

Engineering Pathways

AQF VET qualification: MEM20413 Certificate II in Engineering Pathways

Training Package: MEM05 Metal and Engineering (version 11.1)

BOSTES course name	Pattern of study	BOSTES course number	Schools Online (Administration) entry advice
Engineering Pathways (120 hours)	2 units x 1 year	59726	Enter this course number for either Preliminary (Year 11) or HSC (Year 12)
Engineering Pathways (180 hours)	3 units x 1 year	59727	Enter this course number for either Preliminary (Year 11) or HSC (Year 12)*

* For course delivery over two years, the entry on *Schools Online (Administration)* should be made in the second year (ie HSC).

Eligibility: Nil

Exclusions: Metal and Engineering Curriculum Framework

HSC course requirements

Engineering Pathways (120 indicative hours)

- the possible qualification outcome is a Statement of Attainment towards MEM20413 Certificate II in Engineering Pathways
- accredited for a total of 2 units at the Preliminary and/or HSC level
- attempt core and/or elective units of competency to a minimum of 120 HSC indicative hours.

Engineering Pathways (180 indicative hours)

- the possible qualification outcome is MEM20413 Certificate II in Engineering Pathways
- accredited for a total of 3 units at the Preliminary and/or HSC level
- attempt all core units of competency (totalling 65 HSC indicative hours) and elective units of competency to a minimum of 115 HSC indicative hours and to meet qualification packaging rules.

The requirements for the completion of an HSC VET course are different to the requirements for AQF VET qualification completion. Registered Training Organisations (RTOs) need to ensure that delivery of courses meets HSC course requirements and complies with Training Package rules.

For a course to count towards the HSC program of study, students must satisfy the course completion criteria as required by the Board of Studies, Teaching and Educational Standards NSW. (Refer to the [Assessment Certification Examination \(ACE\) website.](#))

There must be sufficient evidence that the student has:

- followed the course developed or endorsed by BOSTES
- applied themselves with diligence and sustained effort to the set tasks and experiences provided in the course
- achieved some or all of the course outcomes
- (where applicable) undertaken the mandatory work placement.

Unit credit for the Higher School Certificate

Engineering Pathways HSC VET courses count as Board Endorsed unit credit for the HSC but do not contribute towards an Australian Tertiary Admission Rank (ATAR).

To facilitate flexibility of VET in the HSC, courses may be delivered as Preliminary, as HSC or as a combination of Preliminary and HSC units.

The HSC credit units will be allocated to students' Preliminary and/or HSC patterns of study as required.

The pattern of study (BOSTES course number) entered on *Schools Online (Administration)* should reflect the delivery of the HSC VET course over successive years. For example, delivery of a 240 HSC indicative hour course over two years should be entered as 2 units x 2 years. Students will be credentialled for the HSC credit units entered each calendar year, provided they have satisfactorily completed the course requirements for that calendar year as determined by the school, college or RTO.

Course content

CORE

Unit code and title	Status for AQF VET qualification	HSC indicative hours of credit
MEM13014A Apply principles of occupational health and safety in the work environment	core	15
MEMPE005A Develop a career plan for the engineering and manufacturing industry	core	5
MEMPE006A Undertake a basic engineering project	core	30
MSAENV272B Participate in environmentally sustainable work practices	core	15

Total HSC indicative hours for core units of competency: 65

ELECTIVE

Unit code and title	Status for AQF VET qualification	HSC indicative hours of credit
MEM16006A Organise and communicate information	elective – Group A	15
MEM16008A Interact with computer technology	elective – Group A	10
MEM18001C Use hand tools	elective – Group A	20
MEM18002B Use power tools/hand held operations	elective – Group A	20
MEMPE001A Use engineering workshop machines	elective – Group A	20
MEMPE002A Use electric welding machines	elective – Group A	20
MEMPE003A Use oxy-acetylene and soldering equipment	elective – Group A	15
MEMPE004A Use fabrication equipment	elective – Group A	20
MEMPE007A Pull apart and re-assemble engineering mechanisms	elective – Group A	15
MSAPCI101A Adapt to work in industry	elective – Group B	15
MSAPMSUP106A Work in a team	elective – Group B	15

AQF VET qualification

Qualification packaging rules are contained in the [*MEM05 Metal and Engineering Training Package*](#) at <http://training.gov.au>.

In summary, to attain [MEM20413 Certificate II in Engineering Pathways](#) students must achieve 12 units of competency including:

- a) 4 core units of competency
- b) 8 elective units of competency:
 - a minimum of 7 Group A electives
 - a maximum of 1 Group B elective.

Other information

Criteria for the endorsement of Board Endorsed VET courses (VET BECs)

The criteria for endorsement of VET BECs are outlined in the *Guidelines for Stages 5 and 6 Board Endorsed VET Courses* available on the BOSTES website at www.boardofstudies.nsw.edu.au/voc_ed/board-endorsed-courses.html.

HSC VET course delivery

HSC VET courses can only be delivered by an RTO with the relevant qualification and units of competency on their scope of registration. Scope of registration can be checked at <http://training.gov.au>.

RTOs offering training programs for the delivery and assessment of Engineering Pathways HSC VET courses must meet the requirements of the VET Quality Framework, the [MEM05 Metal and Engineering Training Package](#) and the HSC course.

Information about the delivery of HSC VET courses by RTOs other than school system RTOs or TAFE NSW institutes is contained on the BOSTES [Assessment Certification Examination \(ACE\) website](#).

Non-government schools outsourcing delivery of HSC VET courses to external providers also need to refer to the *Registered and Accredited Individual Non-government Schools (NSW) Manual* or *Registration Systems and Member Non-government Schools (NSW) Manual* which are available on the BOSTES website at <http://rego.bostes.nsw.edu.au>.

Allocation of HSC indicative hours of credit

Units of competency drawn from Training Packages are not defined in terms of duration. The amount of time required by individual students to achieve competency will vary according to their aptitude and experience. Where a training program is designed for delivery by an RTO, the RTO will specify the length of the training program according to the delivery strategies and/or curriculum resources chosen.

However, for the purposes of the HSC, VET 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. It is emphasised that the assignment of indicative hours does not imply that all students will fulfil all requirements of a unit of competency within these hours. RTOs may determine that additional or fewer hours are required for the achievement of particular competencies. However, this does not alter the HSC indicative hours allocated, only the delivery hours.

Students may need to spend additional time practising skills in a work environment and completing projects and assignments, in order to fulfil Training Package assessment requirements.

Exclusions

Where there is significant overlap between an HSC VET course and other HSC VET or general education course, BOSTES has an exclusion between the courses. Exclusions are generally applied at a course level rather than at the unit of competency level.

Schools should check all course exclusions when determining an appropriate pattern of study for their students.

Students can only undertake the Engineering Pathways (120 indicative hours) course or the Engineering Pathways (180 indicative hours) course.

Course exclusions for Engineering Pathways are detailed on the first page of this course description.

Recognition of Prior Learning (RPL) and credit transfer within VET courses

Students who have current knowledge, skills or experience relevant to a VET course may be granted credit towards the course requirements.

Arrangements for RPL and credit transfer within VET courses, including processes, application form and examples of possible scenarios, are detailed on the BOSTES website at www.boardofstudies.nsw.edu.au/voc_ed/rpl.html.

School-based apprentices and trainees

Information regarding provision for school-based apprentices and trainees within the HSC is available on the BOSTES website at www.boardofstudies.nsw.edu.au/voc_ed/apprenticeships-traineeships.html.

Information on requirements and arrangements for NSW school-based apprenticeships and traineeships is available at www.training.nsw.gov.au/individuals/apprenticeships_traineeships/school_based/index.html.

Students with special education needs

Students with special education needs may access a VET course in one of two ways:

- by undertaking the course under regular course arrangements, or
- by undertaking selected units of competency within the course that have been identified through the collaborative curriculum planning process.

For more information, see the [VET Courses and Students with Special Education Needs](#) fact sheet, as well as [Collaborative Curriculum Planning](#) advice, on the BOSTES website.

Students in Years 9 and 10 (Stage 5)

In certain circumstances students in Years 9 and 10 (Stage 5) may access Stage 6 VET courses. Further information is available on the BOSTES website at www.boardofstudies.nsw.edu.au/voc_ed/stage-5.html.