

22632VIC Certificate II in Engineering Studies



This is a project-based, hand-on course delivered in a simulated workplace environment in a fully equipped workshop. The course provides students with the skills and knowledge to pursue an apprenticeship in the engineering trades or with a foundation for professional engineering roles. Units 1 & 2 cover areas in computer technology and using hand and power tools.

We deliver a general qualification including some elective units from fabrication, machining and engineering technical pathways. Units 3 & 4 offers scored assessment and incorporates units such as producing basic engineering sketches and drawings, handling engineering materials, performing computations (for the VCE stream only).

ACTIVITIES/TASKS

Projects made in Units 1 & 2 include vice soft jaws, sheet metal tool caddy, centre punch, soft face mallet and an engineer's square. Students doing Units 3 & 4 are required to construct a major project and document the project in a portfolio.

UNITS OF COMPETENCY

Units 1 & 2 (Core)

VU23481 Apply occupational health and safety principles in an engineering environment

VU23475 Safely use hand tools and hand held power tools for general engineering applications

VU23476 Report on a range of sectors in the manufacturing, engineering, and related industries

VU23477 Interpret and prepare basic two- and three-dimensional engineering drawings

VU23478 Perform basic machining processes

VU23479 Apply basic fabrication techniques

Units 3 & 4 (Core)

MEMPE006 Undertake a basic engineering project

VU23480 Perform intermediate engineering computations

Units 3 & 4 (Elective)

VU23482* Produce basic engineering components and products using fabrication and machining operations

* Prerequisite: VU23478 Perform basic machining processes and VU23479 Apply basic fabrication techniques

LENGTH OF COURSE

This program is delivered to students as a VET in Schools Vocational Major (VM) program for Year 10 or Year 11 commencements. Internal NCAT students can complete the program as a NCAT Pre-apprenticeship student over one year.

External VCE VM students attend for a half day per week (Feb-Nov) over two years and enrol through their home school.

ELIGIBILITY & PREREQUISITES

A minimum sound achievement of Year 10 Maths and English or equivalent and an aptitude for practical work is recommended. If you have individual needs, please contact the college.

The core unit VU23480 Perform intermediate engineering computations requires students to undertake mathematical calculations (fractions, formulae, ratios, trigonometry) and produce graphs and charts.

ASSESSMENT

Students wanting a study score for the Engineering certificate can undertake scored assessment. Practical project work is assessed by observation and questioning, written tasks and tests are assessed using set criteria. Students are given a fair and adequate assessment process with multiple opportunities to demonstrate competency. Students must attend 80% of all classes and successfully complete all units of competency to obtain their certificate II qualification.

Students are recommended to undertake a minimum of 80 hours of Structured Workplace Learning.

BENEFITS OF TRAINING

This course offers a VCE study score in year 12 through scored assessment which can contribute directly to the ATAR as one of a student's primary four scaled studies or as the fifth or sixth study. The VCE VET Engineering Program is available for students who are enrolled in the VCE VM program.

The contribution of the VCE VET Engineering program to a student's VCE VM program is determined by the number of units of competency successfully completed.

APPLICATION & ENROLMENT PROCESS

Students wanting to study full time at NCAT must arrange an interview phone 9478 1333. External students must complete two forms.

1. An Application Form given from home school for approval at the home school level.
 2. An NCAT RTO VET Enrolment Form available from the home school VET coordinator or at ncat.vic.edu.au or the Northern Melbourne VET Cluster website nmvc.vic.edu.au
-

PATHWAYS

This certificate provides pathways to engineering, manufacturing or other related industries. The manufacturing sector encompasses a broad range of industries including automotive components, advanced electronics and machinery, aerospace and aviation, defence, chemicals, and plastics, pharmaceuticals, fabricated metals, textiles, clothing and footwear (TCF) and food processing.

Apprenticeships and traineeships can lead into a range of careers in design, manufacture, installation and repair of a wide range of equipment and machinery. As a qualified tradesperson, occupations include boilermaker, welder, toolmaker/die maker, hydraulics, avionics or mechanical technician, draftsman and mechanical fitter and fitter and machinist. Fitters and machinists are in very high demand across Australia.

There are pathways into professional careers in the engineering industry such as a mechanical engineer, electrical engineer and surveying.

POLICIES

The NCAT VET and General Student Handbook on our website contains policies and procedures for access, equity, privacy, refunds, student conduct, recognition processes, access to records, complaints & appeals.

For safety reasons there is a NCAT uniform.

Parents will receive a letter outlining specific details of the uniform and the supplier.
