

# ➤ Bachelor of Engineering Technology (Mechanical and Manufacturing or Mechatronics Streams)

CRICOS 075246B, Course BET001

## COURSE DETAILS

### Duration

3 years

### Intake

February/July

### Campus

Dandenong

### Cost (2012 intake)

\$16,000 per year

### Entry requirements

- Equivalent Academic IELTS 6.0
- Equivalent Year 12
- Applicant must be 18 years of age at course commencement

## PATHWAYS INTO THE DEGREE

Students who have completed the Advanced Diploma of Engineering Technology (Mechanical Design or Robotics and Mechatronics) will receive substantial credit towards this degree.



ENGINEERS  
AUSTRALIA

## COURSE OVERVIEW

Acquire specialist knowledge and skills in the exciting world of mechanical or mechatronics engineering. This new degree focuses on industry and project-based learning, to produce work-ready engineering technologists with industry-relevant skills.

As an engineering technologist you will apply your problem-solving skills and knowledge of scientific fundamentals to the design, testing, inspection, adaptation, commissioning, management or operation of equipment, machinery, plant and sustainable systems.

This degree is accredited by Engineers Australia at the Engineering Technologist level. It can lead to post-graduate study and the opportunity to become a professional engineer through the Engineers Australia accredited conversion masters degree program.

## Degree streams

Students will choose from 2 strongly related streams, mechanical and manufacturing or mechatronics engineering, which have a common first 3 semesters and then branch into separate units. The first 3 semesters develop an appreciation of the professional engineering technologist's role and professional responsibilities, whilst providing a mathematical background and fundamental engineering science knowledge.

### Mechanical and Manufacturing Stream

Mechanical engineering is the second oldest and the broadest traditional engineering discipline. It applies the principles of physics and materials science to create, analyse, design, manufacture and maintain mechanical systems. Manufacturing engineering includes product design and manufacturing system design as well as factory operation.

### Mechatronics Stream

Mechatronics integrates mechanics, electronics, control theory, and computer science to optimise the functionality of product design and manufacture in an increasingly automated industrial environment.



The program combines traditional discipline based subjects such as Dynamics, Strength of Materials, Material Science, Fluid Mechanics and Thermodynamics with a wide range of industry-focused applied technology subjects such as: Machine Condition Monitoring, Industrial Automation, Design of Fluid Power Engineering Systems, Advanced Manufacturing Systems, Data Acquisition Systems, and Materials and Process Selection.

The Bachelor of Engineering Technology includes practical work placement to ensure that you graduate with a strong mix of practical work experience and academic foundation.

### JOB OPPORTUNITIES

- Technical supervisor
- Production manager
- Systems engineer

- Maintenance engineer
- Project engineer
- Technical team leader
- Commissioning engineer
- Plant engineer

### ASSESSMENT METHODS

Students will participate in the following assessment methods throughout their degree studies:

- Self directed learning
- Essays and research papers
- Oral presentations
- Quizzes
- Group work
- Project based learning
- Lectures, tutorials and required reading
- Laboratory practicals
- Practical placement

### COURSE STRUCTURE

Year 1

Semester 1 Core	Semester 2 Core
Professional Engineering Technologist Engineering Mathematics I Engineering Scientific Principles Engineering Measuring Equipment Engineering Design and Practice	Material Science Engineering Mathematics II Engineering Statics and Dynamics Engineering CAD II Engineering Practice II

Year 2

Semester 3 Core	Semester 4	
	Mechatronics stream	Mechanical and Manufacturing Stream
Manufacturing Processes Industrial Automation Strength of Materials Engineering Mathematics III Engineering Practice III	Programming Concepts Instrumentation Principles Design of Fluid Power Engineering Systems PLC1 Engineering Practice IV (Mechatronics) Practical Work Placement	Materials and Process Selection Mechanical Drive Systems PLC1 CAD/CAM and Engineering Practice Practical Work Placement

Year 3

Semester 5		Semester 6	
Mechatronics Stream	Mechanical and Manufacturing Stream	Mechatronics Stream	Mechanical and Manufacturing Stream
Industrial Networking Fluid Mechanics Advanced PLC Project Management Estimating and Costing	Mechanical Elements Fluid Mechanics Advanced Manufacturing Systems Project Management Estimating and Costing	Data Acquisition Systems Quality Management Industrial Project I Industrial Project II	Thermodynamics Quality Management Industrial Project I Industrial Project II Machine Condition Monitoring

### MORE INFORMATION

Please speak with an authorised Chisholm Institute agent, or:

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