



Certificate IV in Engineering (Heavy Fabrication)

MEM40105

- Nationally Recognised Training
- Apprenticeship Allowed
- This training is subsidised by the NSW Government

DURATION
1 Year

ATTENDANCE
Part Time

DELIVERY
On campus

START DATE
Anytime

LOCATION
Wollongong
Foleys Lane, North Wollongong

STUDY COMMITMENT
7.5 Hours Per Week

How much time on average each week you will need to commit to successfully complete this course.

Hours include class attendance/participation, directed study, and any required work placements.

You may also need to do additional hours of self-directed study.

Studying with TAFE NSW

With over 25,000 industry connections*, teachers experienced in the latest industry trends plus state-of-the-art facilities, it's easy to see why TAFE NSW is Australia's largest training provider. Want even more reasons to study with us?

*TAFE NSW current employer database as of May 2017



85.9%
EMPLOYER SATISFACTION

NSW EMPLOYERS ARE VERY SATISFIED WITH THE QUALITY OF THE NATIONALLY RECOGNISED TRAINING WE DELIVER*



80%
OF GROWTH AREAS COVERED

WE OFFER TRAINING IN 80% OF THE OCCUPATIONS PREDICTED TO HAVE THE GREATEST GROWTH OVER THE NEXT 5 YEARS^



83%
GRADUATE SATISFACTION

TAFE NSW ENJOYS A RATING WELL ABOVE THE NATIONAL AVERAGE FOR THE OVERALL QUALITY OF TRAINING#



93%
WOULD RECOMMEND TAFE NSW

AS A TRAINING PROVIDER - NATIONAL VET AVERAGE 90%**

Source: ^ employment.gov.au, * Graduate Satisfaction Survey - Undergraduate [Quality Indicators of Teaching and Learning (QILT) - Course Experience Questionnaire 2017-2018]. * NCVET, Survey of Employers' Use and Views of the VET System, 2017. ** VET - NCVET Graduate Outcomes Survey 2018

OVERVIEW

The nationally accredited Certificate IV in Engineering Heavy Fabrication prepares you for a career as a boilermaker or fabrication tradesperson. Graduate with post-trade level skills in fitting and machining, metal fabrication and welding and move into leadership and management roles.

LEARN NEW SKILLS

Through a mix of theory and practical coursework, learn to:

- Engage with engineering measurements and principles
- Perform engineering computations with computer technology
- Complete metal fabrication, boilermaking and welding skills in gas tungsten arc welding, silver soldering, thermal cutting, sheet and plate assembly
- Safely use workshop tools
- Ensure quality assurance procedures
- Lead and supervise teams
- Communicate and plan in the workplace

DEVELOP YOUR TALENT

Develop the attributes to help you get ahead:

- Complex problem solving skills
- An aptitude for mechanical tasks
- Collaboration and teamwork
- Reliability and self-motivation
- Effective communication skills

ACHIEVE YOUR GOALS

Completing this course provides you with:

- Experience working on key engineering and fabrication challenges in a real workshop
- A network of professional peers
- A strong pathway to continue your study and enhance your career opportunities
- A nationally recognised qualification at Certificate IV level

Career opportunities:

- Boilermaker
- Fabrication tradesperson
- Mechanical engineering draftsman
- Pressure welder
- Advanced fabrication technician
- Advanced mechanical maintenance technician
- CAM programmer

GROW YOUR CAREER

Take your career further with the:

- Diploma of Engineering - Advanced Trade

ENTRY REQUIREMENTS

When you study with TAFE NSW, we want you to succeed. Entry requirements allow us to make sure that you have the right pre-existing knowledge and skills to achieve your chosen qualification. You will need to provide evidence that you meet the requirements listed in this section.

ENTRY REQUIREMENTS

TAFE NSW offers the Certificate IV in Engineering (Heavy Fabrication) as an apprenticeship. There may also be options available for you to study as a non-apprentice.

Apprenticeship

To be eligible for this course, you must:

- Be employed as an apprentice in the fabrication industry as evidenced by a letter of support from your employer
- Submit your Training Plan Proposal (TPP) with your application

Non-apprenticeship

Enquire today and one of our Apprenticeship and Traineeship team will help you understand any eligibility or entry requirements.

IS THIS COURSE RIGHT FOR YOU?

To be prepared for this course, we recommend that you have:

- Adaptability to work in different environments, including on and offsite, outdoors, indoors, in confined spaces and in high temperature environments
- Completed your NSW School Certificate or equivalent level of education
- Numeracy and literacy skills at a Year 10 or equivalent level
- Fitness at an intermediate level to manage the physical demands of the role

If you need help preparing for study, contact us about your options.

ADDITIONAL REQUIREMENTS

With 130 locations across the state, TAFE NSW tailors qualifications to meet the needs of the local community and specific student groups (like apprentices, fast-tracked and online students). To make sure this course is the right fit for you, we will need you to demonstrate that you can meet the additional requirements below.

COURSE ENTRY REQUIREMENTS

To be enrolled in this course, you need to be able to provide evidence that you are:

- an apprentice (you will work in industry and study at the same time)
- employed full time
- signed up with an Apprentice Network Provider and have a Training Plan Proposal

To successfully complete this course, you will need:

- to undertake RUPReady testing prior to undertaking any study
- to successfully complete all units of competency
- to provide Personal Protective Equipment (PPE): including steel cap boots, cotton drill work clothes, safety glasses and a welding

shield.

- to supply pens, pencils, paper and a calculator

OTHER COURSE INFORMATION

INFORMATION SESSIONS

There are no information sessions currently scheduled for this course.

STUDY COMMITMENT

This is a face to face part time evening course. You will need to attend approximately 5.5 hours of class, over 2 evenings a week, for 30 weeks. As well as the in-class component, you will need to complete approximately 2 hours of other study per week.

You may also be required to complete approximately 1 hour of additional study each week outside of class hours, including content review and assessment preparation.

When applicable, students will have the option to study flexibly from remote TAFE NSW Connected Learning Centres or home.

NOTE Alternatively there will also be 5 day block arrangements set for each semester. Block 1 will run from the 15 March to 19 March 2021, Block 2 will run from 7 June to 11 June 2021. Students will be required to nominate which practical delivery option they will undertake on application.

For any students wishing to apply for Recognition of prior learning and/or credit transfer please provide this information to the teaching section prior to starting the course so that accurate fees can be calculated for this course. For any study completed more than 10 years ago, this will be treated as Recognition or Prior Learning not Credit transfer under Smart and Skilled guidelines.

IS THIS COURSE RIGHT FOR YOU?

This course offering is designed for people who:

- are currently working in the Engineering industry and have an apprenticeship for this qualification.
- have completed their Certificate III in Engineering Fabrication Trade. Students enrolling in this qualification will undertake study in AS1796 pressure welding (Practical and Theory), Advanced Maths, Non-destructive testing and CAD Drafting (2D and 3D).
- wish to further advance their career in the Metal Fabrication industry

If you are not an apprentice, please contact the TAFE NSW on 131601 to discuss your options prior to enrolment, as other training options may be available for this offering.

MORE ABOUT THIS COURSE

There is a new training package for this course coming soon. If it is available before you complete your studies, you will be notified of your options and may be transferred to the new course.

SERVICES AND STUDY SUPPORT

We offer student services and study support to ensure you can achieve your goals. Learn about TAFE NSW [Student Services](#)

As a TAFE NSW student in this course, you will have access to:

- LinkedIn Learning (formerly Lynda.com)

- Smarthinking - after hours online study support service
- Easy computing online short courses
- Access to local TAFE libraries
- Accessibility and Disability Support Services
- Access to Read&Write learning support software at TAFE and at home

ATTENDANCE

This course is currently scheduled on Wednesday from 5.30pm to 7.30pm for theory and Thursday from 5.30pm to 9.00pm for practical training. This timetable may change and will be confirmed by your teacher.

FEE DETAILS

SUBSIDISED PRICES

FIRST QUALIFICATION *
\$3,280.00

SUBSEQUENT QUALIFICATION
\$3,820.00

APPRENTICESHIP **
\$2,000.00

CONCESSION
\$240.00

NON-SUBSIDISED PRICE

FULL FEE
\$18,310.00

*If you are 35 years old or over and are looking for work you may be eligible for the mature age workers **Fee-Free** scholarship which will be verified at enrolment.

You may be eligible for the NSW Smart & Skilled **Fee-Free Apprenticeship which will be verified at enrolment

WHAT DO THESE PRICES MEAN?

First Qualification Fee

Applies to a student who does not already hold a post-school qualification from any tertiary sector (TAFE, private provider or University), and includes any vocational (certificates, Diplomas, Advanced Diplomas) and higher education (degree) qualifications achieved in Australia or overseas previously.

Subsequent Qualification Fee

Applies to a student who already holds one or more post-school qualifications from any tertiary sector (TAFE, private provider or University), and includes any vocational (certificates, Diplomas, Advanced Diplomas) and higher education (degree) qualifications achieved in Australia or overseas previously.

Apprenticeship Fee

Eligible apprentices are exempt from fees when undertaking an apprenticeship under the NSW Government's Fee Free Apprenticeship. For apprentices who are not eligible, apprenticeship qualification fees are capped at \$2,000.

For more information visit the [Fee Free Apprenticeships](#) page.

Traineeship Fee

Applies to a student undertaking a traineeship qualification under a traineeship pathway, with fees are capped at \$1,000.

For more information visit the [Apprenticeships and Traineeships](#) page.

Concession Fees

Applies to eligible disadvantaged students who receive a specified Commonwealth Government welfare benefit or allowance. Concession fees are discounted, with flat fees applied across a qualification level.

For more information on concessions and exemptions, visit the [Smart and Skilled Fee Exemption and Concessions](#) page

on the *Smart and Skilled* website.

For more information on Smart and Skilled funding, visit the [Smart and Skilled](#) page.

SMART AND SKILLED FEES

This course is government-subsidised, meaning you pay a portion of the full course fee to TAFE NSW and the NSW Government will pay the balance. However, you must meet certain eligibility criteria for this to apply.

Depending on your previous qualifications and experience, your fee may be less than the maximum fee quoted. Your actual fee and eligibility for concession/exemption will be calculated and confirmed during the enrolment process. Payment plans are available through TAFE NSW for Smart and Skilled eligible qualifications.

For further information about eligibility and explanations of the different fee categories, visit [Are You Eligible?](#)

READ BEFORE YOU ENROL

Learn about TAFE NSW [Fees](#)

Learn about TAFE NSW [Payment/Funding](#)

RECOGNITION

Recognition is a process of acknowledging previously completed qualifications, skills, knowledge or experience relevant to your course. This may reduce the amount of learning required, reduce your course fees and allow you to achieve your qualification faster.

Learn about Recognition at TAFE NSW [Recognition](#)

HOW TO ENROL

Before you can start an apprenticeship, you first need to find an employer in the industry you're interested in that will support you through your studies. You and your employer should contact an Apprenticeship Network Provider (ANP) and tell them you're interested in studying at TAFE NSW.

The ANP will help you and your employer to complete a Training Contract. Once you have a Training Contract, we will help you, your employer and the ANP to complete a Training Plan Proposal. Once you have both these documents, the ANP will lodge them with State Training Services, who will provide further advice about next steps.

Find out more: https://www.training.nsw.gov.au/apprenticeships_traineeships/index.html

For further information or assistance, call 131 601.

UNITS

UNIT CODE	UNIT DESCRIPTION
MEM13014A	Apply principles of occupational health and safety in the work environment
MEM15024A	Apply quality procedures
MEM15002A	Apply quality systems
MEM17003A	Assist in the provision of on the job training
MEM16008A	Interact with computing technology
MEM16006A	Organise and communicate information
MSAENV272B	Participate in environmentally sustainable work practices
MEM12024A	Perform computations
MEM12023A	Perform engineering measurements
MEM14005A	Plan a complete activity
MEM14004A	Plan to undertake a routine task
MEM16007A	Work with others in a manufacturing, engineering or related environment
MEM05010C	Apply fabrication, forming and shaping techniques
MEM30012A	Apply mathematical techniques in a manufacturing engineering or related environment
MEM05052A	Apply safe welding practices
MEM05026C	Apply welding principles
MEM05011D	Assemble fabricated components
MEM05005B	Carry out mechanical cutting
MEM09009C	Create 2D drawings using computer aided design system
MEM09010C	Create 3D models using computer aided design system

MEM09002B	Interpret technical drawing
MEM12007D	Mark off/out structural fabrications and shapes
MEM05008C	Perform advanced manual thermal cutting, gouging and shaping
MEM05048B	Perform advanced welding using flux core arc welding process
MEM05018C	Perform advanced welding using gas metal arc welding process
MEM05020C	Perform advanced welding using gas tungsten arc welding process
MEM05016C	Perform advanced welding using manual metal arc welding process
MEM05009C	Perform automated thermal cutting
MEM24003B	Perform basic magnetic particle testing
MEM24001B	Perform basic penetrant testing
MEM05037C	Perform geometric development
MEM05007C	Perform manual heating and thermal cutting
MEM05045B	Perform pipe welds to code standards using manual metal arc welding process
MEM05050B	Perform routine gas metal arc welding
MEM05049B	Perform routine gas tungsten arc welding
MEM05012C	Perform routine manual metal arc welding
MEM03003B	Perform sheet and plate assembly
MEM05042B	Perform welds to code standards using flux core arc welding process
MEM05043B	Perform welds to code standards using gas metal arc welding process
MEM05044B	Perform welds to code standards using gas tungsten arc welding process
MEM05046B	Perform welds to code standards using manual metal arc welding process
MEM05051A	Select welding processes
MEM11011B	Undertake manual handling

MEM18001C	Use hand tools
MEM18002B	Use power tools/hand held operations
MEM05047B	Weld using flux core arc welding process
MEM05017D	Weld using gas metal arc welding process
MEM05019D	Weld using gas tungsten arc welding process
MEM05015D	Weld using manual metal arc welding process

CAREER OPPORTUNITIES

Higher engineering tradesperson or advanced engineering tradesperson at level C7 under the Metal, Engineering and Associated Industries Award.

NEXT STEPS

Need more information? Call our customer support team on 131 601 or [submit an enquiry](#)