Mechanical Engineering offers diverse career options in areas including the aeronautics and automotive industries, acoustics, biomechanics, manufacturing, minerals and energy technology, robotics, and construction.

**Mechanical Engineering at Melbourne**

The Melbourne School of Engineering is the leading provider of engineering and IT education in Australia*, and ranked No.1 in Australia for Mechanical, Aeronautical and Manufacturing Engineering.

Whether you are interested in a professional qualification, a career change, expanding your technical skills or pursuing a new interest, the Melbourne School of Engineering has a range of world class programs to meet your needs.

Our professional Master of Engineering is the first graduate program in Australia to offer accreditation from Engineers Australia and EUR-ACE®, enabling graduates to practice as engineers in Australia, Europe, the US, Japan, Singapore, and more.

*No. 1 in Australia; No.18 in the world. QS World University Rankings by Faculty 2015-16.

# QS World University Rankings by Subject 2016.

Mechanical engineering programs that we offer include:

- Master of Engineering (Mechanical)
- Master of Engineering (Mechanical with Business)
- Master of Philosophy (Engineering)
- Doctor of Philosophy (Engineering)
Engineering professionals are in demand, not only in Australia, but across the globe. With a rapidly growing population, the need for engineers will become more critical than ever to ensure our cities have adequate transport, power, water, telecommunications and healthcare.

Students are advised to begin building their employability skills whilst at university, to give themselves the best start to their careers. Visit the University Careers Service to find out more: careers.unimelb.edu.au

For more information about the job outlook for this sector, please visit the Australian Government’s Employment Projections and Job Outlook website: joboutlook.gov.au

For information about salaries see: graduateopportunities.com

Specialisations

As a mechanical engineer, you could specialise as an:

- **Aeronautical Engineer** Perform and supervise the design, development, manufacture and maintenance work of all types of flight vehicles. This may include military and civilian aeroplanes, helicopters, missiles, launch vehicles, spacecraft, satellites and control and guidance systems.

- **Automotive Engineer** Design, manufacture and operate ground-based vehicles, such as motorcycles, automobiles, buses and trucks and their respective engineering subsystems.

- **Building Services Engineer** Design and develop the inner workings of buildings to provide a safe and functional work environment.

- **Construction Engineer** Plan and manage the construction of structures such as highways, bridges, airports, railroads, buildings, dams, and reservoirs.

- **Consultant Engineer** Undertake independent contract work for clients in a particular field. Consulting Engineers generally work on a project-by-project basis for a variety of clients.

- **Engineering Project Manager** Plan, administer and review engineering and technical projects.

- **Management Consultant** Study the procedures and systems used in an organisation to assess how individuals and the organisation as a whole can best operate.

- **Manufacturing Systems Engineer** Design and improve systems and equipment that complete tasks accurately and change raw materials into products with minimal wastage of time, materials and energy.

- **Mechanical Design Engineer** Design new machines, equipment or systems taking into account cost, availability of materials, strength and maintenance requirements.

- **Mining Engineer** Plan and direct the engineering aspects of extracting mineral resources from the earth.

**Job Outlook**

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### Sectors & Employers

**MECHANICAL ENGINEERING SECTORS & INDUSTRIES**
- Acoustics
- Aeronautics
- Automotive
- Biomechanics and Biomedical
- Construction
- Manufacturing
- Minerals and Energy
- Power Generation
- Robotics
- Transport

**EXAMPLES OF EMPLOYERS**
- BAE Systems
- Boeing Aerostructures Australia
- BP Australia
- DSTO
- ExxonMobil
- Fluor
- Origin Energy
- OZ Minerals
- Shell
- Toyota
- SKM

### Career Progression

<table>
<thead>
<tr>
<th>GRADUATE</th>
<th>3-5 YEARS EXPERIENCE</th>
<th>10 YEARS</th>
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<tbody>
<tr>
<td>Graduate Mechanical Engineer</td>
<td>Aeronautical Engineer</td>
<td>Lead Mechanical Engineer</td>
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<tr>
<td>Graduate Mechanical Design Engineer</td>
<td>CAD Product Design Engineer</td>
<td>Principal Mechanical Engineer</td>
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<tr>
<td>Graduate Mechanical Process Engineer</td>
<td>Marine Engineer</td>
<td>Senior Mechanical Engineer</td>
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<tr>
<td>Manufacturing Systems Engineer</td>
<td>Mechanical Engineer</td>
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<td></td>
<td>Mechanical Engineer – Building Services</td>
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<td>Mechanical Engineer – Materials Handling</td>
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<td>Mechanical Engineer – Mining</td>
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<td>Mechanical Engineer – Oil &amp; Gas/Pipelines</td>
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<td>Mechanical Engineer – Plant Performance</td>
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<td>Mechanical Engineer – Power Station</td>
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<td>Mechanical Engineer – Solar Industry</td>
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<td>Mechanical Engineer – Underground</td>
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<td>Mechanical Engineer – Water Treatment Projects</td>
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<td></td>
<td>Mechanical Design Engineer</td>
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<td>Mechanical Design Engineer – Automotive</td>
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<td>Mechanical Design Engineer – Heavy Industry Design</td>
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<td></td>
<td>Mechanical Design Engineer – Underground Drilling</td>
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<td>Mechanical Equipment Engineer</td>
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<td>Mechanical Maintenance Engineer</td>
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<td>Mechanical Process Engineer – Design &amp; Documentation</td>
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<td>Mechanical Project Engineer – Oil &amp; Gas</td>
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<td>Mechanical Systems Engineer</td>
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<td>Piping Engineer</td>
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<td>Reliability Engineer – Mechanical</td>
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<td>Tool Engineer</td>
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<td></td>
<td>Underground Mechanical Construction Engineer</td>
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</table>
Alternative Careers

An engineering degree at the University of Melbourne gives you a solid technical and design foundation combined with strong analytical, problem solving and communication skills valued across a range of industries. Other areas our graduates have moved into include:

- Management consulting
- Finance, economics and banking
- Business analysis
- Project management
- Technical sales, marketing and communications
- Intellectual property management
- Technical writing
- Teaching
- Government and policy

Careers in Research

If you are passionate about a certain field of mechanical engineering and would like to advance your research skills, enrolling in a graduate research degree could be a great option for you. Graduate research enhances your ability to problem solve, think autonomously and creatively, and analyse. Careers in research are diverse and may include:

- academic positions at universities;
- policy-making or research positions at public sector organisations;
- private sector research and development projects;
- self-employed consulting positions on technical or policy issues in your area of expertise.

Careers Services and Industry Links

Students undertaking our programs have access to a range of careers services, and benefit from a curriculum that offers excellent opportunities to connect with industry through:

- an elective internship subject
- student projects partnered with industry
- guest lectures led by industry leaders and experts
- site visits hosted by key organisations
- industry networking events
- career panels featuring industry representatives
- career question drop-in service
- an online jobs and internships portal