



**Metal and Engineering
Curriculum Framework
Stage 6 Draft Syllabus**

Consultation Report

December 2005

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1 Background

The preparation of the Draft Metal and Engineering Curriculum Framework adhered to the process for framework revisions and amendments approved by the Board in June 2001.

The Draft Metal and Engineering Curriculum Framework was distributed widely for comment over the period 30 May to 22 July 2005.

Copies of the Draft Metal and Engineering Curriculum Framework were distributed to all NSW schools, TAFE colleges and the VET consultative network.

Modifications to this draft, following widespread consultations, have enabled the revised Metal and Engineering Curriculum Framework to be finalised for submission to the Industry Curriculum Committee, the VET Advisory Committee and the Board.

1.1 Survey responses

Eleven (11) survey responses to the consultation in Metal and Engineering were received by 22 July 2005.

The sample profile of survey respondents is as follows:

Individual responses

There were 8 individual responses: 7 from schools, 1 from TAFE NSW and 0 others.

School responses

classroom teacher	4	head of department	3	school executive	0
principal	0	nil response	0		
Up to 3 years teaching	0	4 – 9 years teaching	1	10 – 15 years teaching	1
16 years + teaching	5	nil response	0		
Metropolitan	1	Non-metropolitan town/city	2	Rural	4
nil response	0				
Government	6	Non-government	1	nil response	0

TAFE NSW responses

teacher	1	head teacher	0	faculty manager	0
TAFE institute consultant	0	curriculum centre program manager	0	college director	0
institute director	0	nil response	0		
Metropolitan	0	Non-metropolitan town/city	1	Rural	0
nil response	0				

Group responses

There were 2 group responses: 0 from school, 0 from TAFE NSW and 2 from others.

Other responses

parent group	0	community group	0	business	0
university	0	professional association	0	industry body	0
organisation	0	school sector	1	other	1
nil response	0				
local	1	state	1	national	0
nil response	0				

The major issues raised in the consultation are addressed in Section 4 of this report.

1.2 Profile of structured sample groups

Five (5) structured sample group meetings were conducted. These meetings were held in Newcastle, Parramatta, Orange, Casino and Wagga Wagga. The participant profile is as follows:

School	21	TAFE NSW	4	Other	5
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Location of school/TAFE

Metropolitan	5	Non-metropolitan	6	Rural	14
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Type of school

Government	17	Non-government	4
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Position in school

classroom teacher	14	head of department	5	school executive	2
principal	0	nil response	0		

Total years teaching

Up to 3 years	4	10–15 years	1	nil response	0
4–9years	4	16 years +	12		

2 Qualitative analysis of the survey

2.1 Rationale

Respondents indicated a high level of satisfaction with the rationale's explanation of the purpose of Metal and Engineering in the NSW Higher School Certificate. This was represented by a 100% approval rate (*strongly agree* and *agree*).

'Rationale was clearly linked to industry demands.' Survey # M3

2.2 Aim

The aim states the overall purpose of the subject. It indicates general educational benefits for students who satisfactorily complete a Metal and Engineering course within this Framework. This correlates to the strategies and principles detailed in the NSW Government's White Paper, *Securing Their Future*, including enhancing:

'...the contribution of courses to the broader education of students'

and providing:

'clear links to post-school destinations, particularly further vocational education and training and employment'.

Survey responses indicate a high level of satisfaction with the aim (approval rate 90%).

The major issues raised in the consultation are addressed in Section 4.

2.3 Metal and Engineering Curriculum Framework

The Metal and Engineering Curriculum Framework is based on national qualifications available within the Metal and Engineering Training Package (MEM05). The majority of respondents (81%) were satisfied that the text and table provided an adequate overview of the relationships between qualifications, industry and the Training Package.

The major issues raised in the consultation are addressed in Section 4.

2.4 Course structures

This section describes how the units of competency are arranged for the purpose of HSC credit. The statements provide advice on the purpose, structure, requirements and qualifications for each of the courses within the framework.

Respondents indicated support for the format (approval rate 100%), agreeing that the information was clearly presented and easy to understand.

Further to this, 91% (approval rate) of respondents agreed the proposed course structures enabled flexibility to plan and deliver programs that maximised student learning.

'Generally an excellent range of units.' Survey # M9

The range of courses proposed within the Metal and Engineering Curriculum Framework received a positive response:

- 91% (approval rate) of respondents agreed the 120-hour course provides students with the opportunity to develop basic knowledge and skills for use in manufacturing, engineering and related industries
- 82% approval for the 240-hour course designed to provide students with the opportunity to gain a range of knowledge and skills suitable for employment in manufacturing, engineering and related industries
- 81% (approval rate) of respondents indicate support for the availability of a 60/120-hour specialisation study.

Responses included:

Participants indicated a high level of satisfaction with the proposed new syllabus and commented that it was significantly better than the current syllabus in terms of supporting teacher delivery. Response # M5

The following indicate issues raised during consultation:

‘Metal machining has been taken from the elective core and placed into specialist studies.’ Survey # M17

Concern regarding the absence of computer-aided drafting (CAD) units in the Framework as the school systems have spent a considerable amount of money resourcing schools with suitably trained teachers. Response # M12

The major issues raised in the consultation are addressed in Section 4.

2.5 Assessment requirements and advice and HSC examination

Section 11 of Part A of the Syllabus briefly outlines assessment requirements for the Higher School Certificate and the Training Package. There was a positive response to this section of the syllabus. 100% (approval rate) of the respondents agreed that the assessment requirements were satisfactorily outlined. The majority of respondents (approval rate 91%) felt that fair, reliable and valid HSC examinations could be developed based on the breadth of learning experiences within the range of compulsory units of competency.

The major issues raised in the consultation are addressed in Section 4.

2.6 Students with Special Education Needs

Section 13 of Part A of the Syllabus provides information on the ways in which VET courses are able to meet the needs of a broad range of students, including those with special education needs.

82% (approval rate) of respondents agreed that courses within the Metal and Engineering Curriculum Framework could be adapted to meet the needs of students with special education needs.

Respondents with concerns made the following comments:

‘As long as the classes are small and there is a push for teachers aides in schools.’
Survey # M19

The wording in the draft Syllabus Part A line 2 on page 36, 13.1.1 ‘Students who meet the eligibility requirements for undertaking Stage 6 Life Skills courses ...’ should read ‘Students with special education needs may access ...’ as all students may select competencies which are relevant to their needs. Response # M13

The major issues raised in the consultation are addressed in Section 4.

2.7 AQF qualification packaging rules

This section has been included so that the minimum requirements for achieving qualifications available in the Metal and Engineering Curriculum Framework are clear.

91% (approval rate) of respondents were in agreement that the qualification packaging rules were clear and easy to understand. Comments included:

‘Shading the units of competency which are available through the HSC Framework has made this document very readable.’ Survey # M19

The major issues raised in the consultation are addressed in Section 4.

2.8 Syllabus Part B

Part B reproduces the text of each unit of competency directly from the Training Package as well as providing associated HSC requirements and advice.

The majority of respondents were satisfied with the content layout and formatting of Part B, agreeing that there is a clear relationship between the unit of competency and the HSC requirements and advice. This was represented by a 72% approval rate.

‘The inclusion of HSC requirements and advice, although lengthy in places, provides an opportunity to cross check that no details have been missed in the teaching material and delivery.’ Survey # M19

The expanded information contained in the “HSC Requirements and Advice” is welcomed. Response # M7

The following comment highlights one concern:

‘..there appears to a be a bit too much content ...’ Survey # M9

Respondents also indicated (approval rate 91%) that together Parts A and B of the syllabus documentation provided sufficient information to develop teaching/learning programs.

The major issues raised in the consultation are addressed in Section 4.

2.9 Overall comments

Overall 82% of respondents were generally happy with the proposed syllabus. Some positive responses included:

‘OK – great document – written by experts ...’ Survey # M3

I like the fact that teachers have the opportunity to cater for their own expertise and the interests of their candidature. Response # M20

Overall, I am very impressed with the content and advice given in the syllabus, both Part A & B. Response # M7

While acknowledging a number of positive features about the proposed Framework in general, 9% of respondents expressed dissatisfaction. Areas of concern include:

- additional support for teachers will be required in relation to the HSC Requirements and Advice in Part B, especially for the compulsory units of competency
- repetition of the generic occupational health and safety (OHS) information regarding safe work practices contained in MEM13.14 *Apply principles of occupational health and safety in the work environment* in other units of competency
- clarification regarding the delivery and/or assessment of MEM13.14 *Apply principles of occupational health and safety in the work environment* prior to participating in work placement.

The following comment highlights one of these concerns:

‘I suggest a preamble or introduction explaining how to integrate the delivery of learning experiences addressing the units of competency by holistic teaching rather than a piecemeal approach where subjects are taught in isolation.’ Survey # M19

These issues have been addressed as detailed in Section 4 and, where appropriate, the Curriculum Framework adjusted in response to consultation.

3 Quantitative analysis of the survey

3.1 Rationale

The rationale describes the nature of the manufacturing, engineering and related industries in broad terms and explains the place and purpose of the subject in the NSW Higher School Certificate.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
64%	36%	0%	0%	0%	0%

3.2 Aim

The aim provides a succinct statement of the overall purpose of the syllabus.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
45%	45%	9%	0%	0%	0%

3.3 Metal and Engineering Curriculum Framework

The text and table provide an overview of the national qualifications related to this industry from the Training Package and outline the qualifications included in the Framework.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
45%	36%	0%	9%	9%	0%

3.4 Course structures

3.4a The information provided is clearly presented and easy to understand.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
45%	55%	0%	0%	0%	0%

3.4b The course structures enable the flexibility to plan and deliver programs that maximise student learning.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
36%	55%	0%	9%	0%	0%

- 3.4c The 120-hour course provides students with the opportunity to develop basic knowledge and skills in manufacturing, engineering and related industries.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
27%	64%	0%	0%	9%	0%

- 3.4d The 240-hour course provides students with the opportunity to gain a range of skills and knowledge suitable for employment in manufacturing, engineering and related industries.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
55%	27%	0%	9%	9%	0%

- 3.4e For students with a particular interest and aptitude within the industry, the 60/120-hour specialisation study provides the opportunity to gain further credit towards Certificate II and III qualifications.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
36%	45%	0%	0%	18%	0%

3.5 Assessment requirements and advice and HSC examination

- 3.5a This section briefly outlines assessment requirements for the Higher School Certificate (including HSC examination specifications) and the Training Package.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
55%	45%	0%	0%	0%	0%

- 3.5b Fair, reliable and valid HSC examinations can be developed based on the breadth of learning experiences within the range of compulsory units of competency.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
55%	36%	0%	0%	0%	9%

3.6 Students with Special Education Needs

Courses within the Metal and Engineering Curriculum Framework can be adapted to meet the needs of these students.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
27%	45%	18%	0%	9%	0%

3.7 AQF qualification packaging rules

Minimum requirements for achieving the industry qualifications available in the Metal and Engineering Curriculum Framework are clear.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
27%	64%	9%	0%	0%	0%

3.8 Syllabus Part B

3.8a There is a clear relationship between the unit of competency and the HSC requirements and advice.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
27%	45%	27%	0%	0%	0%

3.8b Together, Parts A and B of the syllabus documentation provide sufficient information to develop teaching/learning programs.

Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Nil response
36%	55%	0%	0%	9%	0%

3.9 Overall comments

Very good, fine as it is	9%
Good, a little fine-tuning necessary	73%
Acceptable, some reworking necessary	9%
Unsatisfactory in its treatment of some significant issues as identified in this response	9%
Nil response	0%

4 Key issues raised in consultation and actions taken

ISSUE	SOURCE	ACTION/RESPONSE
<ul style="list-style-type: none"> Aim <p>The aim should be expressed in point form.</p>	M3.	The format of this section is standard for all industry curriculum frameworks and has a high level of general satisfaction.
<p>The aim should mention articulation into traineeships and apprenticeships.</p>	M19.	<p>The aim is designed to provide a succinct statement of the overall purpose of the syllabus.</p> <p>Section 13 of Part A of the Syllabus addresses articulation into traineeships and apprenticeships.</p>
<ul style="list-style-type: none"> Qualifications available through the Framework <p>To assist with understanding and ease of reading, provide hours and industry points for the qualifications that can be achieved (ie a table as in current syllabus).</p>	M17.	<p>As the qualification packaging rules are expressed differently in the new Metal and Engineering Training Package (MEM05), the table/diagram in the current Framework has been replaced with the following:</p> <ul style="list-style-type: none"> MEM05 qualification packaging rules Tables 6–8 identifying the status of units of competency from the HSC courses for the qualifications included in the revised Metal and Engineering (M&E) Curriculum Framework. <p>This information is in Section 15 of Part A of the Syllabus and will assist with selection of elective units of competency to meet HSC course requirements and qualification packaging rules.</p>
<ul style="list-style-type: none"> Course structures <p>Reduce the compulsory hours and increase elective hours to enable greater flexibility.</p>	M20.	The units of competency selected to be compulsory in the M&E Framework were chosen because they maximise articulation towards a number of qualifications from the MEM05 Training Package, delivering better outcomes for students. The number of compulsory units of competency is comparable with other industry curriculum frameworks.

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ISSUE	SOURCE	ACTION/RESPONSE
		<p>Units of competency drawn from Training Package/s are not defined in terms of duration. For the purposes of the HSC, courses must be described in terms of their indicative hours. For this reason, indicative hours for unit credit towards the HSC have been assigned to each unit of competency.</p> <p>There is some overlap of knowledge and skills required by units of competency within the M&E HSC courses. Complementary units can be delivered and assessed concurrently reflecting the holistic approach strongly recommended in HSC VET delivery (see Part A of the Syllabus). Examples of integrated approaches to programming will be provided in the support document.</p>
<p>Concern expressed about whether the proposed course structures will still allow students to gain a Certificate II, utilise current resources available on the North Coast and continue to meet local employer expectations that students enter the workforce with a broad range of skills.</p>	<p>M11, M17.</p>	<p>Depending on the courses undertaken in the M&E Framework and the selection and achievement of units of competency, students have the opportunity to achieve:</p> <ul style="list-style-type: none"> • Certificate II in Engineering (MEM20105) • Statement of Attainment towards Certificate II in Engineering – Production Technology (MEM20205) • Certificate II in Boating Services (MEM20305) • Statement of Attainment towards a number of Certificate III qualifications. <p>Metal and Engineering (240 indicative hours) has an elective pool containing 34 units of competency. Within the Specialisation Study there are 27 units of competency available. These elective units of competency were chosen with industry support to provide a range of choices suitable for delivery.</p> <p>Where employer needs/expectations have not been met for the local area, schools with registered training organisation (RTO) scope and appropriately trained teachers and facilities/resources may submit a locally designed Board Endorsed VET course drawing from the MEM05 Training Package in addition to courses within the M&E Framework. This may enable students to achieve qualifications using alternative elective units of competency not available in the Framework.</p>
<p>Why does the aviation industry miss out? It is more important than jewellery manufacture.</p>	<p>M2.</p>	<p>Units of competency relating to the aviation industry are not contained in the MEM05 Training Package. The Aviation Training Package (TDA03) can be accessed via the National Training Information Service (NTIS) website www.ntis.gov.au. With industry support, RTO scope and appropriately trained teachers and facilities/resources, a locally designed Board Endorsed VET Course can be developed drawing on units of competency from the TDA03 Training</p>

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ISSUE	SOURCE	ACTION/RESPONSE
		<p>Package and other related Training Packages.</p> <p>Units of competency under the Field title <i>Jewellery and horological</i>, have been included as electives in the M&E Framework and are not compulsory in any of the HSC courses.</p>
<p>Include a diagram showing the relationship between the available HSC courses and the possible AQF outcomes as exists on p 21 of the current Part A Syllabus.</p>	<p>M11, M17.</p>	<p>This advice was to be included in the support document for the revised M&E Framework. Section 15 of Part A of the Syllabus has now been amended and provides details of the status of units of competency from the HSC courses for all qualifications included in the Framework (refer to Section 15 of Part A of the Syllabus).</p>
<p>● Units of competency</p> <p>Absence of computer-aided drafting units in the 240-hour course in the Framework. Many students are highly skilled in this area and school systems have spent a considerable amount of money resourcing schools with suitably trained teachers and resources.</p>	<p>M8, M12.</p>	<p>MEM30.1A <i>Use computer aided drafting systems to produce basic engineering drawings</i> is available in the Metal and Engineering Specialisation Study (60 or 120 indicative hours) courses.</p> <p>Qualification packaging rules of the MEM05 Training Package have CAD units of competency contributing to qualifications at Certificate IV level and above. These qualifications are not available in the M&E Framework.</p> <p>With industry support, RTO scope and appropriately trained teachers and facilities/resources, a locally designed Board Endorsed VET Course can be developed drawing from the MEM05 Training Package in addition to courses within the M&E Framework.</p>
<p>The importance of incorporating OHS in the delivery of all practical units.</p>	<p>M7, M10, M12.</p>	<p>Occupational health and safety (OHS) is a significant component of the M&E Framework. The majority of units of competency in the MEM05 Training Package look for evidence that confirms knowledge of safe work practices and procedures (refer to the <i>Evidence Guide</i> within each unit of competency in Part B of the Syllabus).</p> <p>MEM13.14A <i>Apply principles of occupational health and safety in the work environment</i> is mandatory for every qualification in the MEM05 Training Package, as well as compulsory in Metal and Engineering (120 and 240 indicative hours).</p>

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ISSUE	SOURCE	ACTION/RESPONSE
<p>Suggest the inclusion of MEM5.19C <i>Weld using gas tungsten arc welding process</i> in the elective pool for fabrication. There is an industry shortage of skilled TIG welders.</p>	<p>M2.</p>	<p>Manufacturing Skills Australia (MSA) – formerly MERSITAB – does not support the inclusion of MEM5.19C <i>Weld using gas tungsten arc process</i> in the M&E Framework. As an alternative, industry has recommended MEM5.49B <i>Perform routine gas tungsten arc welding</i> which is a pre-requisite for the higher order unit of competency. This is in keeping with the level of all the other welding units in the M&E Framework.</p> <p>Based on advice from MSA, Part A of the Syllabus has been amended to include MEM5.49B <i>Perform routine gas tungsten arc welding</i> in the elective pool for Metal and Engineering (240 indicative hours).</p>
<p>Suggestion that more machining units be included in the 240-hour pool of electives (eg MEM7.6B <i>Perform lathe operations</i> and MEM7.7B <i>Perform milling operations</i>).</p>	<p>M14, M17.</p>	<p>Advice received from industry, as well as TAFE NSW, specifies that if MEM7.5B <i>Perform general machining</i> is to be included in the M&E Framework it should only be delivered as part of a specialisation study.</p> <p>MEM7.5B is a prerequisite for MEM7.6B <i>Perform lathe operations</i> and MEM7.7B <i>Perform milling operations</i>. Industry deems these two units of competency as ‘trade’ units and therefore not suitable for inclusion in the Framework.</p> <p>With industry support, RTO scope and appropriately trained teachers and facilities/resources, a locally designed Board Endorsed VET Course can be developed drawing from the MEM05 Training Package in addition to courses within the M&E Framework.</p>
<p>MEM12.24A <i>Perform computations</i> is not covered very well. Further advice required.</p> <p>Will RPL be possible for students doing 2 unit Mathematics?</p>	<p>M9.</p>	<p>The HSC requirements and advice have been developed from the MEM05 Training Package requirements. They draw from the Evidence Guide (in particular Required skills and Required Knowledge) for each unit of competency and the Performance Criteria and Range Statement for each Element of competency.</p> <p>Clarification of the requirements of specific units of competency within the MEM05 Training Package would need to be sought from the developers of the Training Package (Manufacturing Skills Australia - www.mskills.com.au). Further advice can also be sought from your school system/sector authority and/or RTO.</p> <p>Under the Australian Quality Training Framework (AQTF), RTOs can grant recognition of prior learning (RPL). This ‘means recognition of competencies currently held, regardless of how, when or where the learning occurred. RPL</p>

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ISSUE	SOURCE	ACTION/RESPONSE
		<p>assesses the individual’s prior learning to determine the extent to which that individual is currently competent against the required learning outcomes, competency outcomes, or standards for entry to, and/or partial or total completion of, a qualification’ (ANTA, 2005, <i>Standards for Registered Training Organisation</i>, p 17). Advice regarding policy and procedures for RPL is available from your school system/sector authority and/or RTO.</p> <p>When granting RPL for any units of competency within the M&E Framework, the RTO must ensure that students have covered all HSC requirements and advice for those units of competency. Where no formal learning is to be undertaken against the unit of competency, an alternative unit of competency must be completed to ensure the indicative hours for each course are met for Preliminary and/or HSC credit.</p>
<ul style="list-style-type: none"> ● Indicative hours <p>Five hours is not enough for the <i>Manufacturing, Engineering and Related Industries Induction</i>. The HSC exam will probably draw on this significantly.</p>	M9.	<p>It is intended that the <i>Manufacturing, Engineering and Related Services Industries Induction</i> developed for the M&E Framework provide students with a basic awareness and understanding of the industry as a whole.</p> <p>A similar Induction module is included in the current M&E Framework with zero indicative hours and is examinable in the current HSC examination.</p> <p>Indicative hours are not necessarily delivery hours (refer to Section 8.2 of Part A of the Syllabus). Indicative hours allocated to the Induction should assist teachers determine the depth of treatment required. It is anticipated that the learning for the Induction will continue to be integrated throughout the course and it is considered likely that students will have much to contribute to the Induction topics after work placement.</p> <p>While keeping this in mind, the indicative hours for the <i>Manufacturing, Engineering and Related Services Industries Induction</i> has been increased to 10 indicative hours.</p>
<p>The link between HSC indicative hours and points seems to be inconsistent. MEM12.23A <i>Perform engineering measurements</i> is allocated 5 points but only 15 indicative hours signalling to teachers</p>	M8.	<p>The point weightings reflect the industrial ‘value’ placed on units of competency for classification under the <i>Metal Engineering and Associated Industries Award 1998</i>.</p>

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ISSUE	SOURCE	ACTION/RESPONSE
<p>that the syllabus only requires a cursory look at it. Other examples of this discrepancy exist in the elective pool units.</p>		<p>Contrary to some funding models, a representative from Manufacturing Skills Australia advised the weightings do not represent hours of training, directly or by formula.</p> <p>There is no indication in the MEM05 Training Package that delivery hours have any correlation to industry points allocated to units of competency.</p> <p>Refer to Section 8.3 in Part A of the Syllabus.</p>
<p>● Work placement</p> <p>Clarification of whether students will be required to be competent in MEM13.14 <i>Apply principles of occupational health and safety in the work environment</i> prior to participating in work placement.</p> <p>The <i>Manufacturing, Engineering and Related Industries Induction</i> and MEM13.14A <i>Apply principles of occupational health and safety in the work environment</i> should be completed prior to work placement.</p>	<p>M1, M7, M10, M12.</p>	<p>For MEM 13.14 <i>Apply principles of occupational health and safety in the work environment</i>, Parts A and B of the Syllabus have been amended to state that ‘Learning experiences for the HSC for this unit must be undertaken prior to work placement’. This does not necessarily mean that the assessment of the unit is complete nor that a student will have been deemed competent.</p> <p>Due to revised content, it is no longer mandatory that the Induction be completed prior to undertaking work placement (as is the case in the current Framework). It is anticipated that the learning for the Induction will continue to be integrated throughout the course. It is considered likely that students will have much to contribute to the Induction topics after work placement.</p>
<p>The <i>WorkCover NSW Construction Induction Certificate</i> should be mandatory for the Metal and Engineering Curriculum Framework as many relevant work placement sites are also considered construction sites.</p>	<p>M11.</p>	<p>It is not appropriate to mandate the <i>WorkCover NSW Construction Induction Certificate</i> in the M&E Framework as not all M&E work placements will require this credential.</p> <p>Under the AQTF, RTOs are responsible for developing risk assessment policies. Work placements that have any special requirements should be identified through this process. School system/sector authority and/or RTO are responsible for ensuring that students are appropriately trained prior to work placement.</p>
<p>OBOS should mandate that work placement be completed in a minimum of one-week blocks to maximise student learning and minimise disruption. Furthermore, for TAFE NSW funding requirements it needs to be advised that these hours are in addition to the 120 and 240 indicative hours.</p>	<p>M19.</p>	<p>The Board of Studies mandates the work placement hours but it is at the discretion of each school system/sector authority and/or RTO to manage how and when this requirement will be met.</p> <p>There is no requirement for work placement hours to be in addition to indicative course hours.</p>

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ISSUE	SOURCE	ACTION/RESPONSE
<p>● HSC examination</p> <p>Will the examination include questions on the new industry areas such as jewellery, boating and marine craft construction?</p> <p>Section III of the examination should include extended response questions allowing students to select one based on an industry area that they have focused on through the course such as fabrication, assembly, jewellery, boating services, marine craft construction, etc.</p>	M7, M8.	Elective units of competency (such as jewellery and horological, boating services and marine craft construction, etc) are not examined in the optional HSC examination. The HSC examination questions will be based on the compulsory units of competency (refer to Sections 8.4 and 11.5 of Part A of the Syllabus).
Disappointment that the HSC examination is still optional as this can devalue VET courses in the minds of students and parents.	M7.	Since some students do not require a Universities Admission Index (UAI), the optional nature of the examination provides the required flexibility.
<p>● Students with special education needs</p> <p>Some thought should be given to reorganising elements for students with Special Education Needs to enable them to complete whole units of competency.</p>	M8.	<p>A unit of competency is the specified knowledge and skill and its application to the standard expected in the workplace. Each unit of competency is endorsed by industry. All individuals must be deemed competent against the whole unit of competency (ie the performance criteria for each element) to be awarded the unit. Units of competency cannot be changed to suit individual purposes.</p> <p>Advice regarding reasonable adjustment should be sought from the developers of the MEM05 Training Package (MSA – www.mskills.com.au), the Department of Education and Training (DEST), school system/sector authority and/or RTO.</p> <p>Provisions for students with special education needs (Section 13.1 of Part A of the Syllabus) allow for the selection of appropriate units of competency.</p> <p>A support document to assist those teaching VET courses to students with special education needs has been developed by the Senior Curriculum Officer, Special Education and the Board’s Special Education Committee. The <i>Stage 6 Industry Curriculum Frameworks Support Document for Students with Special Education Needs (2005)</i> is available under the HSC Syllabuses link on the Board’s website (www.boardofstudies.nsw.edu.au).</p>
Employer requirements and attitudes may make finding work placement for special needs students difficult.	M2.	Work placement is a mandatory component of any industry curriculum framework course. As with any Stage 6 course, course requirements should be taken into consideration when making decisions to offer the course and when providing advice to students regarding subject selection for the HSC.

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Importance of allowing additional time, especially in regard to OHS, for students with special needs	M14.	Agreed. Refer to Section 13 of Part A of the Syllabus which indicates how this can occur.
In Section 13, Part A Syllabus, please include the transition planning process.	M19	<p>The <i>Stage 6 Industry Curriculum Frameworks Support Document for Students with Special Education Needs (2005)</i> is available under the HSC Syllabuses link on the Board’s website (www.boardofstudies.nsw.edu.au). This document provides information regarding transition planning.</p> <p>For further advice, contact appropriate personnel from relevant school system/sector authority and/or RTO.</p>
<ul style="list-style-type: none"> • Qualification packaging rules <p>Section 15 lists all the units required for a particular qualification when only the greyed out units are incorporated into the Framework.</p>	M6.	<p>Section 8 of Part A of the Syllabus outlines courses within the M&E Framework available for the HSC and the units of competencies that make up the courses.</p> <p>Section 15 of Part A of the Syllabus outlines the qualification packaging rules reproduced directly from the MEM05 Training Package.</p> <p>The rules and structure of HSC VET courses are not always identical to the qualification packaging rules (refer <i>Board Bulletin</i>, Feb 2002 and Section 4.2 of Part A of the Syllabus).</p> <p>For the convenience of the reader, the greying of rows in Section 15 allows the reader to quickly identify:</p> <ul style="list-style-type: none"> • which units of competency listed for a particular qualification have been included in the Framework, and • those that are not included in the Framework which may be gained in future study. <p>This section has received a high approval rating from stakeholders.</p>
The <i>Manufacturing, Engineering and Related Industries Induction</i> is not mandated in the packaging rules.	M1.	<p>Manufacturing Skills Australia (MSA) has indicated that ‘induction to the industry’ is not mandated in the qualification packaging rules because induction training normally takes place in an industry setting. It is the industry norm for individual workplaces to induct their employees to their particular aspect of the industry.</p> <p>The <i>Manufacturing, Engineering and Related Services Industries Induction</i> is a set of topics developed by the Office of the Board of Studies under advice received</p>

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		from the Metal and Engineering Industry Curriculum Committee (ICC) to provide students with a basic awareness and understanding of the industry as a whole. It is not a unit of competency from the MEM05 Training Package.
Confusion over reference to industry points (unit weight) in the packaging rules. In particular, Section 8 on page 17 of Part A – MEM15.2A <i>Apply quality systems</i> is listed as having 2 points allocated. In Section 15, on page 46 of Part A, no points appear to be allocated.	M8.	<p>MEM15.2A <i>Apply quality systems</i> does have a unit weight of 2 points. However, this particular unit of competency is mandatory for some qualifications (eg Certificate II in Engineering) and a specialisation/elective unit for others (eg Certificate I in Engineering). Refer to Section 15 of Part A of the Syllabus.</p> <p>When MEM15.2A <i>Apply quality systems</i> is mandatory the industry points are not relevant. The unit of competency must be completed and awarded to be eligible for the qualification.</p> <p>Where MEM15.2A <i>Apply quality systems</i> is listed as a specialisation/elective unit, the 2 industry points allocated count towards the total number of points required for the qualification.</p> <p>For example, for a Certificate I in Engineering an individual must complete the 4 mandatory units of competency, plus completion of specialisation units from the list to the value of 24 points. MEM15.2A <i>Apply quality systems</i> is listed and therefore can contribute 2 of the 24 points required.</p> <p>Section 8 of Part A of the Syllabus needs to be read in conjunction with Section 15 of Part A of the Syllabus when deciding on which units of competency to deliver to achieve the desired qualification.</p>
Packaging Rules indicate only a 6 point difference between Certificates I and II.	M8.	This is correct. The qualification packaging rules in Section 15 of Part A of the Syllabus have been reproduced directly from the MEM05 Training Package.
The layout of the packaging rules is challenging. Each unit should be listed once against ‘stream’ recognition, in columns, allowing comparison and commonalities across streams to be recognised.	M20.	<p>The qualification packaging rules of the endorsed version of the MEM05 Training Package has been condensed and does list the specialisation units in one place rather than repeating them for every qualification concerned. Part A of the Syllabus has been amended to reflect this change.</p> <p>Section 15 of Part A of the Syllabus is a direct copy of what appears in the MEM05 Training Package.</p> <p>A table listing all units of competency included in the Framework, their status within each of the Framework HSC courses and in relation to the qualifications available through the Framework now appears in Section 15 of Part A of the Syllabus.</p>

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<p>● Part B</p> <p>The very involved content of compulsory units may make it difficult to cover practical units.</p> <p>Indicative hours may not be enough in reality.</p> <p>The depth of treatment in some cases is far above the requirements of the unit of competency.</p>	<p>M1, M9, M11, M14, M15, M17.</p>	<p>The HSC Requirements and Advice have been developed from the MEM05 Training Package requirements. They draw from the Evidence Guide (in particular, Required skills and Required knowledge) for each unit of competency and Performance Criteria and the Range Statement for each Element of competency.</p> <p>Units of competency drawn from Training Package/s are not defined in terms of duration. For the purposes of the HSC, courses must be described in terms of their indicative hours. For this reason, indicative hours for unit credit towards the HSC have been assigned to each unit of competency. The indicative hours for the majority of units of competency are in line with TAFE NSW nominal hours. Indicative hours are not delivery hours. Refer to Section 8.2 of Part A of the Syllabus.</p> <p>There is some overlap of knowledge and skills required by units of competency within the Framework courses. Complementary units of competency should be delivered and assessed concurrently reflecting the holistic approach recommended in HSC VET delivery. (See Part A of the Syllabus.) Examples of integrated approaches to programming will be provided in the support document.</p>
<p>The HSC Requirements and Advice is lengthy and makes presentation of units unwieldy. The repetition of the OHS ‘spiel’ is not helpful though it seems to be standard. Some ‘trimming’ of the content in the HSC Requirements and Advice would be desirable.</p>	<p>M1, M9.</p>	<p>Refer to comment above.</p> <p>HSC requirements and advice may be repeated in several units because the MEM05 Training Package specifies it in the knowledge and skills required for a particular unit of competency (refer to the Evidence Guide within each unit of competency in Part B of the Syllabus). The OHS ‘spiel’ has been repeated in the majority of units of competency as ‘safe work practices and procedures’ is required knowledge for the unit.</p> <p>It is anticipated that teachers exercise judgement when delivering units of competency. Where content is repeated and has been delivered as part of an earlier unit or group of units, teachers would need only to contextualise the information as relevant to the unit currently being delivered.</p> <p>Complementary units of competency should be delivered and assessed concurrently reflecting the holistic approach recommended in HSC VET delivery (see Part A of the Syllabus). Examples of integrated approaches to programming</p>

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		<p>will be provided in the support document.</p> <p>Elective units of competency contained in Part B of the Syllabus have been amended in response to consultation feedback on this issue.</p>
<p>Additional support for teachers may be necessary in relation to the HSC Requirements and Advice in Part B especially for the compulsory units.</p>	<p>M1, M7, M11, M14.</p>	<p>A support document will be developed to aid initial implementation. Sample scope and sequence, examples of integrated approaches to programming (covering compulsory units of competency) and holistic delivery and assessment and sample assessment tasks will be provided.</p> <p>It will be available from the Board's website (www.boardofstudies.nsw.edu.au).</p>
<p>What is the relevance of the prescriptive HSC Requirements and Advice in the non-examinable units of competency?</p>	<p>M14.</p>	<p>Within each VET Framework, the optional HSC examination is attached to the 240 indicative hour course. It is current Board policy that HSC Requirements and Advice are written for each unit of competency in the 240-hour course.</p> <p>The HSC Requirements and Advice provides teachers with a common body of knowledge to assist with planning and delivery and reflects Training Package requirements for the unit of competency.</p>
<p>A number of points listed under 'awareness of safe work practices' in the HSC Requirements and Advice for Element 1.1 in MEM12.23A <i>Perform engineering measurements</i> are unrelated to measuring devices and equipment.</p>	<p>M1, M4.</p>	<p>HSC requirements and advice may be repeated in several units because the MEM05 Training Package specifies it in the knowledge and skills required for a particular unit of competency (refer to the Evidence Guide within each unit of competency in Part B of the Syllabus).</p> <p>The OHS points listed under 'safe work practices and procedures' have been repeated in the majority of compulsory units of competency as this is required knowledge for the unit. It was deemed appropriate that this information be standardised in each unit of competency. It is anticipated that teachers exercise judgement and where content is repeated and has been delivered as part of an earlier unit or group of units, teachers would need only to contextualise the information as relevant to the unit currently being delivered.</p>
<p>Suggested edits for HSC Requirements and Advice</p>	<p>M7</p>	<p>Where appropriate, Part B of the Syllabus has been adjusted in response to consultation feedback.</p>

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<p>● Implementation and support</p> <p>Publish some case studies indicating student patterns of study and the qualification achieved.</p>	M3.	A support document will be developed to aid initial implementation. Sample scope and sequence, examples of integrated approaches to programming and holistic delivery and assessment and sample assessment tasks will be provided.
<p>Include a proforma for programming which includes all the necessary columns filled in except for resources, teaching strategies and registration.</p>	M1.	This document will be available from the Board's website (www.boardofstudies.nsw.edu.au).
<p>Suggested that sample programs show projects that include an illustration of the project/job, the tools required and the necessary OHS requirements.</p>	M3.	
<p>There is a need to emphasise that units of competency should not be delivered in isolation.</p>	M19.	Agreed. Complementary units of competency should be delivered and assessed concurrently reflecting the holistic approach recommended in HSC VET delivery (see Part A of the Syllabus). Examples of integrated approaches to programming and assessment will be provided in the support document.
<p>The courses will work if classes are kept small and schools have the appropriate equipment.</p>	M3.	<p>Class sizes and the availability/provision of equipment and resources are the responsibility of the school system/sector authority and/or RTO.</p> <p>Resources/equipment in current use may be suitable for the revised courses.</p> <p>Minimum resource requirements for each unit of competency contained in the 120-hour and 240-hour courses are in Part B of the Syllabus. Details regarding units of competency contained in the Specialisation Study can be found in the MEM05 Training Package or at www.ntis.gov.au.</p> <p>The Industry Curriculum Framework Information Package (ICFIP) produced in collaboration by the three school systems (Association of Independent Schools, Catholic Education Commission and NSW Department of Education) will be reviewed after the endorsement of the revised M&E Framework and provides details of equipment/resource requirements for school sector RTOs.</p>
<p>● Teacher Training</p> <p>Concern about the need for additional teacher training.</p>	M11.	The consultation process identified units of competency that were suitable for delivery by currently trained teachers. School sector/system authorities are

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		<p>responsible for training and development and will provide advice to teachers, following the endorsement and release of a revised M&E Framework, regarding which units of competency they are able to deliver.</p> <p>Policy development and practice regarding teacher training requirements for school system RTOs is the responsibility of the Qualification Recognition and Resource Requirements Committee (QRRRC).</p>
<p>● Other</p> <p>For version control purposes the suggestion is made that changes to syllabus documents after publication of the hard copy be highlighted.</p>	<p>M15.</p>	<p>Any amendments made to syllabus documents after publication and distribution of the hard copy are detailed in a Board Bulletin Official Notice and changes are made to the version on the Board’s website.</p> <p>This suggestion has been passed on to personnel in the OBOS Information Services Branch for consideration.</p>
<p>Concern about students being required to repeat competencies already achieved when enrolling in other RTOs.</p>	<p>M15.</p>	<p>The key objective of the AQTF is to provide the basis for a nationally consistent vocational education and training system. Standards for RTOs have been developed to aid this process. Standard 5 states that ‘the RTO recognises the AQF qualifications and Statements of Attainment issued by any other RTO’ (ANTA, 2005, <i>Standards for Registered Training Organisations</i>, p 8.)</p> <p>It is recommended that students studying courses within the M&E Framework be advised of the right to apply for advanced standing and recognition of prior learning (RPL) when enrolling in further training with other RTOs.</p> <p>In situations where an RTO does not comply with this standard, students are advised to contact the state registering body, NSW Vocational Education Training Accreditation Board (VETAB), or their school system authority.</p>

5 Written responses

In addition to survey responses, written responses were received from the following groups:

Individual
Mr Gordon McLean, Program Manager, TAFENSW
Ms Susan Murphy, Post School Transition, NSW Department of Education and Training
Mr Graham Warne
Group
Association of Independent Schools NSW
Catholic Education Commission NSW
Department of Education and Training – Vocational Education in Schools Directorate (survey)