

# Bachelor of Engineering (Automotive Engineering)(Honours)

2019  
Undergraduate

Gain the skills to design and work within the fast moving technologies of the automotive industry.

This program is built on core studies in mechanical engineering, with a specialisation in automotive engineering to develop economical and sustainable automotive designs, or solve automotive engineering problems.

You'll study vehicle power systems, sustainable vehicle design and automotive manufacturing and vehicle handling and control, vehicle aerodynamics, and vehicle noise and vibration.

The program incorporates complete car design with a focus on new technologies that benefit society such as driver-less cars, full-electric, hybrid power trains and fuel cells. It takes a global view and is increasingly environmental in outlook.

The emphasis will be on hands-on learning, with your work largely laboratory-based, where you'll conduct experiments and design your own projects.

With the opportunity for 12 weeks of industry placements undertaken locally or internationally, you'll be work-ready when you graduate. There are also opportunities to tackle research projects in partnership with industry, like the Engineers Without Borders Challenge.

This program is an outcome of industry and student demand.

## Industry connections

As a Cornerstone RMIT pathway student, you'll have opportunities to engage with industry from the beginning of your degree.

Through work placements, industry projects, internships, seminars and events, you'll be in contact with industry every step of the way.

You'll have the chance to do 12 weeks' work experience, research projects in collaboration with industry and the opportunity to work overseas with leading organisations.

## Professional recognition

This program is fully accredited by Engineers Australia. Graduates of the program are eligible for graduate membership of Engineers Australia. Full membership as a professional engineer may be obtained after an appropriate period of professional practice.

Australia is one of 15 countries that are signatories to the International Engineering Alliance, also known as the Washington Accord, for professional engineers. The qualification of graduates from this degree is recognised in all countries that are signatories to the Accord.

The degree also satisfies the requirements of the Society of Automotive Engineers, Australia, for graduate membership.

## Career outlook

Automotive engineering is a growing global industry. Automotive engineers are employed by major car, truck and bus companies, as well as racing teams and parts manufacturers.

Graduates from RMIT have gone on to work at a range of organisations including:

- F1 teams
- Porsche
- Ford
- General Motors
- Toyota
- Audi
- BMW
- Daimler-Chrysler
- Bosch

## Program snapshot

### Duration

Full-time: 4 years

### Location

#### Chennai and Melbourne campuses

Years 1 and 2 are conducted on the Chennai campus and years 3 and 4 on the Melbourne campuses

### How to apply

Apply ONLINE:

[cornerstone.edu.in/apply now](https://cornerstone.edu.in/apply-now)

### Fees

For fee information:  
[cornerstone.edu.in/fees-and-funding](https://cornerstone.edu.in/fees-and-funding)

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[cornerstone.edu.in/  
automotive-engineering](https://cornerstone.edu.in/automotive-engineering)

## Program structure

### Year 1 and 2

You'll learn the basics of mechanical engineering, focusing on the automotive industry.

You'll tackle and solve advanced engineering problems, particularly in the structural design and manufacturing of vehicles and automotive components.

### Year 2

While continuing your studies in maths, mechatronics, mechanics, and dynamics, you'll also undertake a Project Based Learning (PBL) course which concentrates on the study of machine elements and their incorporation into simple machines.

### Year 3

You'll deepen your knowledge in mechanical engineering. A highlight includes vehicle power systems which is an introduction to the development, design, specification, and operation of internal combustion engines for mobile applications, with a focus on traditional spark-ignited and diesel engines. It also covers alternative power plants and fuels.

### Year 4

In addition to elective studies, you'll also learn about vehicle handling and control, which covers performance prediction relatively early in the design process, and identifies the conflicts in designing for optimal performance in different models.

Your final year (capstone) project will develop and reinforce the skills and knowledge you need - as defined by Engineers Australia - to commence your professional engineering career.

### Program elective examples:

- Advanced Engineering Computer Aided Design
- Advanced Materials
- Computational Engineering 1
- Engineering Unmanned Aircraft Systems
- Humanitarian Experiential Learning Project
- Industrial and Vehicle Aerodynamics
- Sustainable Automotive Manufacturing
- Vehicle Noise and Vibration

Year 1	Introduction to Professional Engineering Practice	Engineering Mathematics C	Computer Aided Design	Mechanics and Materials 1
	Applied Thermodynamics	Further Engineering Mathematics C	Manufacturing Systems	Fluid Mechanics of Mechanical Systems
Year 2	Maths and Stats for Aero, Mech and Auto	Mechatronics Principles	Mechanics and Materials 2	Engineering Dynamics
	Mechanical Design 1		University elective	University elective
Year 3	Management of Vehicle Design	Solid Mechanics 3	Mechanical Vibrations	Research Methods for Engineers
	Vehicle Power Systems	Mechanics of Machines	Finite Element Analysis	Engineering and Enterprise
Year 4	Engineering Capstone Project Part A	Automatic Control	Advanced Thermo-Fluid Mechanics	Program elective

Compulsory courses
  Program electives
  University electives

Please note: This is an indicative program structure. Courses may change and be available in different semesters.