

Engineering & Technology

Creative
thinkers
made here.

2024 Course Guide

- Aeronautical
- Aviation
- Chemical
- Civil
- Civil & Environmental
- Computer Systems
- Electrical Power
- Electrical & Renewable Energy
- Electronics & Communications
- Electronics & Computer Systems
- Engineering Science
- Instrumentation Control & Automation
- Maritime
- Mechanical
- Mechatronics
- Motorsports
- Petroleum

Contents

Engineering at ECU	3
10 reasons to choose Engineering at ECU	4
What kind of Engineer will you be?	5
Pathways to Engineering	6
Scholarships	6
Chemical Engineering	7
Civil Engineering	8
Civil and Environmental Engineering	9
Computer Systems Engineering	10
Electrical Power Engineering	11
Electrical and Renewable Energy Engineering	12
Electronics and Communications Engineering	13
Instrumentation Control and Automation Engineering	14
Maritime Engineering	16
Mechanical Engineering	17
Mechatronics Engineering	18
Petroleum Engineering	19
Engineering Science	20
Engineering Technology	21
Motorsports	22
Aviation	23
Aeronautical	24
Double Degrees	25
Postgraduate Degrees	26
Life as a student	28
What pathway can you take into ECU?	30
How to apply	31



Creative thinkers
made here.



ECU is committed to reconciliation and supports a Voice to Parliament being enshrined in the Australian Constitution. We recognise and respect the significance of Aboriginal and Torres Strait Islander peoples' communities, cultures and histories. We also acknowledge and respect the Noongar people as the traditional custodians of the land on which our campuses are located.

→ ecu.edu.au/about-ecu/indigenous-matters



Ranked in the world's top 100 universities under 50 years old.



The top public university in Australia for undergraduate teaching quality for seven years in a row.

Engineering
at ECU

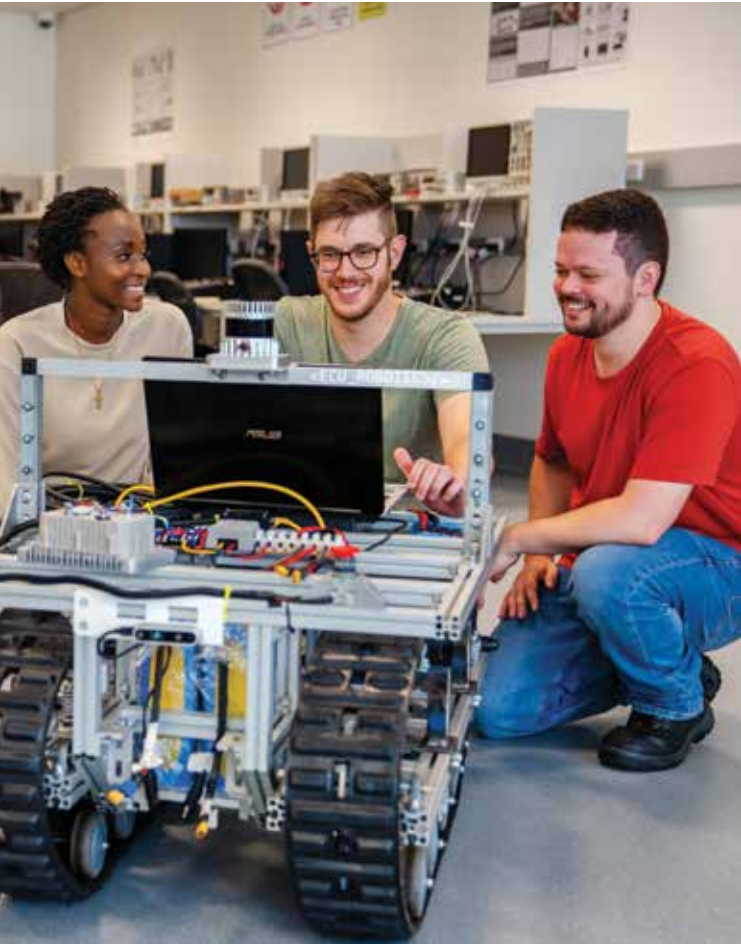
ECU has been ranked in the top 175 universities in the world for Engineering by the Times Higher Education World University Rankings for 2023.

As an ECU engineering student, you'll study in some of the best-equipped, industry-grade engineering labs in Australia, with the opportunity to work on real-world projects and develop strong contacts through industry engagements, events and internships.

With an ECU engineering degree, you'll graduate as a world-ready engineer, able to work globally and capable of meeting the challenges of the future.



ECU ranked 151-175 for Engineering (Times Higher Education 2023)



Executive Dean's
Message

Engineering is a great profession for creative thinkers who have an analytical mind, and have the desire to apply science and technology to develop solutions, systems and infrastructure to serve the changing needs of the global community. Engineers are highly sought after globally for their unique problem-solving skills and they enjoy a professional career that is highly rewarding.

The School of Engineering at ECU is recognised internationally for its excellent quality of education and research, along with our highly supportive and committed academics, and outstanding infrastructure and facilities that are second to none. My colleagues embrace and promote the concept of peace engineering, and deliver our teaching and research programs within the paradigms of environmental and community sustainability. We teach the next generation of engineers to reflect on environmental considerations in their design and development practices, and endeavour to harmonise the natural and built environments such that we can sustain and improve our world for all creatures and for future generations.

Our responsible and ethical approach to community and environmental sustainability, together with a student-centred culture and a strong focus on industry engagement and professional practice, has made the School of Engineering at ECU one of the fastest growing and most successful engineering schools in Australia.

If you wish to study engineering in an environment that promotes learning excellence, where you are not just a number and everyone is treated like a VIP, a place where diversity is celebrated and inclusion is the norm, and where integrity, respect and harmony are at the core of our culture, then you should consider joining my School.

Join us, be part of our learning journey, and acquire the professional knowledge and ethics to help make the world more sustainable and serve humanity.

Professor Daryoush Habibi
Pro Vice-Chancellor and Executive Dean
School of Engineering

10 reasons to choose Engineering at ECU

1. Global rankings

ECU is ranked in the world's top 175 universities for Engineering (Times Higher Education 2023).

2. World-class facilities

Get practical experience in some of the most advanced engineering labs in Australia. Our labs are equipped with the latest technology, such as cutting-edge 3D printers, building-scale structural testing equipment, automated manufacturing, environmental remediation technologies, smart energy systems, and much more.

3. Top in WA for engineering

ECU has been ranked the top university in Western Australia for undergraduate Engineering education, across all six indicators (QILT SES results 2021).

4. Industry connections

Our courses are developed in close consultation with industry and, in addition to a 12-week formal work placement, you will have many opportunities to engage with industry-based projects throughout your studies.

5. Professionally accredited

All of our Bachelor of Engineering (Honours) and Master of Engineering courses are accredited by Engineers Australia.

6. Global recognition

You can work wherever you choose because our accredited courses are globally recognised under the Washington Accord.

7. Choice

Choose from over 20 Engineering and Technology courses across a wide range of traditional and emerging discipline areas.

8. Engineering student clubs

Expand your horizons by joining dynamic student clubs like the Climate Change Combat Engineering Society, Women in Engineering, Edith Cowan Aviators, ECU Robotics, Engineers Without Borders, Edith Cowan University Racing, and more.

9. Scholarships

You could secure a \$20,000 scholarship if you excel in Year 12.

10. Range of admission pathways

Our Technology courses provide a pathway to study in the field of engineering if you don't meet the prerequisites, or wish to graduate as an Engineering Technologist instead of a Professional Engineer.

Did You Know?

When you study Engineering at ECU, you can...

Start with a taste of everything

All of our engineering honours courses have a common set of eight units in the first year. This allows you to develop a better understanding of the engineering disciplines we offer. It also gives you the flexibility to switch to another engineering course, if desired, after your first year.

Start like a professional

One of the most valuable things our engineering students learn from the beginning of their course is applied experience in purpose-built labs. Many of our labs have been built in collaboration with industry and they're world-class. This means you'll be ready for the real thing when you graduate.



What kind of Engineer will you be?



Chemical Engineer

Production of pharmaceuticals, polymers and other chemicals; oil and gas refining; mineral processing; food and wine production; industrial process design; environmental protection.



Civil Engineer

Design and construction of roads, buildings and bridges; design of water supply and water management systems; development of harbours and railways.



Computer Systems Engineer

Design of computer and digital systems; embedded systems development; hardware/software integration; robotic and intelligent system implementation.



Electrical Engineer

Design, development and maintenance of systems for power generation and distribution; renewable energy systems planning; design and commissioning of electrical plant for mining or industry.



Instrumentation Control and Automation Engineer

Automation of mining and mineral processing operations; development of automated manufacturing systems; process control for industrial production facilities.



Maritime Engineer

Design and commissioning of oil and gas rigs, ports and harbours; marine system design and operation; marine surveying and coastal engineering; naval architecture; offshore renewable energy infrastructure development.



Mechanical Engineer

Design, optimisation and maintenance of mechanical systems; automotive and manufacturing engineering; development of systems for materials handling and mineral processing; air handling and conditioning system design.



Mechatronics Engineer

Automation of industrial systems; design and development of robotic and smart mechanical systems; advanced and intelligent manufacturing; industrial process control.



Motorsports Engineer

Design and development of high-performance vehicles; automotive and manufacturing engineering; engine and vehicle system optimisation; motorsports team management.



Petroleum Engineer

Exploration, evaluation and drilling of oil and gas reservoirs; production, delivery and downstream processing of hydrocarbons.

ECU City

Our new campus in the heart of the Perth CBD will represent the future of university education – urban, connected, integrated with business and community – and part of the lifeblood of a thriving city.

ECU City will seamlessly bring together Creative Industries, Business and Technology to deliver a world-class university campus that reimagines education and transforms the city of Perth.

ECU City will open to students from 2026.

➔ To follow the journey, visit citycampus.ecu.edu.au



Pathways to Engineering

At ECU, we welcome anyone with the capability and aspiration to study engineering. If you don't meet the entrance requirements for the Bachelor of Engineering Honours, you may be able to enrol in one of our Bachelor of Technology courses. If you successfully complete your first year of studies, you can then apply for a transfer to a Bachelor of Engineering Honours course. You'll also be granted advanced standing (credit) for applicable units you've already completed.

➔ For entry requirements — ecu.edu.au/engineering

ATAR 80+ or equivalent

- Mathematics: Methods ATAR (required)
- Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR (required)

ATAR below 80

Experience-based entry

University preparation entry

Scholarships

Secure a \$20,000 scholarship to study Engineering at ECU. If you're a high-performing Year 12 student studying the minimum prerequisites (Maths Methods, and, Physics or Engineering Studies or Chemistry or Maths Specialist), and you're on target to achieve an ATAR of 94 or above, this scholarship will support your studies in a Bachelor of Engineering (Honours) or Bachelor of Engineering Science course at ECU. If you're successful, you'll receive \$20,000, paid as \$5,000 per year over four years, or pro rata, once you become an enrolled student at ECU.

To find out more and for full terms and conditions, visit ecu.edu.au/scholarships/engineering-excellence

➔ To find out more and for full terms and conditions — ecu.edu.au/scholarships/engineering-excellence

Bachelor of Engineering Honours

4 YEARS

Bachelor of Technology

1 YEAR

+

Bachelor of Engineering Honours

3-3.5 YEARS



Bachelor of Engineering (Chemical) Honours

Indicative ATAR: 80

Duration:	4 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

The chemical engineering discipline is principally concerned with the application of knowledge of how materials and chemicals interact or can be converted in some way to a more useful form, as part of a processing, production or refining process.

The program focuses on the development of knowledge and skills relevant to professional engineering practice and, along with a sound theoretical base, includes strong elements of practical problem solving, teamwork and project development. As a result, graduates will gain strong analytical skills, and have the ability to lead complex projects as well as having multiple technical and transferable competencies.

The course provides a sound basis in mechanics, mathematics, and the principles of engineering design in the first two years of study, along with core areas of engineering science, including chemistry and materials science, fluid mechanics, process systems and thermodynamics. In the final two years of study, a range of more specialist chemical engineering topics are covered, including process design, operations and control, to prepare students to enter their chosen profession with relevant knowledge and skills.

Admission Requirements

All applicants are required to have Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR, with equivalents considered.

It is desirable that all applicants have Chemistry ATAR and either Physics ATAR or Engineering Studies ATAR, with equivalents considered. Students without Chemistry ATAR or Physics ATAR or Engineering Studies ATAR may need to take bridging unit(s) in the first year of their studies.

Applications for this course are not accepted through ECU's Experience Based Entry Scheme.

Work Experience

Students are required to undertake a minimum of 12 weeks of practical work experience in an engineering industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Professional Recognition

Engineers Australia has accredited this course.

Employment Opportunities

Chemical engineers work in a wide range of domains, from mineral processing, mining, and oil and gas, through to industries associated with clothing, food, packaging, fertilisers, pharmaceuticals and many other manufacturing and biological processes.

In Western Australia, many chemical engineers find career opportunities in the extensive mining, mineral processing, and oil and gas industries, which dominate the industrial profile of the state. Chemical engineers play a central role in both the production, refining and downstream processing in these important resource-based industries.

Careers

Chemical Engineer, Process Engineer, Design Engineer, Plant Engineer, Petrochemical Engineer

➔ See more course information — ecu.edu.au/courses/Y50



“I completed a 12-week paid work placement at Woodside, in Perth’s CBD, and loved it.”

Megan Clayton
ECU Chemical Engineering student



Bachelor of Engineering (Civil) Honours

Indicative ATAR: 80					
Duration:	4 years full-time or part-time equivalent				
Availability:	JO	ML	SW	OL	
Full-time	■				
Part-time	■				

Civil engineering is the branch of engineering that deals with the design, construction and maintenance of the human-made environment, including buildings, roads, bridges, tunnels, dams, and other large physical structures. The course is designed to equip graduates with industry-relevant skills across a full range of core civil engineering subject areas, including surveying, soil mechanics, engineering geology, structural analysis and design, hydrology, and transportation engineering, as well as construction technology and site management.

The program focuses on the development of knowledge and skills relevant to professional engineering practice and, along with a sound theoretical base, it includes strong elements of practical problem solving, teamwork and project development. As well as having multiple technical and transferable competencies, graduates will gain strong analytical skills and the ability to lead complex projects.

The course provides a sound basis in mechanics, mathematics, and the principles of engineering design in the first two years of study, along with core areas of engineering science, including materials and manufacturing, engineering drawing and computer-aided design, foundational electrical engineering, and thermodynamics and fluid mechanics. In the final two years of study, a range of more specialist civil engineering topics are covered to prepare students to enter their chosen profession with relevant knowledge and skills.

Admission Requirements
All applicants are required to have Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR, with equivalents considered.

It is desirable that all applicants have Physics ATAR or Engineering Studies ATAR, with equivalents considered. Students without Physics ATAR or Engineering Studies ATAR may need to take a bridging unit in the first year of their studies.

Applications for this course are not accepted through ECU's Experience Based Entry Scheme.

Work Experience
Students are required to undertake a minimum of 12 weeks of practical work experience in an engineering industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Professional Recognition
Engineers Australia has accredited this course.

Employment Opportunities
Graduates will have competencies in all major areas of civil engineering, and be able to participate in, and lead, complex, multidisciplinary projects. Civil engineers have strong employment opportunities in many sectors of industry, including road and transport, construction, mining and resources, public utilities, defence, and consulting.

Careers
Civil Engineer, Structural Engineer, Transportation Engineer, Geotechnical Engineer, Water Resource Engineer

→ [See more course information — ecu.edu.au/courses/Y13](https://ecu.edu.au/courses/Y13)

Bachelor of Engineering (Civil and Environmental) Honours

Indicative ATAR: 80				
Duration:	4 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

This course includes a range of studies in civil engineering with a secondary focus towards the management of environmental concerns that confront an engineer working in civil engineering. Many engineering projects, especially those that may impact on the quality of land, water and air, require detailed environmental analysis to identify and mitigate any chances that the project will adversely affect the environment. It is essential to consider both the short- and long-term sustainability of such projects and their environmental consequences.

The program focuses on the development of knowledge and skills relevant to professional engineering practice and, along with a sound theoretical base, includes strong elements of practical problem solving, teamwork and project development, resulting in strong analytical skills and the ability to lead complex projects.

Areas of study within the course include a foundation in physical and engineering sciences along with computer-aided design, engineering materials, surveying, and other core civil engineering topics. This is followed by more specialist civil and environmental engineering content areas, including structural analysis and design, hydrology and hydraulics, construction technology and site management, and project management. The course also includes advanced studies in environmental risk assessment and management, water and wastewater treatment, water distribution systems and wastewater collection systems, waste disposal and management, air-borne pollution control, and the principles that ensure long-term sustainable engineering design solutions.

Admission Requirements
All applicants are required to have Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR, with equivalents considered.

It is desirable that all applicants have Physics ATAR or Engineering Studies ATAR, with equivalents considered. Students without Physics ATAR or Engineering Studies ATAR may need to take a bridging unit in the first year of their studies.

Applications for this course are not accepted through ECU's Experience Based Entry Scheme.

Work Experience
Students are required to undertake a minimum of 12 weeks of practical work experience in an engineering industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Professional Recognition
Engineers Australia has accredited this course.

Employment Opportunities
Graduates will have competencies in both civil and environmental engineering, and be able to participate in, and lead, complex, multidisciplinary projects. Civil and environmental engineers have strong employment opportunities in many sectors of industry, including infrastructure development projects (roads and transportation, urban development), public utilities (water supply, waste disposal), mining (planning and operations), and consulting (project management).

Careers
Civil Engineer, Environmental Engineer, Water Resource Engineer

→ [See more course information — ecu.edu.au/courses/Y28](https://ecu.edu.au/courses/Y28)



“I am now a proud business owner and attribute much of its successful start up and running to the skills I learnt at ECU.”

Breanna Cameron
ECU Civil and Environmental Engineering graduate and Director/Co-Founder of JUDDRILL

Bachelor of Engineering (Computer Systems) Honours

Indicative ATAR: 80				
Duration:	4 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

Computer systems engineering requires in-depth knowledge of digital and analogue electronic systems along with a detailed understanding of computer architecture, software design and hardware-software interfacing. Graduates of this course will be conversant with all aspects of computing, from the development and application of individual microprocessors to the design of personal, mainframe or supercomputer systems, as well as real-time and embedded systems implementation, robotics, and software engineering.

The program focuses on the development of knowledge and skills relevant to professional engineering practice and, along with a sound theoretical base, includes strong elements of practical problem solving, teamwork and project development. As a result, as well as having multiple technical and transferable competencies, graduates will gain strong analytical skills, and have the ability to lead complex projects.

The course provides a sound basis in mathematics and in the fundamentals of electronics and engineering design principles in the first two years of study, along with relevant computer technology and programming principles. In the final two years of study, advanced topics from both the electronics and computer systems engineering fields are covered, including software engineering, data networks and communication systems, digital signal processing, real-time embedded systems, industrial control, and robotics to prepare students to enter their chosen profession with relevant knowledge and skills.

Admission Requirements
All applicants are required to have Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR, with equivalents considered.

It is desirable that all applicants have Physics ATAR or Engineering Studies ATAR, with equivalents considered. Students without Physics ATAR or Engineering Studies ATAR may need to take a bridging unit in the first year of their studies.

Applications for this course are not accepted through ECU's Experience Based Entry Scheme.

Work Experience
Students are required to undertake a minimum of 12 weeks of practical work experience in an engineering industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Professional Recognition
Engineers Australia has accredited this course.

Employment Opportunities
Employment opportunities include the development and design of microcomputer systems, computer networks, complex real-time systems, high-performance processors, multimedia systems, and control and automation.

Careers
Computer Systems Engineer, Electronics Engineer, Embedded Systems Engineer

➔ [See more course information — ecu.edu.au/courses/Y47](https://ecu.edu.au/courses/Y47)



“After the first year, I realised there were so many opportunities to grow, learn and get involved.”

Helia Moayed
ECU Computer Systems Engineering graduate

Bachelor of Engineering (Electrical Power) Honours

Indicative ATAR: 80				
Duration:	4 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

Electrical power engineering is a well-established engineering discipline encompassing electrical power generation, transmission and distribution. The course provides broad coverage across a range of core electrical and electronics subjects, leading to more in-depth studies of power systems, including generation, transmission and protection, as well as power electronics, electromechanical systems, industrial control, and renewable energy.

The program focuses on the development of knowledge and skills relevant to professional engineering practice and, along with a sound theoretical base, includes strong elements of practical problem solving, teamwork and project development. As a result, as well as having multiple technical and transferable competencies, graduates will gain strong analytical skills, and have the ability to lead complex projects.

The course provides a sound basis in mechanics, dynamics, mathematics, and the principles of engineering design in the first two years of study, along with a broad basis in engineering science, including materials and manufacturing, computer-aided design,

programming principles, and analogue and digital electronics. In the final two years of study, a range of specialist electrical power engineering topics are covered to prepare students to enter their chosen profession with relevant knowledge and skills.

Admission Requirements
All applicants are required to have Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR, with equivalents considered.

It is desirable that all applicants have Physics ATAR or Engineering Studies ATAR, with equivalents considered. Students without Physics ATAR or Engineering Studies ATAR may need to take a bridging unit in the first year of their studies.

Applications for this course are not accepted through ECU's Experience Based Entry Scheme.

Work Experience
Students are required to undertake a minimum of 12 weeks of practical work experience in an engineering industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Professional Recognition
Engineers Australia has accredited this course.

Employment Opportunities
Electrical power engineers have diverse employment opportunities in most sectors of industry, including public utilities, renewable energy, mining and resources, manufacturing, defence, aerospace, chemical and pharmaceutical, and consulting.

Careers
Electrical Engineer, Power Systems Engineer, Electrical Power Engineer

➔ [See more course information — ecu.edu.au/courses/Y49](https://ecu.edu.au/courses/Y49)





Bachelor of Engineering (Electrical and Renewable Energy) Honours

Indicative ATAR: 80				
Duration:	4 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

Electrical and renewable energy engineering is a specialisation within electrical engineering concerning the generation of electrical power from a wide range of sources, and with a special focus on renewable energy sources. This includes solar, wind, hydro, biomass and geothermal, and the integration of these energy sources into hybrid energy supply and distribution networks. The course provides graduates with strong competencies in the fundamental electrical engineering discipline areas, with particular focus on the utilisation, generation, management and design of renewable energy resources.

The program focuses on the development of knowledge and skills relevant to professional engineering practice and, along with a sound theoretical base, includes strong elements of practical problem solving, teamwork and project development. As a result, as well as having multiple technical and transferable competencies, graduates will gain strong analytical skills, and have the ability to lead complex projects.

The course provides a sound basis in mechanics, dynamics, mathematics, and the principles of engineering design in the first two years of study, along with a broad basis in engineering science including materials and manufacturing, computer-aided design, programming

principles, and analogue and digital electronics. In the final two years of study, a range of units are included, covering more in-depth electrical power engineering topics alongside specialist studies on sustainable and renewable energy sources and systems and their integration into a mixed energy environment.

Admission Requirements

All applicants are required to have Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR, with equivalents considered.

It is desirable that all applicants have Physics ATAR or Engineering Studies ATAR, with equivalents considered. Students without Physics ATAR or Engineering Studies ATAR may need to take a bridging unit in the first year of their studies.

Applications for this course are not accepted through ECU's Experience Based Entry Scheme.

Work Experience

Students are required to undertake a minimum of 12 weeks of practical work experience in an engineering industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Professional Recognition

Engineers Australia has provisionally accredited this course.

Employment Opportunities

Electrical and renewable energy engineers have a wide range of employment opportunities across the energy generation, conversion, distribution and management sectors, including power utilities, the mining industry, larger manufacturing businesses as well as the domestic markets, where renewable energy systems are now quite common.

Careers

Electrical Engineer, Power Systems Engineer, Renewable Energy Engineer

➔ [See more course information — ecu.edu.au/courses/W21](https://ecu.edu.au/courses/W21)

Bachelor of Engineering (Electronics and Communications) Honours

Indicative ATAR: 80				
Duration:	4 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

This course combines the fundamental engineering disciplines of electronic and communication systems. It provides graduates with skills in all aspects of analogue and digital circuit design, as well as communication systems and communications networks development. The course concentrates on the engineering principles required to analyse and solve problems related to the design and implementation of electronic and communication systems. Graduates will be conversant in the fundamental engineering sciences, electronic circuits and systems, digital signal processing, radio communications, fibre-optic and microwave communications, computer networking, and cellular and wireless networks.



The program focuses on the development of knowledge and skills relevant to professional engineering practice and, along with a sound theoretical base, includes strong elements of practical problem solving, teamwork and project development. As a result, as well as having multiple technical and transferable competencies, graduates will gain strong analytical skills, and have the ability to lead complex projects.

The course provides a sound basis in mathematics and in the fundamentals of electronics and engineering design principles in the first two years of study, along with relevant computer technology and programming principles. In the final two years of study, advanced topics from the electronics and communication systems engineering fields are covered to prepare students to enter their chosen profession with relevant knowledge and skills.

Admission Requirements

All applicants are required to have Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR, with equivalents considered.

It is desirable that all applicants have Physics ATAR or Engineering Studies ATAR, with equivalents considered. Students without Physics ATAR or Engineering Studies ATAR may need to take a bridging unit in the first year of their studies.

Applications for this course are not accepted through ECU's Experience Based Entry Scheme.

Work Experience

Students are required to undertake a minimum of 12 weeks of practical work experience in an engineering industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Professional Recognition

Engineers Australia has accredited this course.

Employment Opportunities

Employment opportunities exist in most sectors of industry, including communication and telecommunication, product development, fabrication, public utilities, mining and resources, defence, aerospace, and consulting.

Careers

Electronics Engineer, Communications Engineer

➔ [See more course information — ecu.edu.au/courses/Y51](https://ecu.edu.au/courses/Y51)

Bachelor of Engineering (Instrumentation Control and Automation) Honours

Indicative ATAR: 80

Duration:	4 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

Instrumentation control and automation engineering is the integration of electrical, electronic and computing engineering with control engineering. This integrated discipline includes the development of intelligent systems to automate monitoring, processing, and production in different engineering industries. The course is designed to provide graduates with a strong background to enter a range of career pathways related to automation and control application in the mining and mineral processing, oil and gas, and agriculture industries, which are strongly represented in the economy of Western Australia.



“ECU enabled me to develop a resilient set of technical skills that I have carried through my career.”

Sheetal Chooramun
ECU Instrumentation Control and Automation graduate and Superintendent, Rio Tinto

Graduates of the course will be conversant in electrical and electronic engineering; have specialist skills in design, development and management of advanced control and automation systems; and have the ability to participate in, and lead, complex multidisciplinary projects.

The program focuses on the development of knowledge and skills relevant to professional engineering practice along with a sound theoretical base, and includes strong elements of practical problem solving, teamwork and project development. As a result, graduates will have strong analytical skills, in addition to multiple technical and transferable competencies.

The course covers topics in process control algorithms, computer interfacing and communications of industrial controllers, as well as computer automation, including the use of PLCs, SCADA, and PC-based systems to control systems and processes. Topics such as advanced PLC control and SCADA systems, and manufacturing execution systems are introduced in the advanced years of the program, after students have gained proficiency in the theory of modern control and dynamic systems.

Admission Requirements

All applicants are required to have Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR, with equivalents considered.

It is desirable that all applicants have Physics ATAR or Engineering Studies ATAR, with equivalents considered. Students without Physics ATAR or Engineering Studies ATAR may need to take a bridging unit in the first year of their studies.

Applications for this course are not accepted through ECU’s Experience Based Entry Scheme.

Work Experience

Students are required to undertake a minimum of 12 weeks of practical work experience in an engineering industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Professional Recognition

Engineers Australia has accredited this course.

Employment Opportunities

Instrumentation control and automation engineers have diverse employment opportunities in most sectors of industry, including product design and development, manufacturing, mining and resources, agriculture, public utilities, road and transport, defence, aerospace, chemical, pharmaceutical, and consulting.

Careers

Control and Automation Engineer, Process Control Engineer, Instrumentation Engineer

➔ [See more course information — ecu.edu.au/courses/Y46](https://ecu.edu.au/courses/Y46)



Bachelor of Maritime Engineering (Specialisation) Honours

Indicative ATAR: 80				
Duration:	4 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

Secondary Location
The first two years are studied at ECU's Joondalup Campus. The final two years of this course are delivered at the University of Tasmania's Australian Maritime College in Launceston. Students will be required to relocate to Launceston for this portion of the course.

Offered in collaboration with the Australian Maritime College at the University of Tasmania in Launceston, Tasmania, this specialist engineering course will guide you towards a thriving career in the maritime industry.

Through this course, students focus on one of the three maritime industry specialisations:

- Marine and Offshore Engineering
- Naval Architecture
- Ocean Engineering

Marine and Offshore engineers are involved with the design, manufacture, deployment and commissioning of systems associated with the marine and offshore oil and gas industries. Naval architects are professional engineers who design and oversee the construction and repair of marine craft and various offshore structures. Ocean engineers are involved in the design of offshore structures such as oil and gas platforms or subsea pipelines, as well as the wide range of infrastructure associated with the ports and harbour facilities and submersible vehicles required to service them.

Admission Requirements
All applicants are required to have Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR, with equivalents considered.

It is desirable that all applicants have Physics ATAR or Engineering Studies ATAR, with equivalents considered. Students without Physics ATAR or Engineering Studies ATAR may need to take a bridging unit in the first year of their studies.

Applications for this course are not accepted through ECU's Experience Based Entry Scheme.

Work Experience
Students are required to undertake a minimum of 12 weeks of practical work experience in an engineering industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Employment Opportunities
Graduates of this course will have the capability to work in many areas in the maritime industry. Marine and Offshore engineers will be able to work in areas such as engineering alternative marine power systems, or improving crude oil extraction to reduce emissions while maximising yield. Marine and Offshore engineers have strong employment opportunities in many sectors of industry, including oil and gas, ship building, alternative energy, marine survey, defence, industrial process, power generation, and consulting. Graduates can also apply for any suitable position open to mechanical engineers.

Ocean engineers have strong employment opportunities in many sectors of industry, including oil and gas, alternative energy, coastal engineering, underwater vehicles, port and harbour design, defence, and consulting. Graduates can also apply for any suitable position open to structural engineers.

Naval architects are in demand in companies that design and build leisure craft, and sailing and power yachts. Many of the vessels of the Royal Australian Navy deployed in the defence of the nation have been built in Australian yards with considerable Australian design input. These include patrol boats, mine hunters, frigates and submarines. Naval architects also have career opportunities in other sectors of the marine industry, including oil and gas, marine surveying, and consulting.

Careers
Oil and Gas Engineer, Naval Engineer, Process Engineer, Offshore Energy Engineer, Marine Surveyor, Mechanical Engineer, Maritime Engineer, Naval Architect, Submersible Vehicle Engineer, Coastal Engineer

➔ [See more course information — ecu.edu.au/courses/W91](https://ecu.edu.au/courses/W91)



Bachelor of Engineering (Mechanical) Honours

Indicative ATAR: 80				
Duration:	4 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

Mechanical engineering is the branch of engineering that deals with the design, manufacture and maintenance of mechanical components and moving systems. Areas of study within the course include a foundation in physical and engineering sciences, along with materials science, manufacturing, and mechanical design. The course includes a particular focus on project-based and practical learning, and provides numerous opportunities for students to extend practical skills development. Students taking this course also have the option to undertake a specialist stream in motorsports. This option provides a special focus on automotive design and motorsports engineering. Students should consult the course coordinator if they are interested in pursuing this option.



“ECU’s world-class engineering labs and industry experience prepared me for designing a green energy future.”
Harley Olsthoorn
ECU Mechanical Engineering graduate and Lead Project Engineer, Fortescue Future Industries

The program focuses on the development of knowledge and skills relevant to professional engineering practice and, along with a sound theoretical base, includes strong elements of practical problem solving, teamwork and project development. As a result, as well as having multiple technical and transferable competencies, graduates will gain strong analytical skills, and have the ability to lead complex projects.

The course provides a sound basis in mechanics, mathematics, and the principles of engineering design in the first two years of study, along with the development of relevant knowledge in computer-aided design and manufacturing, materials science, statics and dynamics, industrial maintenance, and mechanical design. In the final two years of study, a range of specialist mechanical engineering topics are covered, including electromechanical systems, structural analysis, and advanced mechanical design, providing students with relevant knowledge and skills to enable them to contribute to the workforce as soon as they graduate.

Admission Requirements
All applicants are required to have Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR, with equivalents considered.

It is desirable that all applicants have Physics ATAR or Engineering Studies ATAR, with equivalents considered. Students without Physics ATAR or Engineering Studies ATAR may need to take a bridging unit in the first year of their studies.

Applications for this course are not accepted through ECU's Experience Based Entry Scheme.

Work Experience
Students are required to undertake a minimum of 12 weeks of practical work experience in an engineering industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Professional Recognition
Engineers Australia has accredited this course.

Employment Opportunities
Graduates will have competencies in all major areas of mechanical engineering and be able to participate in, and lead, complex multidisciplinary projects. Mechanical engineers have diverse employment opportunities in most sectors of industry, including product design and development, manufacturing, road and transport, mining and resources, public utilities, agriculture, defence, aerospace, and consulting.

Careers
Mechanical Engineer

➔ [See more course information — ecu.edu.au/courses/Y45](https://ecu.edu.au/courses/Y45)

Bachelor of Engineering (Mechatronics) Honours

Indicative ATAR: 80				
Duration:	4 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

Mechatronics engineering is a multidisciplinary program, where knowledge of mechanical and electrical/electronic engineering is combined towards the development of intelligent machines and advanced manufacturing and processing systems. Whilst developing the strong analytical and problem-solving capabilities typical of any engineering program, this particular program is specifically tailored to Australia’s resource-based and service industries. The course starts with a typical engineering science foundation in mathematics, mechanics, electrical engineering and computing, and then proceeds to cover major engineering topics, including digital electronics and microprocessor systems, advanced materials and manufacturing, and mechanical design.

Mechatronics engineering gives a broader engineering coverage compared with standard mechanical or electrical engineering programs, with the themes of automation, instrumentation, digital electronics, manufacturing, mechanical design, fluid mechanics and control systems.

The program focuses on the development of knowledge and skills relevant to professional engineering practice and, along with a sound theoretical base, includes strong elements of practical problem solving, teamwork and project development. As a result, as well as having multiple technical and transferable competencies, graduates will gain strong analytical skills, and have the ability to lead complex projects.

Areas of study within the course include engineering mechanics, computer-aided design and manufacturing, analogue and digital electronics, signal analysis, electromechanical systems, industrial control, and robotics.

Admission Requirements

All applicants are required to have Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR, with equivalents considered.



“There is no better time to choose mechatronics as a career pathway; it’s at the forefront of engineering innovation and future job creation.”

Ryan Bradley
ECU Mechatronics Engineering student

It is desirable that all applicants have Physics ATAR or Engineering Studies ATAR, with equivalents considered. Students without Physics ATAR or Engineering Studies ATAR may need to take a bridging unit in the first year of their studies.

Applications for this course are not accepted through ECU’s Experience Based Entry Scheme.

Work Experience

Students are required to undertake a minimum of 12 weeks of practical work experience in an engineering industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Professional Recognition

Engineers Australia has accredited this course.

Employment Opportunities

Mechatronics engineers have diverse employment opportunities in most sectors of industry, including product design and development, manufacturing, mining and resources, process control and automation, public utilities, road and transport, defence, aerospace, and consulting.

Careers

Mechatronics Engineer, Robotics Engineer, Automation Engineer

→ [See more course information — ecu.edu.au/courses/Y44](https://ecu.edu.au/courses/Y44)

Bachelor of Engineering (Petroleum Engineering) Honours

Indicative ATAR: 80				
Duration:	4 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

Petroleum engineers work in a range of industry sectors, often related to the exploration, mining, production, delivery and downstream processing of fossil fuels. These fossil fuels are derived from oil and gas reservoirs in the earth’s crust, but may also include extraction from sands and shales. This course provides the foundations for a professional engineering career in the oil and gas industry, both in Australia and internationally. As well as providing core mechanical and chemical engineering skills, the course provides specialist knowledge in drilling, reservoir and petroleum production engineering.

The program focuses on the development of knowledge and skills relevant to professional engineering practice and, along with a sound theoretical base, includes strong elements of practical problem solving, teamwork and project development. As a result, graduates will gain strong analytical skills, and have the ability to lead complex projects as well as having multiple technical and transferable competencies.



The course provides a sound basis in mechanics, mathematics, and the principles of engineering design in the first two years of study, along with core areas of engineering science, including chemistry and materials science, fluid mechanics, process systems and thermodynamics. In the final two years of study, a range of more specialist petroleum engineering topics are covered to prepare students to enter their chosen profession with relevant knowledge and skills.

Admission Requirements

All applicants are required to have Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR, with equivalents considered.

It is desirable that all applicants have Physics ATAR or Engineering Studies ATAR, with equivalents considered. Students without Physics ATAR or Engineering Studies ATAR may need to take a bridging unit in the first year of their studies.

Applications for this course are not accepted through ECU’s Experience Based Entry Scheme.

Work Experience

Students are required to undertake a minimum of 12 weeks of practical work experience in an engineering industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Professional Recognition

Engineers Australia has provisionally accredited this course.

Employment Opportunities

Petroleum engineers work in a wide range of industries associated with the exploration, drilling and mining, development and operation of production and transport of raw and processed products as well as the downstream processing of fossil fuel derivatives.

Careers

Petroleum Engineer, Oil and Gas Engineer, Exploration Engineer, Reservoir Engineer, Drilling Engineer, Pipeline Engineer, Refining Engineer, Production Engineer

→ [See more course information — ecu.edu.au/courses/W17](https://ecu.edu.au/courses/W17)



Bachelor of Engineering Science

Indicative ATAR: 90

Duration:	3 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

This course provides a high-quality and broad-based coverage of multidisciplinary engineering. In the modern engineering environment, large-scale engineering projects are increasingly likely to be of a highly multidisciplinary nature, requiring engineers from diverse backgrounds to be able to work effectively as a team to deliver the outcomes. In such environments, a broader understanding of engineering, beyond one specific area of specialisation, is highly desirable and advantageous.

Developing such breadth in four-year engineering courses is a challenge as it compromises the level of specialist knowledge that is also required from a graduate engineer. Successful completion of this three-year program guarantees entry into ECU's Master of Engineering course, affording the opportunity to develop a chosen discipline specialisation, building on this strong multidisciplinary knowledge base.

Admission Requirements

All applicants are required to have Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR or Chemistry ATAR or Mathematics: Specialist ATAR, with equivalents considered.

It is desirable that all applicants have Physics ATAR or Engineering Studies ATAR, with equivalents considered. Students without Physics ATAR or Engineering Studies ATAR may need to take a bridging unit in the first year of their studies.

Applications for this course are not accepted through ECU's Experience Based Entry Scheme.

→ [See more course information — ecu.edu.au/courses/K94](http://ecu.edu.au/courses/K94)



“My ECU degree helped me to understand the industry, make the right connections, and work in the area that I’m really passionate about.”

Bruna Rocha
ECU Postgraduate Engineering Science graduate Structural Engineer, AECOM

Bachelor of Technology (Engineering)

Indicative ATAR: 70

Duration:	3 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

This course is suitable for students who may not achieve the entrance requirements for the Bachelor of Engineering Honours but who aspire to have a career in an engineering-related area. This course can also be used as a pathway to the Bachelor of Engineering Honours courses.

Admission Requirements

It is desirable that all applicants have passed Mathematics: Methods ATAR, with equivalents considered. Alternatively, applicants can complete a bridging unit during the first year of their studies if they have not passed Mathematics: Methods ATAR.

Work Experience
Students must undertake a technology practicum, which requires 8 weeks of approved work experience. For more information, see course details on our website.

Employment Opportunities
Graduates of the course will find employment opportunities in engineering- and technology-related industries.

Careers
Engineering Technologist, Engineering Technician

Available Majors	JO	ML	SW	OL
Chemical	■			
Civil	■			
Electrical	■			
Electronics & Communications	■			
Electronics & Computer Systems	■			
Mechanical	■			
Petroleum	■			

→ [See more course information — ecu.edu.au/courses/Y62](http://ecu.edu.au/courses/Y62)



Bachelor of Technology (Motorsports)

Indicative ATAR: 70				
Duration:	3 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

This course develops core problem-solving abilities and the technical, financial and management skills associated with manufacturing industries in general, and the motorsports industry in particular. Students gain a solid understanding of the design, simulation and fabrication processes, and the management issues associated with the production of complex automotive systems and the components that underpin the motorsports industry. The course provides a stimulating and supportive learning environment, with an enthusiastic and articulate approach that reflects the culture of motorsports.

Students also have the opportunity to further develop competencies through the provision of extra-curricular activities to help progression into the motorsports industry.

Admission Requirements

It is desirable that all applicants have passed Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR, with equivalents considered. Alternatively, applicants can complete bridging units during the first year of their studies, if required, if they have not passed one or more of these subjects.

Work Experience

Students are required to undertake a minimum of 8 weeks of practical work experience in an engineering technology industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Professional Recognition

Engineers Australia has accredited this course.

Employment Opportunities

As well as employment in the motorsports industry, graduates also have broader employment opportunities in product design and development, manufacturing, marketing and project management.

Careers

Automotive Technologist, Mechanical Technologist

→ [See more course information — ecu.edu.au/courses/G68](https://ecu.edu.au/courses/G68)



Diploma in Aviation

Indicative ATAR: Not applicable				
Duration:	1 year full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			■
Part-time	■			■

This course provides a flexible study option for pilots and aviation professionals who are already working in the aviation industry and wish to upgrade their knowledge and skills through a tertiary program in aviation. This will give them an opportunity to expand their career options. The course also provides a pathway into a full degree program in Aviation with an additional two years of study.

Employment Opportunities

This course prepares graduates for a range of careers within the aviation industry such as airline operations or aviation management, and also provides relevant complementary education for those who wish to pursue or further a career as an airline pilot.

Careers

Flight Planner, Aviation Operations Controller, Load Controller, Aviation Safety Regulator, Aviation Operations Officer, Air Traffic Controller, Air Force Officer, Pilot

→ [See more course information — ecu.edu.au/courses/W88](https://ecu.edu.au/courses/W88)



Bachelor of Aviation

Indicative ATAR: 70				
Duration:	3 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

This course provides a focused, professional education and graduate status for those seeking to enter the aviation industry. The course is technically oriented, covering a good breadth of the underlying science and technology related to aircraft systems, in addition to a range of more general content areas related to the aviation industry.

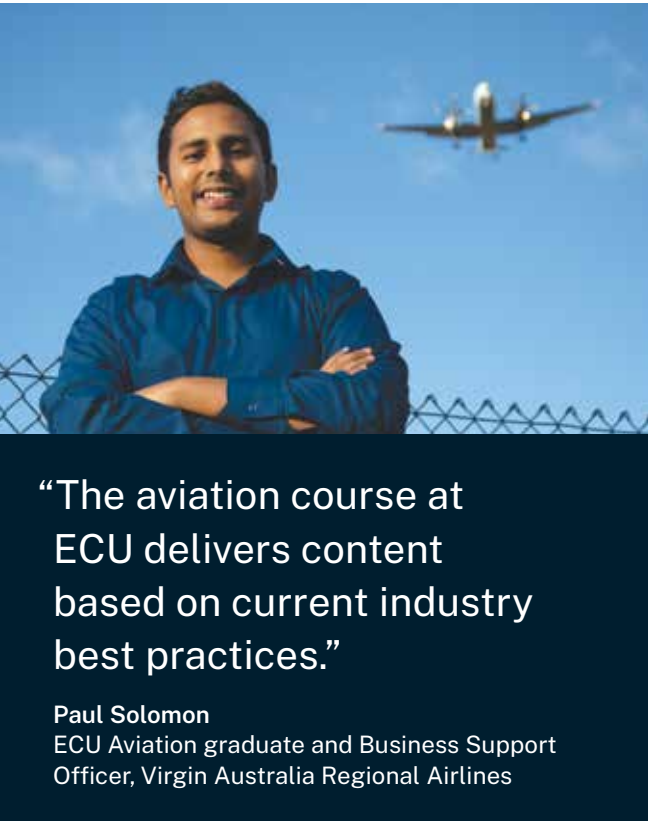
Employment Opportunities

This course prepares graduates for a range of careers within the aviation industry such as airline operations or aviation management, and provides relevant complementary education for those who wish to pursue a career as an airline pilot. Additionally, a suitable choice of elective units will lead to wider employment opportunities within the aviation industry, as well as in other areas.

Careers

Flight Planner, Aviation Operations Controller, Load Controller, CASA Regulator, Aviation Operations Officer, Air Traffic Controller, Royal Australian Airforce Officer, Pilot

→ [See more course information — ecu.edu.au/courses/K99](https://ecu.edu.au/courses/K99)



Bachelor of Technology (Aeronautical)

Indicative ATAR: 70				
Duration:	3 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

This course is intended for students with an interest in aviation, aeronautics and flying, who wish to have the option of expanding their studies towards becoming accredited professionals in an engineering field.

The only course of its kind in Western Australia, aeronautical technology deals with the science and technology of aviation, including aircraft systems, materials and manufacturing technology, and aircraft operation. Areas of study include a foundation in science and mathematics, along with engineering mechanics, computer-aided design, engineering materials, and thermodynamics and fluids. It also covers specific aviation science subjects such as aircraft systems and structures, aircraft propulsion and aerodynamics. Students will also gain an understanding of the operation and performance of aircraft from the point of view of an aviation technologist.

The course focuses on the development of knowledge and skills relevant to the aviation industry and, along with a sound theoretical base, includes strong elements of practical problem solving, teamwork and project work. As a result, students will have multiple technical and transferable competencies, and will graduate with strong analytical skills and the ability to contribute to complex projects.

Provided appropriate electives are chosen, graduating students can apply to articulate into ECU's Master of Engineering course, specialising in either Mechanical or Civil Engineering. This enables students to achieve professional engineer status after a further two years of study.

Admission Requirements

It is desirable that all applicants have passed Mathematics: Methods ATAR, with equivalents considered, and Physics ATAR or Engineering Studies ATAR, with equivalents considered. Alternatively, applicants can complete bridging units during the first year of their studies, if required, if students have not passed one or more of these subjects.

Work Experience

Students are required to undertake a minimum of 8 weeks of practical work experience in an engineering technology industry environment. This will normally be undertaken during a vacation period. For more information, see course details on our website.

Careers

Aeronautical Technologist, Mechanical Technologist

→ See more course information — ecu.edu.au/courses/Y73



Double Degrees

Bachelor of Engineering (Computer Systems) Honours / Bachelor of Computer Science

Indicative ATAR: 80				
Duration:	5 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

→ See more course information — ecu.edu.au/courses/Y64

Bachelor of Engineering Honours / Bachelor of Science

Indicative ATAR: 80				
Duration:	5 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

→ See more course information — ecu.edu.au/courses/W32

Bachelor of Engineering Honours / Bachelor of Commerce

Indicative ATAR: 80				
Duration:	5 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

→ See more course information — ecu.edu.au/courses/W26

Bachelor of Engineering (Mechatronics) Honours / Bachelor of Technology (Motorsports)

Indicative ATAR: 80				
Duration:	5 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

→ See more course information — ecu.edu.au/courses/Y75

Bachelor of Engineering Honours / Bachelor of Laws

Indicative ATAR: 85				
Duration:	6 years full-time or part-time equivalent			
Availability:	JO	ML	SW	OL
Full-time	■			
Part-time	■			

→ See more course information — ecu.edu.au/courses/Y66



Postgraduate Degrees

At ECU's School of Engineering, we offer postgraduate courses of the highest standard in a friendly and supportive environment, where a strong industry focus enriches the teaching, learning and research outcomes.

➔ For more details visit — ecu.edu.au/engineering

Graduate Certificates

- Graduate Certificate in Environmental Engineering
- Graduate Certificate in Industrial Automation Engineering
- Graduate Certificate in Renewable Energy Engineering

Master's Degrees

- Master of Engineering
Specialisations are available in the following disciplines:
 - Chemical Engineering
 - Civil Engineering
 - Civil and Environmental Engineering
 - Computer Systems Engineering
 - Electrical Power Engineering
 - Electrical and Renewable Energy Engineering
 - Electronics and Communications Engineering
 - Instrumentation Control and Automation Engineering
 - Mechanical Engineering
 - Mechatronics Engineering
 - Petroleum Engineering
- Master of Engineering Science
- Master of Technology
Specialisations are available in the following disciplines:
 - Chemical Engineering
 - Civil Engineering
 - Electrical Engineering
 - Mechanical Engineering
 - Petroleum Engineering

Doctorates

- Doctor of Philosophy

Research Focus

With a future focus and global outlook, ECU has a wealth of engineering excellence and experience across key research areas, including:

- Renewable energy resources
- Subsurface energy and resources
- Water resources
- Waste recycling and management
- Materials, manufacturing and infrastructure
- Structural engineering
- Communications, monitoring and control
- Chemical and process engineering
- Robotics, electronics and embedded systems
- Thermofluids
- Geotechnical and geoenvironmental



Life as a student

It doesn't matter if you've just left high school or you haven't been a student for a few years, study at uni is a whole new world. The good news is, no matter what your study challenges, we're ready to help you succeed.

Adjusting to study whatever your situation

At ECU, we'll support you through your studies whatever your personal circumstances. This includes if you have a medical condition or disability or have responsibilities for caring for a family member in a similar situation.

It might also include ensuring you can continue to observe any cultural or religious practices.

Our Access and Inclusion team will work with you to identify reasonable adjustments to your study and uni life. They'll also provide ongoing support to you through an individual Learning Access Plan.



Adjusting to academic life

Learning at university can be a bit daunting to begin with, but we've got you covered whatever help you need.

That includes help with preparing assignments, help with researching or referencing, help with online study and loads more. You even get a peer mentor in your first semester!



Free counselling service

If you need to discuss any personal issues that may be affecting your ability to study, we have a free, professional and confidential psychological counselling service.

Sports and Gyms

Being physically active positively stimulates your student brain and helps you reduce the stress of assignment deadlines or exams.

So, it's a good thing that our campuses have terrific sports and gym facilities. You can also join group fitness classes, social sports teams or attend regular healthy activities like yoga classes.

Career advice and job skills

You can get support and resources to help you plan your future career, as well as find work or volunteering experience while you're a student.

This includes career-based workshops, industry events, one-to-one career advice and more.

Student health services

The ECU campuses in Joondalup and Mount Lawley have student health centres with doctors (GPs), and nurses to assist you if you need them. The services are covered by Medicare or Overseas Student Health Funds so most visits are free or low cost.



What pathway can you take into ECU?

If you don't have an ATAR, or you do but got a lower ATAR than expected, you still have pathway options into university courses.

For some of these pathways, you may need to have completed WACE.

▶ Watch a short video on pathways to ECU — youtu.be/p1UUREajINI

University Preparation courses

This is a pathway we recommend to students who didn't get an ATAR, or didn't get the ATAR they had hoped for. UniPrep courses are free too.

UniPrep is either a standard uni semester course or one of two intensive courses – UniPrep Accelerate for 4 weeks in January and UniPrep Summer from November to January.

➔ Read more about UniPrep — ecu.edu.au/degrees/uniprep

Experience Based Entry

If you don't have an ATAR (or had a near-miss) or any VET qualifications, like a Cert IV, this could be your way into university.

You'll need to include a letter telling us about your goals and why you want to go to uni as part of your application, along with references.

➔ Read more about Experience Based Entry — ecu.edu.au/future-students/course-entry/experience-based-entry-scheme

Diploma or Cert IV Entry

If you've completed or started a VET course at a TAFE or another training organisation since high school, you might also have a pathway to uni.

If you completed a Diploma or an Advanced Diploma you may be eligible to go straight into an undergraduate course.

➔ To read more about all pathways — ecu.edu.au/degrees/pathways

How to apply

Application options can vary, depending upon your situation and your chosen pathway.

Australian universities have 4 standard categories that cover student applications.

These are:

- Recent secondary education (typically most school leavers)
- Work and life experience (usually mature age students who've been working)
- Vocational education and training (VET) (think TAFE students)
- Higher education student (people who've got a degree or done a bridging course)

We won't try to explain these in this space, but we suggest you visit our Applying page and see which category is your best fit.

The page also details your different entry requirements and options.

➔ Everything about applying is here — ecu.edu.au/future-students/applying

If you'd rather talk to us about applying for courses, we'd love to hear from you. Call 134 328 or drop into your nearest ECU campus.



Become an ECU student in 6 steps

- 1 Choose your course.**
Consider having a back-up course in case you've applied for a popular course, and it's oversubscribed. You can apply for up to 3 courses at once.
- 2 Check entry requirements.**
Some courses have special admission or 'inherent' requirements so check these too.
- 3 Check the application date.**
Don't miss the deadline for your chosen course/s.
- 4 Apply for a scholarship.**
These are awarded to all kinds of people, not just high achievers. You can do this when you apply for a course.
- 5 Have your paperwork ready.**
You'll need scanned copies of other qualifications, your résumé or other required paperwork ready to upload.
- 6 Accept your offer.**
If you're successful, we'll send you an offer of a place. We hope you accept it and become an ECU student!

Every effort has been made to ensure that the information in this publication is correct at the time of production. The information is subject to change from time to time and the University requests the right to add, vary or discontinue courses and impose limitations on enrolment in any course. The publication constitutes an expression of interest and is not to be taken as a firm offer or understanding. This publication is intended for Australian citizens and permanent residents only. Some information contained in this publication may not be applicable to international students.

GREENING ECU: Edith Cowan University is committed to reducing the environmental impact associated with its operations by conducting its activities in a socially and environmentally responsible manner. This includes implementing strategies and technologies that minimise waste of resources and demonstrate environmentally sensitive development, innovation and continuous improvement.




Unlock your superpower.

**Creative thinkers
made here.**


CRICOS Provider No. 00279B | RTO Code 4756
TEQSA ID PRV12160, Australian University

Contact

 +61 8 6304 0000
(For calls outside Australia)

 ECU.EDU.AU

Find us at


 [ecujourney](https://www.facebook.com/ecujourney)

 [edithcowanuni](https://twitter.com/edithcowanuni)

 [edithcowanuniversity](https://www.youtube.com/edithcowanuniversity)

 [edithcowanuniversity](https://www.instagram.com/edithcowanuniversity)

 [edithcowanuni](https://www.tiktok.com/edithcowanuni)

 [school/edith-cowan-university](https://www.linkedin.com/school/edith-cowan-university)