHISA</li> <li>• Arna Wesley Loreto Kirribilli</li> <li>• OTEN</li> </ul>	<p>question error in the survey document</p> <ul style="list-style-type: none"> <li>• This has been clarified in the student "learn about" and "learn to" sections (p15,19, 21)</li> <li>• This has been clarified in the student "learn about" and "learn to" sections (p19)</li> <li>• This has been done for some of the dot points in both the preliminary and HSC courses to clarify the course structure</li> <li>• The course structure has been modified so that the dot points act as organisers for the content sections</li> <li>• The word 'current' has been removed from the course structure section to avoid confusion</li> </ul>
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>content areas to be addressed include project management, using resources and evaluation. Integral to management is using resources and evaluating the outcome(s) including these as additional to management is confusing.</p> <ul style="list-style-type: none"> <li>• If the reference to using resources is directed at developing skills in manipulating materials/equipment this needs to be expressly stated.</li> <li>• The HSC course structure indicates that students will complete an individual case study related to a specific innovation, design or designer. As design and designers can be innovative, singling out this aspect of a product/process is unwarranted.</li> <li>• Will students have more difficulty with this new Case Study - It seems to be more difficult than the present study.</li> <li>• Major Design Project production should be emphasised more as a</li> </ul>	<ul style="list-style-type: none"> <li>• OTEN</li> <li>• DET</li> <li>• BCC Manufacturing</li>   <li>• Bill Kensey Central Coast Grammar</li>   <li>• Damien Mah</li> </ul>	<ul style="list-style-type: none"> <li>• Although when managing a project students do do these things, they should select methods of project management appropriate to the nature of individual design projects. This is articulated in the content sections</li>   <li>• Agreed. This has been amended and clarified in the student “learn about” and “learn to” columns (p20)</li> <li>• Agreed. This has been amended and clarified in the student “learn about” and “learn to” columns (p10, 11)</li>   <li>• The depth of study required is articulated in the content sections and the support document will provide suitable references for teacher support</li>   <li>• The production of projects is</li> </ul>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>great deal of their time will be devoted to its thorough completion.</p> <ul style="list-style-type: none"> <li>• The section currently titled <i>Innovation &amp; Emerging Technologies</i> should be shortened to <i>Innovation</i>. Dot points should read: <i>The study of innovation involves: factors that impact on success including social, ethical, moral, legal, economic, environmental; entrepreneurial activity; role of designers, producers/manufacturers; impact of emerging technologies; impact on Australian society. As part of this study students will complete an individual case study related to a specific innovation.</i></li> <li>• There seems to be a big difference between the work to be covered in 2U Preliminary Course and the 2U HSC course. 120 hours seems a very short time to cover the HSC component</li> </ul>	<p>Leichardt High School</p> <ul style="list-style-type: none"> <li>• DET</li> <li>• Philip Huthnance Blue Mountains Grammar School</li> </ul>	<p>clearly emphasised all the way through the syllabus</p> <ul style="list-style-type: none"> <li>• Agreed. Amendments made in the HSC course structure section (p10)</li> <li>• The student “learn to” and “learn about” columns clarify the depth and amount of content to be covered in each year</li> </ul>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<ul style="list-style-type: none"> <li>• A problem with the section of "The Study of Designing and Producing through." being in HSC year only as I feel it should be the focus of the study for the 2 design briefs completed in Year 11. So, students are familiar with the requirements i.e.. Project proposal and management etc.</li> <li>• Suggestion that investigation for the case study be undertaken in the preliminary year and should be specifically mentioned in the content.</li> <li>• It would be useful to have examples of preliminary coursework considered appropriate. For example, what do you mean by collaborative design? We know really but feel that a booklet of good practice might help all concerned. Although it may be wordy, examples of how to achieve this content would be beneficial</li> </ul>	<ul style="list-style-type: none"> <li>• Val Burns Karabah High School &amp; Distance Education Centre</li> <li>• John Rochford Corpus Christie College</li> <li>• Fred Gregson Pennant Hills High School</li> <li>• Canberra Grammar School</li> </ul>	<ul style="list-style-type: none"> <li>• Misinterpretation of the table. The table has been amended (p10)</li> <li>• The preliminary and HSC courses are completely separate courses. The depth of study has been clarified in the revised syllabus in the HSC course section</li> <li>• The "learn to" column has been amended to clarify depth. The support document will provide references to which teachers can refer (p15)</li> </ul>
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<ul style="list-style-type: none"> <li>• I believe a succinct description of what a product system or environment could entail, is also needed.</li> <li>• Re MDP, the inclusion of <i>criteria for evaluation</i> should indicate that this is to commence at the start of the process not the conclusion</li> </ul>	<ul style="list-style-type: none"> <li>• Kathryn Hayes St Johns Park High School</li> <li>• AHISA</li> </ul>	<ul style="list-style-type: none"> <li>• The support document will provide detail about these aspects</li> <li>• This has been clarified in the syllabus to reinforce that evaluation occurs throughout the entire process (p21,32)</li> </ul>
<p>Outcomes</p>	<ul style="list-style-type: none"> <li>• A number of respondents commented that both the preliminary and HSC outcomes needed rewording to fully reflect the intent of the syllabus. Respondents also noted that the outcomes needed to flow from the objectives and that they also needed clarifying in relation to terms used</li> <li>• Objective 7 is missing with the accompanying outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>• 18 respondents</li> <li>• DET</li> <li>• AHISA</li> <li>• 3 schools</li> <li>• AHISA</li> </ul>	<ul style="list-style-type: none"> <li>• In keeping with the re-working of some of the objectives, a number of the outcomes have been modified in order to clarify and streamline the intent (p12)</li> <li>• Objective 7 has been deleted from the objectives table and the outcomes have been incorporated into existing outcomes (p9, 12)</li> </ul>

	<ul style="list-style-type: none"> <li>• In industry a designer does not just come up with ideas. It is usual for a client to submit a brief which has resulted from research into target markets etc. The case study encourages that concept! Yet we expect our 16 year old students to come up with NEW and INNOVATIVE ideas.</li> <li>• Nearly all designers, architects and engineers use a design process to meet identified needs and opportunities. They very rarely identify a need or opportunity (H4.1 - I am an architect by trade)</li> <li>• Some respondents expressed concern that many students would have difficulty in achieving some of the outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• Fred Gregson Pennant Hills High School</li> <li>• Fred Gregson Pennant Hills High School</li> <li>• 4 respondents</li> </ul>	<ul style="list-style-type: none"> <li>• The case study is a study of an innovation and the processes that the designer used to come up with the innovation. Students may adapt this process, or make modifications to it, to assist in the development of their own MDP work (p19)</li> <li>• Agree. However, students are learning about the entire design process from the market research and identification of needs by the client and realisation through to evaluation by the designer</li> <li>• The “learn to” column has clarified the depth of content in relation to the outcomes</li> </ul>
Content	<ul style="list-style-type: none"> <li>• A number of respondents indicated that the layout is clear and easy to follow and it allows for flexible programming. Clear about what is to be achieved. Good combination of the 2 and 3 unit courses</li> <li>• A small number of respondents indicated that the layout and structure was difficult to follow. Tracking not</li> </ul>	<ul style="list-style-type: none"> <li>• 16 respondents</li> <li>• 2 respondents</li> <li>• AHISA</li> </ul>	<ul style="list-style-type: none"> <li>• Noted</li> <li>• The draft syllabus has been revised to ensure that the relationship between the course</li> </ul>

	<p>always easy from structure diagram to content headings</p> <ul style="list-style-type: none"> <li>• The revision of outcomes has implications for the content. A reference group of expert teachers, including the project writers needs to be established. This group needs to undertake a final mapping of the content against the revised outcomes and the course structure to ensure all aspects are included.</li> <li>• Some respondents indicated that some content areas did not have the depth of content specified</li> <li>• The content is not of a Stage 6 level - it is extremely basic.</li> <li>• The design project seems to be downplayed. Can we make it seem more significant?</li> <li>• A number of terms including 'design disciplines' and 'design profession' need qualification. While there is a general understanding as to what these terms mean, it is all too easy to</li> </ul>	<ul style="list-style-type: none"> <li>• DET</li> <li>• 6 respondents</li> <li>• Jody Ziesel TARA Anglican School for Girls</li> <li>• Damien Mah Leichardt High School</li> <li>• OTEN</li> </ul>	<p>structure and content is clear for both the preliminary and HSC courses (p10)</p> <ul style="list-style-type: none"> <li>• An expert group of teachers, the BCC and the writing team collaborated to revise the outcomes and link to content (p10,12)</li> <li>• The content section of the syllabus has been reviewed to ensure that the depth is clear (p14-22)</li> <li>• Disagree. Consultation has supported the inclusion of the best features of both the current 2 and 3 unit courses.</li> <li>• The MDP has been integrated throughout the entire document to emphasise its relevance in the course</li> <li>• The support document will provide information that clarifies the meanings of these terms</li> </ul>
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>place an individual interpretation on such terms to the students detriment.</p> <ul style="list-style-type: none"> <li>The issue of team work is raised again in the Preliminary course where 'students learn to collaborate and participate in design teams'. Mandating achievement through prescribed pedagogy leads to inequitable outcomes for those students remote and isolated from other learners such as those studying via distance education.</li> <li>Resourcing innovative or emerging areas is an issue. Access to current information is limited - a situation which is exacerbated by distance. The aspect of implementation needs to be considered at the front end and realistic expectations established - it is too easy to dismiss this as a systems issue and abandon teachers to struggle with the difficulties of</li> </ul>	<ul style="list-style-type: none"> <li>OTEN</li> <li>OTEN</li> <li>Donna Shepherd St Mary's High School</li> </ul>	<ul style="list-style-type: none"> <li>Design usually occurs in collaboration, particularly in industry. Isolated students need to learn about this and in this case, collaboration could occur between parents, teachers and via electronic telecommunications</li> <li>The support document will contain a resource list which will contain references for teacher guidance and assistance</li> </ul>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>resourcing.</p> <ul style="list-style-type: none"> <li>• Much of the 3U course has been incorporated into an already demanding 2U course. The course should seek to achieve a better balance between the knowledge and skills involved in design and production rather than shifting focus still further to the cognitive domain.</li> <li>• It is extremely difficult to expect 16 year old students to generate ideas creatively and to use creative and innovative approaches. It is possible but generally an uphill battle. They can analyse but not easily formulate design briefs. They have to do a lot of absorbing in just 3 terms. The skill levels required in communications alone with Tech Drawing, freehand sketching, CAD, word processing, GANTT charts, spread sheets, and</li> </ul>	<ul style="list-style-type: none"> <li>• OTEN</li> <li>• Fred Gregson Pennant Hills High School</li> </ul>	<ul style="list-style-type: none"> <li>• The evaluation of the existing syllabus and extensive consultation has supported the inclusion of the most valued components of both the 2 and 3 unit courses and has been developed to ensure a balance between these components</li> <li>• The depth of study has been clarified in the student “learn about” column to indicate that teachers need to provide opportunities for students to learn about creative process and then they can apply these to their own learnings (p15, 20, 32)</li> </ul>
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	graphics is daunting.		
Assessment components, weightings and tasks	<ul style="list-style-type: none"> <li>A number of respondents indicated that this section was set out clearly and the inclusion of outcomes created a clear link to the content sections. A clear link has also been established between the weightings and task allocation</li> <li>The table on page 28 needs to be aligned and edited. It is proposed that 60% weighting should be given to the design projects and 20% for each of the other two components</li> <li>The area of 'Innovation and Emerging Technologies' should clearly and equally specify the choice of a design innovation as well as the study of a designer</li> <li>A number of respondents indicated that the sample questions and the structure of the paper did not cover the full range of content, or cater for all students</li> <li>The figure of 20% in the internal</li> </ul>	<ul style="list-style-type: none"> <li>7 respondents</li> <li>AHISA</li> <li>DET</li> <li>W Herbert Sydney Girls High School</li> <li>AHISA</li> <li>Wendy Herbert Sydney Girls High School</li> <li>5 respondents</li> <li>AHISA</li> <li>AHISA</li> </ul>	<ul style="list-style-type: none"> <li>Noted</li> <li>The table has been realigned. The weightings provided are only suggested weightings and teachers may vary these if they wish to (p28)</li> <li>Agreed. This section needed clarification. The study of an innovation will be required including the input of the designer (p10)</li> <li>Agreed. A full sample examination paper has been developed for inclusion in the syllabus package.</li> <li>Agreed. This has been clarified by removal of the percentage sign in the internal assessment column (p33)</li> </ul>

	<p>assessment column of page 30 gives the impression that this is 20% of the 40 weighting not 20 weighting. Further clarification is needed of other areas to assess in this section</p> <ul style="list-style-type: none"> <li>The internal Trial Examination is suggested to assess both areas of Innovation and the MDP, this is not reflective of the external format of the examination</li> <li>Part B is a great improvement on a question based on the comparative case study. The responses will depend on the resources that are going to be given to schools to assist them in the teaching of the course</li> </ul>	<ul style="list-style-type: none"> <li>AHISA</li> <li>Peter Myers Pittwater High School</li> </ul>	<ul style="list-style-type: none"> <li>Disagree. Schools can develop their own internal assessment which can include a trial exam which emulates the HSC (p29,33)</li> <li>A support document will be developed which includes a list of references</li> </ul>
<p><b>Design and Technology</b> Stage 6 HSC Examination Specifications</p>	<ul style="list-style-type: none"> <li>A number of respondents indicated that they are happy with this section</li> <li>A number of respondents indicated that this section needed rewording in parts to clearly communicate the requirements.</li> </ul>	<ul style="list-style-type: none"> <li>8 respondents</li> <li>DET</li> <li>AHISA</li> <li>Independent Sector Professional Development Working Group</li> <li>5 respondents</li> </ul>	<ul style="list-style-type: none"> <li>Noted</li> <li>Agreed. The exam specifications have been revised to ensure clarity (p30)</li> </ul>

	<ul style="list-style-type: none"> <li>• Innovation and creativity have not been properly addressed as a set criterion in the marking of the MDP</li> <li>• Some respondents indicated confusion from reading this section about when students could commence work on their MDP.</li> <li>• More guidance and emphasis needs to be given to teachers regarding the record of students work which is to be kept by the teacher</li> <li>• The previous D&amp;T check-sheet as attached should be modified and included here.</li> </ul>	<ul style="list-style-type: none"> <li>• AHISA</li> <li>• AHIS</li> <li>• TAS Dept St Mary's Cathedral College</li> <li>• Malcolm Tolley Marist College</li> <li>• Rosalind Rennie Presbyterian Ladies College</li> <li>• Heather Norton New England Girls School</li> <li>• G Glanville/T Morrell Forster High School</li> </ul>	<ul style="list-style-type: none"> <li>• Disagree. Evidence of creativity is listed in the criteria. Students do not necessarily need to "innovate" in their MDP. Innovation is studied in the case study and students may apply the processes to their MDP (p32)</li> <li>• Agreed. This sentence will be clarified. The MDP can only be started at the commencement of the HSC course (p31)</li> <li>• Agreed. This has been emphasised in the syllabus (p31)</li> <li>• The marking criteria is specified in the syllabus in the course structure, in the HSC content pages and in the marking criteria page (p32)</li> </ul>
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<ul style="list-style-type: none"> <li>Evidence and application of practical skills to produce a quality PSE. As the major innovative technological ideas involve complex plastic moulded shapes it is unrealistic for a student to be able to produce a final product. A wood, foam etc prototype might be the closest to the final form they will achieve. Is this acceptable or do we still produce metal wood and textile standard products and pass them off as an innovation technology</li> </ul>	<ul style="list-style-type: none"> <li>Fred Gregson Pennant Hills High School</li> </ul>	<ul style="list-style-type: none"> <li>Students can produce models or prototypes from any material using resources available</li> </ul>
Post-School Opportunities	<ul style="list-style-type: none"> <li>Many respondents indicated that this section did not really provide any specific information. It was felt that details of actual links and names of courses needed to be given to make this section worthwhile</li> </ul>	<ul style="list-style-type: none"> <li>16 respondents</li> <li>DET</li> <li>AHISA</li> <li>Independent Sector Professional Development Working Group</li> </ul>	<ul style="list-style-type: none"> <li>The post-school opportunities section has been revised for clarity. As now, a separate TAFE HSC credit transfer guide will be developed (p24)</li> </ul>

<p><b>Design and Technology</b> Stage 6 Sample HSC Assessment Items</p>	<ul style="list-style-type: none"> <li>• Clearly set out, good to have the outcomes being assessed</li> <li>• Some respondents indicated that the range of specimen questions do not cater for the full range of students</li> <li>• Cultural factors aren't always important in design which has been made a major part of the question</li> <li>• The second question on innovation is clearly an improvement. I find the multiple choice questions more of a text of comprehension of English and frustrating for students – not a good way to start on exam paper. I would prefer to see far greater emphasis on understanding of industrial processes and how they affect designers activities, questions relating to advertising and marketing, mechanisations's and automation versus craft activities, ergonomics, social and moral responsibilities of the designer</li> </ul>	<ul style="list-style-type: none"> <li>• 8 respondents</li> <li>• DET</li> <li>• 7 respondents</li> <li>• AHISA</li> <li>• OTEN</li> <li>• Mulwaree High School</li> <li>• Canberra Grammar School</li> </ul>	<ul style="list-style-type: none"> <li>• Noted</li> <li>• This will be considered when the complete sample exam paper is developed to be distributed with the syllabus package</li> <li>• Agreed. This will be clarified in the full sample paper</li> <li>• The multiple choice questions developed for the sample exam paper can relate to any section of the outcomes and content within the syllabus</li> </ul>
<p><b>Design and Technology</b> Stage 6 Draft Performance</p>	<ul style="list-style-type: none"> <li>• Clear and easy to understand</li> <li>• The terminology needs to be clarified in the scales to make them more</li> </ul>	<ul style="list-style-type: none"> <li>• 6 respondents</li> <li>• 12 respondents</li> </ul>	<ul style="list-style-type: none"> <li>• Noted</li> <li>• Further refinement of the draft performance scales will occur</li> </ul>

<p>Bands</p>	<p>useable and relevant</p> <ul style="list-style-type: none"> <li>• Replace reference to 'Products, Systems and Environments' to 'Design Project'</li> <li>• The bands must clearly assess both practical and written assessment areas. We suggest that the written paper be moderated against the practical mark</li> <li>• The descriptors of typical performance at each of the bands will need to be modified in line with changes made to the draft syllabus, especially the outcomes</li> <li>• Query relating to the contents of Band 1</li> </ul>	<ul style="list-style-type: none"> <li>• Wendy Herbert Sydney Girls High School</li> <li>• TAS Dept St Mary' Cathedral College</li> <li>• AHISA</li> <li>• DET</li> <li>• Killara High School</li> <li>• G Glanville/T Morrell Forster High School</li> </ul>	<p>through to 2001</p> <ul style="list-style-type: none"> <li>• Agreed. This has been adjusted in the performance bands</li> <li>• The scale will be amended to take into account the practical component. Students will be allocated to a band based on HSC performance and this will be based upon the standard that they demonstrate at the HSC</li> <li>• Yes, this has been undertaken for the draft performance bands</li> <li>• Standard across all syllabus documents. Band 1 represents a range of students who are below minimum standard. At this point descriptions are not available. Further work is being done on this</li> </ul>
--------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Overall Evaluation	<ul style="list-style-type: none"> <li>• Many respondents indicated that they were very happy with the layout and structure of the draft syllabus. They also felt that the links between the objectives, outcomes and objectives were clearly defined</li> <li>• A number of respondents indicated the need for support materials to facilitate the delivery of the syllabus</li> <li>• Some key areas that need reworking include the outcomes and content and the linkage of these throughout the syllabus</li> <li>• Sustainability seems to be only an issue to consider mostly after the main work of design. There is not enough emphasis on the fact that ecodesign is becoming a mainstream design process, that is, a way to innovate designs rather than just evaluate them</li> </ul>	<ul style="list-style-type: none"> <li>• 25 respondents</li> <li>• 5 respondents</li> <li>• AHISA</li> <li>• DET</li> <li>• Independent Sector Professional Development Working Group</li> <li>• 9 respondents</li> <li>• Cameron Tonkin EcoDesign Foundation</li> </ul>	<ul style="list-style-type: none"> <li>• Noted</li> <li>• A support document will include references for teachers</li> <li>• Agreed. An expert group of teachers and the writers have revised the objectives, outcomes and content in response to consultation (p12)</li> <li>• The revised objectives and outcomes encourage teachers and students to consider sustainability and environmental issues throughout the course which includes design projects (p12)</li> </ul>

#### 4. Responses

Written responses were received from the following individuals and groups:

##### Individuals

<b>Individual</b>	<b>School</b>
Verity Pilley	Willoughby Girls High School
Graham Boyton	Dubbo Christian School
Darrel McGovern	
D&T Teachers	Wyong High School
Carolyn Burgess	Holy Cross College
Penny Colley	Orara High School
Mark Smith	Holy Spirit College
Joyce Russell	Leumeah THS
Suzanne Strazzari	Lake Macquarie High School
IA Staff	Taree High School
Marijan Maricic	Northmead High School
Debbie Middleton	Moorefield Girls High School
Fiona Walsh	Morisset High School
Neil Gillespie	Monaro High School
TAS Staff	Rutherford Technology High School
Angela Queenan	Newcastle High School
TAS Dept	St Mary's Cathedral College
Heather Norton	New England Girls' School
Assoc. Prof Ron Newman	University of NSW
Jody Ziesel	Tara Anglican School for Girls
Cameron Tonkin	EcoDesign Foundation
Arna Wesley	Loreto Kirribilli
Wendy Herbert	Sydney Girls High School
TAS Department	Pymble Ladies' college
Rosalind Rennie	Presbyterian Ladies' College
Bil Kensey	Central Coast Grammar School
Harry Hines/Howard Jennar	Kingscliff High School
Damien Mah	Leichhardt High School
Tomaree IA Staff	Tomaree High School
Peter Myers	Pittwater High School
L. Henry	St. Johns Park High School
Linda Thurston	Bonnyrigg High School
Malcolm Tolley	Marist college
Philip Huthnance	Blue Mountains Christian School
Alan Denham	Farrer Agricultural High School
Rosalind Rennie	Presbyterian Ladies College
William Simmons	St. John's College - Woodlands
D & T Teachers	Killara High School
Helena Koltun	Our lady of Mercy College
Val Burns	Karabar High & Distance Education Centre
Dimitra Papadopoulos	St. Scholastica's College
Donna Shepherd	St Mary's High School
G.E.Wise	McCarthy Catholic College

John Rochford	Corpus Christi College
Canberra Grammar School	Canberra Grammar School
<b>Individual (contd.)</b>	<b>School (contd.)</b>
R.Katrib	St. Patrick's Marist College
G Glanville/T Morrell	Forster High School
Tech.Man. Dept	Mulwaree High School
Kathryn Hayes	St Johns Park High School
Steve Tatham	Corpus Christi College
Margaret McMahon	Meriden School
Fred Gregson	Pennant Hills High School
Independent Sector	Masada College
Angela Thomas	Santa Sabina College
St.Ives High Ind Arts	St Ives High School
Mrs V Davie	Port Macquarie High School
Louise Watson	Illawarra Sports High School
Alan Boughton	Marian College
Bruce O'Donnell	Merewether High School
Ken Liddell	Francis Greenaway High School
Judith Lyn Gough	Coffs Harbour High School
B.Mitford	Randwick Boys High School
Brian Barter	Toongabbie Christian School
Scott Henderson	Santa Sabina College
M Mallison	Newington college
Paul Woods	Newington College
St. John's College TAS	St John's College Dubbo
Peter Pinazza	Edmund Rice College
Ian McDonald	Richmond River High School

<b>Groups</b>
Department of Education
Institute of Technology Education
AHISA
BCC
OTEN
Technology Educators Association
Independent Sector Professional Development Working Group