



Engineering 2020



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Federation University acknowledges the Traditional Custodians of the lands and waters where our campuses, centres and field stations are located, and pay our respects to Elders past and present. We extend this respect to all Aboriginal and Torres Strait Islander and First Nations Peoples.

The Aboriginal Traditional Custodians of the lands and waters where our campuses, centres and field stations are located include:

- ★ **Wimmera Wotjobaluk, Jaadwa, Jadawadjali, Wergaia, Jupagulk**
- ★ **Ballarat Wadawurrung**
- ★ **Berwick Bunurong Boon Wurrung and Wurundjeri**
- ★ **Gippsland Gunai Kurnai**
- ★ **Nanya Station Mutthi Mutthi and Barkindji**
- ★ **Brisbane Turrbal and Jagera**



# Engineer a better future

Wind turbines that reduce global warming.  
Robots that rove the surface of Mars.  
Underwater tunnels that connect different countries.

**Engineers build extraordinary things.**

With a qualification from Federation University, you can too.

## Engineering Specialisations

	<b>Civil Engineering</b>
	<b>Mechanical Engineering</b>
	<b>Mining Engineering</b>
	<b>Mechatronic Systems Engineering</b>
	<b>Electrical &amp; Information Engineering</b>
	<b>Renewable Energy &amp; Electrical Power Systems</b>
	<b>Maintenance &amp; Reliability Engineering</b>
	<b>Project Management</b>



Federation University has a distinguished history as one of Australia's oldest higher education institutions. We have a strong tradition of education and training delivery and will celebrate our 150 year tradition in 2020. We became Federation University Australia in January 2014.

## Industry Partnerships

Our academic staff have strong industry connections and experience, providing you with excellent opportunities for professional engagement.

Federation University is actively engaged with industry and professional bodies, and students get involved in networking and have contact with a range of industry experts, including guest lectures on campus.

Through our engineering industry advisory board, and inputs from relevant industries are regularly reviewed to ensure our programs are up-to-date with latest technological trends and meet industry needs and demands.

## Integrated Learning

We have recently reviewed and improved our range of engineering programs to include project based learning, cross-discipline learning, and to be better aligned with industry needs and advancements in technology.

As part of your engineering studies at Federation, you will go on excursions and site visits, participate in practical activities in laboratory and technical workshops, and undertake industry based projects.

Industry placements are a vital component of our undergraduate engineering programs. All engineering undergraduate students complete 12 weeks of equivalent work experience before graduation.

Professional Practice courses focus on giving you real life experience in the engineering industry, which is achieved through industry placements or equivalent activities. Throughout your engineering studies you will gain skills that are valuable to the workplace including teamwork, communication, critical and creative thinking and responsible and ethical practices.

## Alumni

No matter where you are located or when you attended the University, you are part of the ever-growing alumni family. Your connection with us does not end at graduation, but is fulfilling, lifelong and active.

Our Alumni pave exciting careers and our graduates are found in all industries, including large well-known companies such as; BHP, Rio Tinto, Downer, Orica, Iluka, Fortescue Metals Group, Evolution Mining and Gekko.

## Professional Recognition

The majority of our engineering programs are professionally/provisionally accredited by Engineers Australia, the accreditation authority for tertiary institutions in Australia, to ensure they meet Australian and global benchmarks and recognised globally. The new degrees have been designed to meet the requirements of provisional accreditation by Engineers Australia.

When you study Engineering at Federation University you will be prepared with skills and hands-on experience to enter the workforce as a very capable engineer.



## Venkata Rao-Gondi

### Master of Mechanical Engineering

Venkata Rao-Gondi, from Hyderabad in India, was recently awarded the Kiran Mazumder-Shaw Scholarship at Federation University after achieving highly in the first year of his Master of Mechanical Engineering.

*'I'm very happy and excited to receive this award,' says Venkata. 'It's helped me financially to cover costs and afford a new laptop, but it's also validated my hard work and encouraged me to study even more.'*

*'The course has been great so far. It's given me much more practical experience of subjects such as robotics, which I only studied theoretically at home. We've been on valuable industry visits, and the lecturers are really amazing; they take the time to explain things to us in detail. I've encouraged my brother to apply to Federation so that he can enjoy the same opportunities.'*

## Career Opportunities

With Australia currently experiencing a shortage of engineers working in the industry, partly due to recently announced renewable energy investments, Federation University is introducing new engineering courses in 2020 tailored specifically to help meet the demand.

It's predicted there will be more than 5600 employment opportunities in engineering every year for the foreseeable future\*\*. These employment opportunities will be a result of investments including \$7.5 billion for large-scale wind, solar and rooftop installations and the State Government's target of 30 per cent energy derived from renewables by 2030.

Our graduate outcomes are worth promoting: 95.5% of our Master of Engineering graduates are in full-time work after 4 months (national average: 84.8%) and their median starting salary is \$132,500 (national average: \$90,000).

At Federation University Australia, we work with industry to deliver programs that ensure our graduates are job-ready when entering the workforce. We are ranked as Australia's number one university for graduate employability skills.\*

We also continually update our courses and student learning experiences to adapt to the environmental changes and market demand.

\* Employer Satisfaction Survey (ESS) 2018, Australian universities, results released January 2019, and ESS 2017

\*\*The Good Careers Guide 2019.

## Scholarships

### Engineering Scholarships and Dean's Bursaries

If you are applying for one of the following new engineering courses; Bachelor of Engineering (Electrical and Information Engineering) Honours, Master of Engineering Project Management, Master of Engineering Technology (Mechatronic Systems Engineering), or Master of Engineering Technology (Renewable and Electrical Power Systems), you will automatically be assessed for an Engineering Scholarship. The scholarships are equivalent to 16% of your tuition fees for the normal duration of your degree program and will be awarded based on achievements in your previous study. In addition you may receive a Dean's Bursary of \$1150 per annum, based on successful study results. You are also encouraged to apply for our International Student Accommodation Scholarships to enjoy the benefits of living on-campus.

### International Student Accommodation Scholarships

You may be eligible for an accommodation scholarship. They range in value up to full accommodation fees for your first semester on campus, with the possibility of it being extended (subject to availability).

Accommodation facilities have access to communal living spaces, kitchens, lounge facilities and recreational areas. All bills (internet, water and electricity/gas) are also included.

### International Excellence Scholarship

If you have a strong academic background you may be awarded a 16% of fees tuition scholarship for any other degree completed by coursework. The value of this scholarship ranges from AU\$3,456 to AU\$4,896 in the first year of study and it may be ongoing, subject to successful study results.

View a complete list of our scholarships at [Federation.edu.au](http://Federation.edu.au)



Being at university is about feeling comfortable with where you're studying, not just what you're studying.

With our six campuses stretching across Victoria – from the regional areas of Gippsland and Ballarat, to our city campus in Berwick, Melbourne, and our Brisbane Campus in Queensland – we're sure you'll find a campus that's right for you.



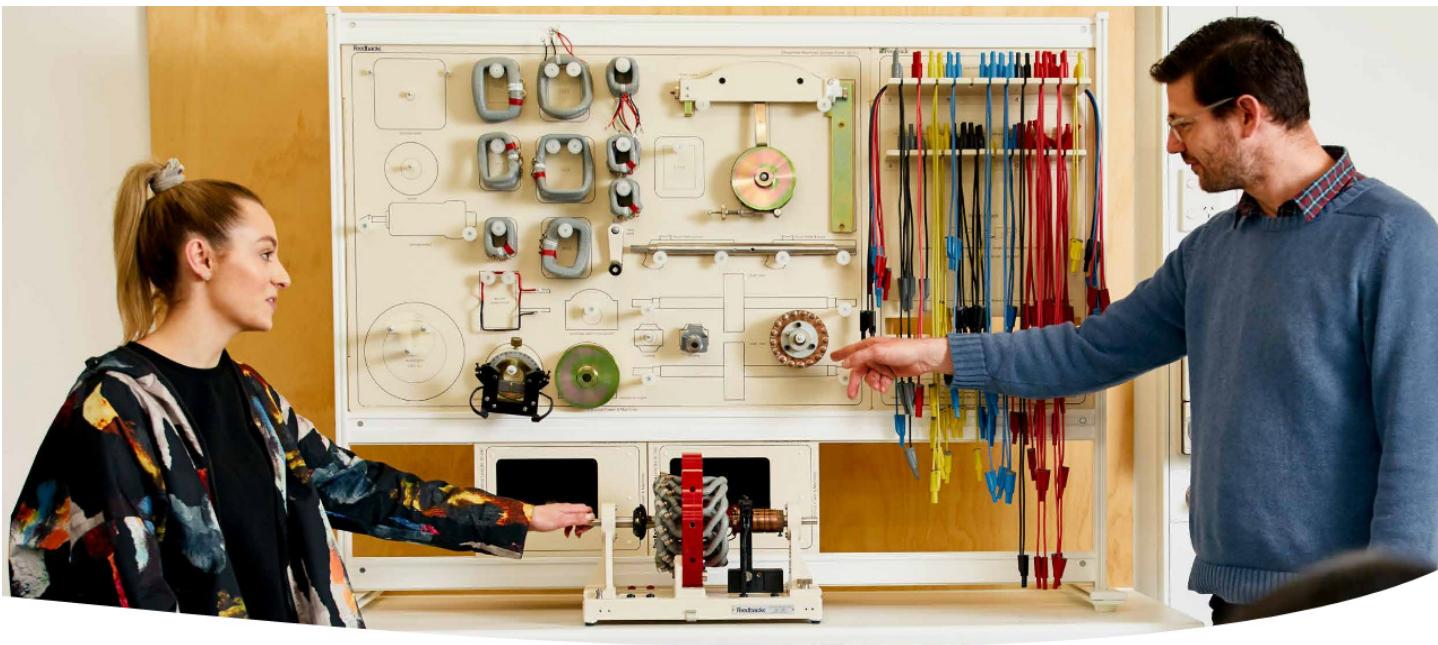
## Engineering Facilities

### Mt Helen

At the Mt Helen Campus (Ballarat) you will find the world-class science and engineering precinct, which reflects the importance of the built environment to the learning experience. The laboratories are equipped with current and relevant technologies that allow students to develop the practical skills demanded in a professional engineering working capacity.

### Gippsland

Equally impressive are our new classrooms, new laboratories, and new mechatronics facilities at the Gippsland Campus (Churchill). All specifically designed to best facilitate hands-on experience and skill development.



## Undergraduate Engineering

### Engineering - First Year

A common first year of study for all undergraduate engineering courses allows you to establish a sound knowledge of engineering. The course structure then allows you to progress into an area of specialisation in years 2 to 4.

#### YEAR 1

Professional Engineering  
Engineering Design & Drafting  
Materials in Engineering  
Engineering Computer Modelling

Engineering Physics  
Engineering Mechanics  
Modelling & Change (intro)  
Secrets of the Matrix

### Engineering Specialisations

#### Bachelor of Mechatronic Systems Engineering (Honours)

Working with aircraft, industrial automation, transport or telecommunication systems excites you, and you have a mind for mechanics, electronics and computing engineering; this is the ideal degree for you. You'll gain the skills necessary to plan, design and manage complex systems that integrate mechanical, electronic and computational elements of engineering.

Our graduates find careers in these separate fields and also at the interface, where these areas of engineering merge. Due to their cross-disciplinary knowledge and versatility as problem solvers, mechatronics professionals are also highly sought after as project engineers. Project-based learning in real world situations ensures you will be work-ready.

Major manufacturers and engineering-based companies are collaborating with the University's academic expertise in this comprehensive industry-supported course. The program's strong industry support ensures you will have relevant, current experience and knowledge.

#### DURATION

4 years

#### ANNUAL TUITION FEE

\$28,800 – commencing 2020

#### CRICOS CODE

085620B

#### LOCATION

Gippsland – Churchill

#### YEAR 2

Professional Practice  
Analog & Digital Electronics  
Measurement & Computer Instrumentation  
Fluid & Pneumatic Control  
Modelling Continuous Change  
Engineering Project Management & Sustainable Design  
Mechanism & Machine Theory  
Electrical & Electronic Drives and Actuators  
Modelling & Change (Advanced Level)

#### YEAR 3

Engineering Computer Applications & Interactive Modelling  
Mechatronics Components Design  
Sensors & Artificial Perception  
System Dynamics & Control  
Engineering Research Methodology & Management  
Engineering Design Project  
Digital Imaging & Artificial Intelligence  
Intelligent Mechanisms Design

#### YEAR 4

Engineering Project 1  
Industrial Robotic Systems  
Terotechnology & Life Cycle Costs  
Engineering Project 2  
Digital & Embedded Systems  
Advanced Control Systems Engineering



## Bachelor of Engineering (Civil) (Honours)

It's civil engineers who work with other experts like builders, architects and clients to ensure that structures are safe, economical and environmentally-sound. You'll find out how to prevent flooding, design irrigation systems, and build multi-storeyed buildings. It's these skills that may see you specialise in structural engineering, geotechnical engineering, transport engineering, water engineering or infrastructure management.

You'll learn problem-solving skills, analytical skills and you'll also understand the environmental, social and political aspects that will impact your career as a civil engineer. In the final year of the course you will have the opportunity to undertake a specialisation in structural or water and wastewater engineering.

DURATION	ANNUAL TUITION FEE
4 years	\$28,800 – commencing 2020
CRICOS CODE	LOCATION
085617G	
<b>YEAR 2</b>	
Professional Practice Hydraulics and Hydrology Concrete Technology and Civil Construction Mechanics of Solids Modelling Continuous Change Engineering Project Management and Sustainable Design Structural Analysis Introduction to Geotechnical Engineering Modelling and Change (Advanced Level)	
<b>YEAR 3</b>	
Structural Design Geotechnical Engineering Traffic and Transport Engineering Surveying Engineering Research Methodology and Management Engineering Design Project Road Engineering Water and Wastewater	
<b>YEAR 4</b>	
Engineering Project 1 Engineering Project 2 Elective Elective Elective	

## Bachelor of Engineering (Mining) (Honours)

Study areas include mineral deposit evaluation and processing, underground production systems, mine power and services, surface mining operations and mine environment and safety. We'll teach you how to mine in a sustainable and safe way and teach you the social and political aspects that will impact your career. You'll also learn communication and problem-solving that are essential in the industry.

Opportunities exist for you in government and private organisations, mining companies and consulting firms. When you graduate from this Honours degree, you'll be eligible for admission to Engineers Australia under the professional engineer category.

DURATION	ANNUAL TUITION FEE
4 years	\$28,800 – commencing 2020
CRICOS CODE	LOCATION
085619F	
<b>YEAR 2</b>	
Professional Practice Mechanics of Solids Mine Power and Services Technology Rock Fragmentation Modelling Continuous Change Thermofluids Rock Mechanics Applications Modelling and Change (Advanced Level) Planet Earth	
<b>YEAR 3</b>	
Engineering Surveying Underground Production Systems Subsurface Environmental Engineering Landscape Restoration and Mine Site Rehabilitation Engineering Research Methodology and Management Surface Mining Operations and Equipment Underground Mine Planning and Infrastructure Development Economic Geology	
<b>YEAR 4</b>	
Engineering Project 1 Mine Planning and Scheduling Mineral Processing I Engineering Project 2 Advanced Mine Ventilation Mineral Processing II	



## Bachelor of Engineering (Electrical and Information Engineering) (Honours)

This course is designed to meet the requirements of Engineers Australia and produce accredited professional engineers with in-depth knowledge and skills across the interdisciplinary domain of electrical and information engineering.

You'll study the key areas of the electrical, electronic and computer domains, linking to these topics, students would be introduced to areas of information engineering – programming, data science, data analytics, cybersecurity of physical systems, imaging, artificial intelligence and communication engineering.

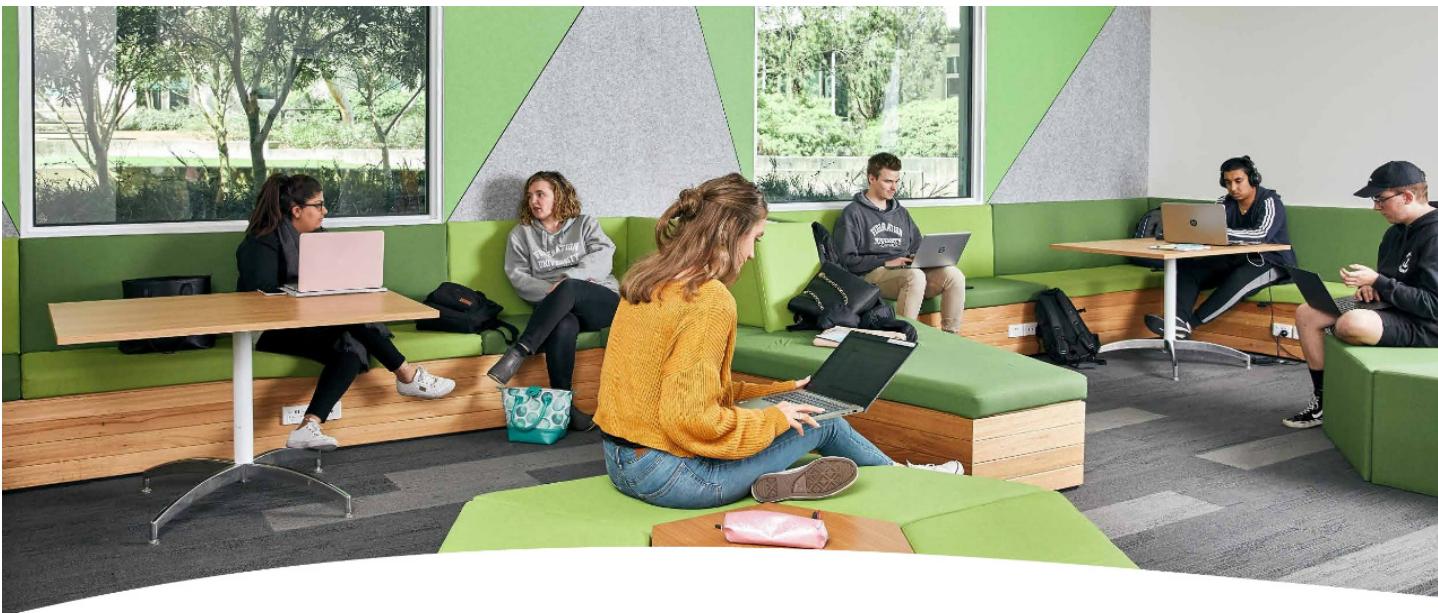
## Bachelor of Engineering (Mechanical) (Honours)

In this degree, you'll learn about electric circuits and machines, thermodynamics, industrial robots and more. When you graduate, you'll be a professional engineer who is an expert in planning, design and management. Your career may see you managing teams who will build the designs you've created.

Your subjects include 'machine design', 'simulation in engineering' and 'energy conversion'. In your final year, you'll take on an engineering project to research and perfect your skills in your favourite area.

NEW COURSE	DURATION	ANNUAL TUITION FEE
	4 years	\$28,800 – commencing 2020
	CRICOS CODE	LOCATION
<b>YEAR 2</b>		
Professional Practice Digital Logic & Design Signals & Systems Big Data & Analytics Modelling Continuous Change Engineering Project Management & Sustainable Design Principles of Renewable Energy Sources Electromechanical Energy Conversion Modelling & Change (Advanced Level)		
<b>YEAR 3</b>		
Power Electronics Power System Analysis Engineering Computer Applications and Interactive Modelling System Dynamics and Control Engineering Research Methodology and Management Power System Protection Digital Communication Principles Digital Imaging and Artificial Intelligence		
<b>YEAR 4</b>		
Engineering Project 1 Electrical Power Distribution Engineering Micro-Grid and Energy Storage Systems Engineering Project 2 Power Electronic Application to Renewable Energy Systems Digital and Embedded Systems		

DURATION	ANNUAL TUITION FEE	
	\$28,800 – commencing 2020	
	CRICOS CODE	LOCATION
<b>YEAR 2</b>		
Professional Practice Mechanics of Solids Engineering Dynamics Measurement and Computer Instrumentation Modelling Continuous Change Engineering Project Management and Sustainable Design Mechanism and Machine Theory Thermofluids Modelling and Change (Advanced Level)		
<b>YEAR 3</b>		
Fluid Dynamics Introduction to Vibration Analysis Robotics System Dynamics and Control Engineering Research Methodology and Management Engineering Design Project Thermodynamics Manufacturing Engineering		
<b>YEAR 4</b>		
Machine Dynamics and Vibration Energy Conversion Engineering Project 1 Engineering Project 2 Machine System Design Modelling and Simulation		



# Postgraduate Engineering

## Maintenance & Reliability Engineering

Our maintenance and reliability engineering postgraduate courses are designed for managers, engineers and technical staff working in the operation, maintenance and reliability improvement of industrial, public sector and defence systems. You'll be looking at areas such as terotechnology and lifestyle costs, asset management and industrial techniques, risk engineering, machine condition monitoring and reliability engineering.

The knowledge achieved can be applied in fields such as manufacturing processes, transport, power generation and the efficient operation of industrial, commercial and civic buildings, with the goal of increasing industrial competitiveness and benefiting a company's bottom line.

\* Online learning is only available for international students not studying on student visas. Online Learning can be undertaken from your home country, please check the "Minimum IT requirements" on our website to ensure you can successfully participate. [federation.edu.au/current-students/starting-at-feduni/minimum-it-requirements-for-studying-online](http://federation.edu.au/current-students/starting-at-feduni/minimum-it-requirements-for-studying-online)

### GRADUATE CERTIFICATE IN RELIABILITY ENGINEERING

DURATION	ANNUAL TUITION FEE	LOCATION
1 year – part-time	\$14,400 per certificate	Online*

### GRADUATE CERTIFICATE IN MAINTENANCE MANAGEMENT

DURATION	ANNUAL TUITION FEE	LOCATION
1 year – part-time	\$14,400 per certificate	Online*

### GRADUATE DIPLOMA OF ENGINEERING MAINTENANCE MANAGEMENT

DURATION	ANNUAL TUITION FEE	LOCATION
1 year – full-time 2 years – part-time	\$28,800 full-time \$14,400 part-time	Online*

### MASTER OF MAINTENANCE AND RELIABILITY ENGINEERING

DURATION	ANNUAL TUITION FEE	LOCATION
2 years – part-time	\$14,400 part-time	Online*

## Master of Engineering Technology (Renewable Energy and Electrical Power Systems)

The course covers key areas of electrical circuits, signals and systems, energy conversion, power electronics, power systems, electrical power distribution and protection system, control systems and renewable energy. It also links to areas covering sensors, artificial perception, and Internet of Things (IoT) in smart energy systems. You will also undertake an independent piece of research in the last year of your course.

The course has a strong focus on research and project-based learning, where you will be able to apply the concepts learned into application and use.

This unique course will help you make your mark, not only in Australia, but also globally, where automation, IoT, smart grid and renewable energy are a key focus of industries and countries worldwide.

### NEW COURSE

DURATION	ANNUAL TUITION FEE
2 years	\$28,800 – commencing 2020

CRICOS CODE	LOCATION
0100637	Ballarat – Mt Helen

#### YEAR 1

Power Electronics  
Power System Analysis  
Sensors and Artificial Perception  
Engineering Project Management Theory  
Principles of Renewable Energy Sources  
Advanced Control Systems Engineering  
Research and Quantitative Methods  
IoT in Smart Energy Systems

#### YEAR 2

Electrical Power Distribution Engineering  
Micro-grid and Energy Storage Systems  
Advanced Engineering Project 1  
Power Electronics Applications to Renewable Energy Systems  
Electrical Demand Forecast and Management  
Advanced Engineering Project 2



## Pattan Tausif

### Master of Engineering Technology (Mechanical Engineering)

Pattan explains he chose to study at Federation University in Ballarat to be in a regional area, live on residence and study at a university with a good reputation. He plans to remain in Ballarat to work after completing his studies under a temporary visa.

*"I thought with a big campus in a quiet city and living on residence it would be a lot easier for me to make friends and survive"*

Pattan Tausif, is in his second year of studying a Master of Engineering Technology (Mechanical Engineering). He travelled from South India to Ballarat to begin the degree in February last year and has been living on campus at Mount Helen since. He set up the university's Indian Students Association last year and has seen it grow from 50 to 400 student members this year.

*"The Indian population at the university has been growing a lot since I started here, as well as the Chinese", he said.*

## Master of Engineering Project Management

Our Master of Engineering Project Management course covers the key knowledge and skills required for engineering project and resource planning and execution. It includes contracts and costing, business analysis and decision making, the global management environment, human and financial resources, risk, and research methodology. You will also undertake an independent piece of research in the last year of your course.

The unique course structure will ensure you are well prepared to make your mark, not only in Australia, but worldwide, where efficient and competent planning and execution of large projects, particularly in infrastructure, is essential in ensuring the success of key global industries.

NEW COURSE	DURATION	ANNUAL TUITION FEE
	2 years	\$28,800 – commencing 2020
CRICOS CODE	LOCATION	
0100640	Ballarat – Mt Helen	
<b>YEAR 1</b>		
Engineering Project Management Theory Data Analytics and Decision Making Engineering Contracts and Procurement Risk Engineering (online) Sustainable Engineering Practice Research and Quantitative Methods Terotechnology and Life Cycle Costs (online) Managing People		
<b>YEAR 2</b>		
Management in a Global Business Environment Financial Management Engineering Project Resource Planning Engineering Project Execution Advanced Engineering Project 1 Advanced Engineering Project 2		

## Master of Engineering Technology (Mechatronic Systems Engineering)

Such is the multidisciplinary nature of mechatronics, the Masters degree caters to students who have successfully completed an undergraduate degree in a range of disciplines including mechanical engineering, electrical and electronic engineering, software and computer systems engineering.

Our Master of Engineering Technology (Mechatronic Systems Engineering) course provides you with a balance in knowledge and skills between the three key areas of mechanical, electrical, and computer engineering, with a strong focus on project-based and multidisciplinary learning. Project-based courses gives you opportunities to bring your multidisciplinary knowledge together to learn and understand mechatronics as a discipline. You will also undertake an independent piece of research in the last year of your course.

NEW COURSE	DURATION	ANNUAL TUITION FEE
	2 years	\$28,800 – commencing 2020
CRICOS CODE	LOCATION	
0100638	Gippsland – Churchill	
<b>YEAR 1</b>		
Engineering Project Management Theory Research and Qualitative Methods Electives - Stream 1 (x3) Electives - Stream 2 (x2) Sustainable Engineering Practice		
<b>YEAR 2</b>		
Advanced Mechatronic Systems Design Actuators and Drives in Mechatronic Systems Advanced Industrial Robotic Systems Advanced Control Systems Engineering		
<b>ELECTIVES – STREAM 1</b>		
Analog and Digital Electronics Measurements and Computer Instrumentation Fluid and Pneumatic Control Engineering Computer Applications and Interactive Modelling Mechatronics Components Design Sensors and Artificial Perception System Dynamics and Control Industrial Robotics Systems		
<b>ELECTIVES – STREAM 2</b>		
Digital Imaging and Artificial Intelligence Intelligent Mechanisms Design Electrical and Electronic Drives and Articulators Digital and Embedded Systems		

## **Master of Engineering Technology (Civil Engineering)**

The specialised education gained in this program will allow you to obtain employment in the mid-level to higher level positions in the industry. It would also provide opportunities with career progression in to the managerial levels.

As a Civil Engineering graduate, you will have developed technical advanced skills together with the knowledge and appreciation of the environment, sustainable development, social and political aspects that impact upon the work of the civil engineer. Graduates may be employed with private consultants, contracting companies, or with federal, state and local government organisations. There are significant opportunities for employment in Australia, as well as in South-East Asia and throughout the rest of the world.

<b>DURATION</b>	2 years	<b>ANNUAL TUITION FEE</b>
		\$28,800 – commencing 2020

<b>CRICOS CODE</b>	079924C	<b>LOCATION</b>
		Ballarat – Mt Helen

### **YEAR 1**

- Geotechnical Engineering
- Surface Water Hydrology
- Modelling and Simulation
- Terotechnology and Life Cycle Costs
- Engineering Project Management and Sustainable Design
- Structural Analysis
- Engineering Research Methodology and Management
- Road Engineering

### **YEAR 2**

- Advanced Engineering Project 1
- Slope Stability
- Advanced Engineering Project 2
- Advanced Structural Analysis II
- Asset Management Techniques

## **Master of Engineering Technology (Mechanical Engineering)**

This is a professionally orientated program that provides students with the knowledge and skills that are necessary to obtain employment as a Professional Engineer.

The program also serves as a preparation for further graduate studies in technology, business administration and system design. Specifically, the program provides students with advanced studies in Mechanical Engineering.

<b>DURATION</b>	2 years	<b>ANNUAL TUITION FEE</b>
		\$28,800 – commencing 2020

<b>CRICOS CODE</b>	079927M	<b>LOCATION</b>
		Ballarat – Mt Helen

### **YEAR 1**

- Mechanics of Solids
- Introduction to Vibration Analysis
- System Dynamics and Control
- Modelling and Simulation
- Engineering Research Methodology and Management
- Thermodynamics
- Advanced Robotics
- Industrial Techniques in Maintenance Management

### **YEAR 2**

- Machine Dynamics and Vibration
- Advanced Engineering Project 1
- Machine System Design
- Energy Conversion
- Advanced Engineering Project 2
- Advanced Control Systems Engineering



## **Graduate Diploma of Mining**

The Graduate Diploma of Mining was created with the working engineer in mind. Intended as continuing education for scientists and engineers already involved with the mining industry, it is expected to appeal particularly to civil, mechanical, electrical, chemical and construction engineers, geologists, metallurgists, surveyors and other professionals with an interest in mining practice.

This program will build upon the knowledge already gained from invaluable industry experience. With a range of study modes available, from part time online learning to full time on campus study, this program can be tailored to suit your needs.

<b>DURATION</b> 2 years	<b>ANNUAL TUITION FEE</b> \$28,800 – commencing 2020
<b>CRICOS CODE</b> 085622M	<b>LOCATION</b> Ballarat – Mt Helen
<b>YEAR 1</b>	
Engineering Physics Mine Power and Services Technology Subsurface Environmental Engineering Modelling and Change (Introductory Level) Rock Mechanics Applications Surface Mining Operations and Equipment Secrets of The Matrix Planet Earth	
<b>YEAR 2</b>	
Mine Planning and Scheduling Mine Surveying Underground Production Systems Production Drilling and Blasting Mine Safety and Environmental Engineering Company Economics and Finance Materials Handling and Hoisting Tunnelling and Mine Development	

## **Master of Engineering Technology (Mining Engineering)**

This is a professionally orientated program that provides students with the knowledge and skills that are necessary to gain employment as an engineer and to be admitted as a member with Engineers Australia.

The program also serves as a preparation for further graduate studies in technology, business administration and other areas. Specifically the program provides students with advanced studies in Mining Engineering.

<b>DURATION</b> 2 years	<b>ANNUAL TUITION FEE</b> \$28,800 – commencing 2020
<b>CRICOS CODE</b> 079928K	<b>LOCATION</b> Ballarat – Mt Helen
<b>YEAR 1</b>	
Underground Production Systems Rock Mechanics Applications Engineering Research Methodology and Management Surface Mining Operations and Equipment Advanced Mine Ventilation	
<b>YEAR 2</b>	
Advanced Engineering Project 1 Mine Planning and Scheduling Advanced Engineering Project 2 Ore Reserve Estimation	

## **Engineering Science – Research**

Federation University Australia facilitates regionally relevant and internationally recognised world-class research activity. Ranking well above global standards, our research has received the highest possible five-out-of-five rating in seven areas under the Excellence in Research Australia (ERA) results.

In Australia and overseas we work with research bodies and industries, as well as other leading universities. And while our research has national and international significance, we also focus on regional matters close to our heart. Powered by outstanding people, our research helps build the communities we're proud to be part of.

## **MASTER OF ENGINEERING SCIENCE**

<b>DURATION</b> 1.5 years	<b>ANNUAL TUITION FEE</b> \$23,000 – \$28,000
<b>CRICOS CODE</b> 015134G	<b>LOCATION</b> Ballarat – Mt Helen; Berwick; Gippsland – Churchill

## **DOCTOR OF PHILOSOPHY – ENGINEERING**

<b>DURATION</b> 3 years	<b>ANNUAL TUITION FEE</b> \$23,000 – \$28,000
<b>CRICOS CODE</b> 023234C	<b>LOCATION</b> Ballarat – Mt Helen; Berwick; Gippsland – Churchill

# Entry Requirements

## Bachelor Degrees

Successful completion of Australian Year 12 with final-year mathematics courses; or overseas equivalent.

### English Language Requirements:

Overall IELTS band score of 6.0; with no band less than 6.0; or equivalent.

## Research

Higher Degrees by Research  
visit [Federation.edu.au/research](http://Federation.edu.au/research)

## Post-graduate Studies

Successful completion of a recognised 3 or 4 year engineering bachelor degree in the relevant specialisation (major field) with credit average; awarded by an Australian university; or a recognised overseas equivalent.

### English Language Requirements:

Overall IELTS band score of 6.0; with no band less than 6.0; or equivalent.

# How to apply

## Step 1. Find the course you wish to study

Find the Federation University course you wish to study

- For undergraduate and postgraduate courses visit [study.Federation.edu.au/international](http://study.Federation.edu.au/international)
- For Higher Degrees by Research visit [Federation.edu.au/research](http://Federation.edu.au/research)
- Check you meet the academic entry requirements
- Check you meet the English language requirements

## Step 2. Apply

Online applications are the preferred method

- Visit [Federation.edu.au/international/study-at-feduni/apply](http://Federation.edu.au/international/study-at-feduni/apply)
- Follow the instructions and ensure you have attached all relevant supporting documents
- A checklist of documentation required is available at [Federation.edu.au/international/prepare](http://Federation.edu.au/international/prepare)

**Note:** Be aware of cut off dates.

## Step 3. Assessment

Your application will be assessed by our team

- English language requirements
- Academic entry requirements

## Step 4. Offer made

### Congratulations!

You will be sent an International Student Offer and Acceptance Pack that includes:

- Letter of Offer
- Information for accepting your offer
- GTE and/or financial assessment forms\*

\*Sometimes, international students will be required to complete a pre-visa screening process as a condition of their offer under the requirement of the Simplified Student Visa Framework (SSVF). The requirements will depend on a number of factors. Refer to [Federation.edu.au/SSVF](http://Federation.edu.au/SSVF) for more information.

## Step 5. Accept & payment

Once you have provided all documentation and met all conditions, including passing SSVF Assessment. You will need to pay the required fees and we will issue you with an electronic Confirmation of Enrolment (CoE).

**Note:** Payments to FedUni must be made via Western Union through your StudyLink application.

## Step 6. Visa application with CoE

You will need your CoE to apply for your Australian student visa.

More information on the visa application process is available at [immi.homeaffairs.gov.au](http://immi.homeaffairs.gov.au)

**Note:** Make sure you plan in advance to get your visa in time.

## Step 7. Prepare to arrive

We will send you an International Student Support Guide to help you understand what to expect.

### Flights

Make sure you arrive in time to attend the compulsory International Student Orientation Program that is held in the weeks before semester commences.

### Accommodation

Check out the offers from FedUni Living – on campus accommodation in Ballarat and Gippsland.

### Transfers

Take advantage of Airport Pick up services from FedUni Living if you are going to the Ballarat or Gippsland campuses.

## Truong Phung Lecturer, Federation University

Federation University has become a new home for Truong Phung, who arrived in 2012 as a postgraduate student and is now a lecturer in Mechanical Engineering awaiting the assessment of his PhD.

Truong, originally from Ho Chi Minh City in Vietnam, was attracted to Federation because of the small class sizes and student-focused style of teaching.

*'It's a really friendly and open environment,' says Truong. 'The advantage of smaller classes is that students can spend extra time with their lecturers, tutors and research supervisors. I benefited from that as a student, and now I'm happy to help others succeed.'*

Truong's research soon opened opportunities for him to pass on his knowledge to others. *'Not long after starting the PhD, I was lucky to have the chance to tutor subjects that were related to my research, which allowed me to gain teaching experience and confidence. I quickly felt included among the staff, and other academics often come into my office for chats.'*

*'Having lived in big cities all our lives, it wasn't an easy decision to move to Ballarat, but we're really glad we did. The environment here's so good; the air's fresh, the travel's easy and there are plenty of things going on. I'm also really into photography, and I love capturing the beauty of the local scenery and wildlife.'*





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\*The Good University Guide 2020

#### Federation University Australia

Call + 61 3 5327 9018

Email [international@federation.edu.au](mailto:international@federation.edu.au)

Address PO Box 663, Ballarat VIC 3353, Australia

[Federation.edu.au/international](http://Federation.edu.au/international)

[Coursefinder.study.federation.edu.au](http://Coursefinder.study.federation.edu.au)

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