

MECHANICAL ENGINEERING TRADESPERSON

ALSO KNOWN AS:

MECHANICAL FITTER

MECHANICAL MAINTENANCE FITTER

MAINTENANCE FITTER

FITTER AND TURNER

MACHINIST

MAINTENANCE MECHANIC

HARNESS YOUR TECHNICAL EXPERTISE AND HANDS-ON SKILLS.

Harness your technical expertise and hands-on skills to fabricate, assemble, and maintain the machinery that powers modern production, directly contributing to the creation of products that shape our world. Masterfully shape raw materials into usable components for machinery across dozens of different industries – this is the definitive career for those who want to sit back, point and say, “I made that.”

KEY SKILLS

Skills which may benefit anyone considering a job as a mechanical engineering tradesperson include:

- ☑ Machinery operation
- ☑ Problem solving
- ☑ Technical drawing and interpretation
- ☑ Measurement and mathematics
- ☑ Technical documentation comprehension
- ☑ Tool operation skills

VALUES & ATTRIBUTES

Values and attributes of anyone considering a job as a mechanical engineering tradesperson include:

- ☑ Attention to detail
- ☑ Physical stamina
- ☑ Innovative
- ☑ Precision
- ☑ Communication
- ☑ Investigative – “Thinker”

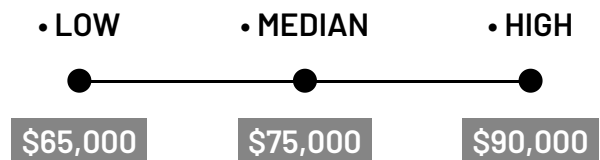
CAREER PROGRESSION

In this role, you may have the opportunity to progress to other positions. Career progression opportunities include:

- Mechanical Engineering Supervisor
- Senior Composites Technician
- Team Leader
- Mechanical Engineer

SALARY EXPECTATION

The expected salary for a Mechanical Engineering Tradesperson can vary across different areas of manufacturing and may vary as you become more experienced.



RELATED INDUSTRIES

- ▶ Aerospace and Defence
- ▶ Transport Equipment and Machinery

RECOMMENDED SCHOOL SUBJECTS

- Engineering
- Industrial Graphics Skills
- Industrial Technology Skills

CORE SCHOOL SUBJECTS

- General Mathematics
- Essential English
- Engineering Skills

JOB OVERVIEW

Mechanical Engineering Tradespersons skillfully convert engineering designs into tangible, functional components and machinery. Working primarily in workshop environments, you'll operate a range of sophisticated equipment including lathes, mills, and grinders to craft metal parts with exacting precision. Your role extends beyond fabrication to include assembly, installation, and maintenance of complex mechanical systems.

In this position, you'll be at the intersection of design and production, interpreting technical blueprints and translating them into reality. Your keen eye for detail and steady hand will be crucial in ensuring that every component meets stringent specifications. The success of machinery across multiple industries hinges on your ability to manufacture parts that function flawlessly within larger systems, making your work both challenging and immensely rewarding.

As a Mechanical Engineering Tradesperson, you would operate a variety of sophisticated machinery and produce a wide range of products. Here are some examples:

- Lathes: Both manual and CNC (Computer Numerical Control) lathes for turning operations.
- Milling machines: Vertical and horizontal mills for cutting and shaping metal.
- Grinding machines: Surface grinders and cylindrical grinders for precision finishing.
- Drill presses: For creating precise holes in metal components.
- CNC machining centers: Multi-axis machines capable of performing various operations.
- EDM (Electrical Discharge Machines): For creating complex shapes in hard metals.
- 3D printers: For prototyping and producing complex geometries.

As a Mechanical Engineering Tradesperson, you'll produce a wide array of products vital to multiple industries. Your work will range from crafting precision automotive and aerospace components like engine parts and turbine blades, to manufacturing industrial machinery elements such as gears and hydraulic cylinders. You'll create medical instruments and implants, parts for consumer appliances and power tools, and components for the energy sector including valves and turbine parts. Your expertise will also be crucial in producing elements for robotics and automation, as well as moulds and dies for various manufacturing processes. Your versatility will be evident as you work on both miniature, high-precision components and large-scale industrial parts, showcasing the essential role you'll play in modern manufacturing across diverse sectors.

WHAT WILL YOU DO?

Your role may include duties as follows:

1. Operating lathes, mills, and other machinery to cut, shape, and finish metal parts following detailed technical specifications.
2. Assembling and installing machinery and mechanical systems.
3. Diagnosing issues, replacing worn parts, and performing routine adjustments to keep systems running smoothly.
4. Following design specifications to create but also understand intended function
5. Measuring the final accuracy of machinery output – whether the component or the machine as a whole does what is intended

HOW TO BECOME A MECHANICAL ENGINEERING TRADESPERSON

To become a mechanical engineering tradesperson, you often need a combination of on-the-job and formal training. You can become a mechanical tradesperson through an apprenticeship. Here are some steps to get you started:

1. You may find it useful to undertake a Certificate II in Engineering Pathways (MEM20422) while you are at school or before commencing an apprenticeship. This course will give you a good introduction to manufacturing concepts and equipment used.
2. Research potential employers in your area via a search engine, social media or job site. Even if there are no jobs advertised with the employer you're interested in, it can be a good idea to send a cover letter with your resume expressing your interest.

VOCATIONAL EDUCATION & TRAINING

An apprenticeship with a manufacturer is the best pathway to gain employment as a Mechanical Tradesperson. You can undertake the following qualifications as apprenticeships:

- Certificate III in Engineering – Mechanical Trade (MEM30219)
- Certificate III in Engineering – Mechanical Trade (Machining)(MEM30219)
- Certificate III in Engineering – Mechanical Trade (Fitting)(MEM30219)
- Certificate III in Engineering – Mechanical Trade (Fitting/machining)(MEM30219)

As an apprentice you will combine work with formal training, allowing you to gain practical skills and knowledge in a specific trade while earning a salary.

Duration: Apprenticeships typically last up to 4 years for full-time participants. Part-time apprenticeships may take longer, depending on the individual's work schedule and training progress.

Work and study combination: As an apprentice you will work either full-time or part-time while receiving formal training from a Registered Training Organisation (RTO). School-based apprenticeships may be available.

Eligibility: Generally, apprenticeships do not require any formal qualifications to enter, making them accessible to a wide range of individuals, including if you are a school leaver or someone looking to change careers. There are minimum age requirements and there may be other eligibility criteria.

Completion: On completion you will receive a nationally recognised trade qualification, showcasing your skill and experience.

Skills, qualifications, accreditations and licences

You may choose to pursue other training or certifications, licences and tickets. Qualifications and skills may be required to progress to supervisor or team leader positions.

Specialist vocational education and training qualifications that may help you progress in this role include:

- Certificate IV in Engineering (MEM40119)

UNIVERSITY & HIGHER EDUCATION

Holding a degree in manufacturing, human resources, finance, economics, marketing or management can be helpful if you are considering taking a step into leadership or a business ownership position.

Specialist higher education qualifications that may help you progress in this role include:

- Bachelor of Engineering