Engineering Degrees in Victoria

Listed below are over 30 engineering degrees offered at most universities in Victoria. Students should note that <u>unless otherwise indicated</u>* all engineering degrees require at the very least *English or EAL, and Maths: Mathematical Methods (CAS).* Courses with an * also require *Chemistry or Physics.*

For a comprehensive list of all courses, their prerequisites and double degrees on offer, visit [VTAC](#)

Institution	Course	Major Studies	ATAR 2018
DEAKIN M – Melbourne G – Waurn Ponds	**Civil**	Civil engineering management, Computer-aided design (CAD), Construction, Engineering (civil), Engineering (fluid), Engineering design, Geotechnical engineering, Materials engineering, Structural engineering, Transportation, Water resources engineering.	71.65 (M) 65.65 (G)
	Electrical & Electronics	Circuits and electronics, Computer-aided design (CAD), Control systems, Data communications, Electrical and electronic engineering and technology, Electrical engineering, Electronic engineering, Energy efficiency and demand management, PLC and SCADA, Power system protection, Power systems, Renewable energy, Smart distributions and transmission systems, Smart grid.	71.10 (M) 71.85 (G)
	Environmental	Environmental engineering, Environmental protection and management, Hydrology, Marine ecosystems, Sustainable infrastructure engineering, Waste management, Water engineering.	73.50 (G)
	Mechanical	Computer-aided design (CAD), Control systems, Engineering (fluid), Engineering (mechanical), Materials engineering, Mechanical design, Systems design.	69.60 (M) 65.00 (G)
	Mechatronics	3D printing, Advanced manufacturing, Artificial intelligence, Circuits and electronics, Computer-aided design (CAD), Control systems, Data communications, Electrical and electronic engineering and technology, Electrical engineering, Electronic engineering, Engineering (mechanical), Engineering (mechatronic), Mechanical design, Mechatronics design, Robotics, Virtual and augmented reality.	70.05 (M) 69.95 (G)
	Software	Artificial intelligence, Computer software, Cyber security, Cyber-physical systems, Data analytics, Data capturing technologies, Data structures and algorithms, Database programming, Embedded systems development, Internet-of-Things, Object-oriented programming, Programming, Robotics Applications, Robotics software, Software architecture, Software design, Software engineering, Software testing, Usability and user experience engineering, Web application development.	66.15 (M)

FEDERATION G – Gippsland B – Ballarat	**Civil**	Civil Engineering, Construction Management, Environmental Engineering, Geotechnical Engineering, Structural Engineering, Transport Engineering, Water Resources Engineering.	n/a (G) n/a (B)
	Mechanical	Automotive and Energy Efficiency, Design Engineering, Manufacturing Engineering, Mechanical Engineering, Mechanical and Industrial Engineering Technology, Mechanics, Robotics, Vibration and Machine Dynamics.	n/a (B)
	Mechatronic Systems	Computing Engineering, Electronics Engineering, Engineering Management, Manufacturing, Mechanical Engineering, Mechatronics, Robotics, Sensing and Artificial Intelligence, Systems Control	n/a (G)
	Mining	Drilling and Blasting, Mine Power and Services, Mine Ventilation, Mineral Deposit Evaluation and Processing, Mining Engineering, Rock Fragmentation, Rock Mechanics, Surface Mining Operations and Equipment, Underground Production Systems.	n/a (B)
LA TROBE M – Melbourne B – Bendigo	**Civil**	Civil engineering.	60.55 (M) 61.70 (B)
	Industrial Engineering	Engineering (industrial), Engineering design, Engineering enterprise, Engineering industry 4.0, Engineering innovation, Project management, Systems engineering.	60.05 (M) n/a (B)
MONASH Cl – Clayton	**Aerospace ***	Aerodynamics, Aeronautical, Aerospace Engineering, Avionics, Engineering.	91.10 (Cl)
	Engineering *	Aerospace engineering, Chemical engineering, Civil engineering, Electrical and computer systems engineering, Engineering, Environmental engineering, Geological engineering, Materials engineering, Mechanical engineering, Mechatronics engineering, Mining engineering, Oil and gas engineering, Renewable energy engineering, Software engineering.	91.05 (Cl)
	Software *	Engineering, Software engineering.	91.75 (Cl)
RMIT C – City C/B – City & Bundoora	**Advanced Manufacturing & Mechatronics**	Advanced manufacturing processes, Advanced robotics, Automatic control systems, Autonomous systems, Design for assembly and automation, Embedded systems, Engineering computing, Engineering mechanics, Manufacturing systems, Manufacturing systems modelling, Mechatronic design.	80.00 (C/B)
	Aerospace	Aerodynamics, Aerospace engineering, Aerospace maintenance, Aerospace science and spacecraft, Aircraft design, Aircraft systems, Aviation, Computer modelling, Mechanics (applied), Mechanics (flight), Mechanics (fluid), Mechanics (solids), Mechanics (structural).	85.05 (C/B)

RMIT C – City C/B – City & Bundoora	**Automotive**	Computer-aided engineering and design, Dynamics and control, Energy conservation and renewable energy, Engineering mathematics, Fluid mechanics, Industrial aerodynamics and computational fluid dynamics, Mechanics of machines, Mechatronics, Solid mechanics and materials, Thermodynamics, Vehicle handling and control, Vehicle noise and vibration, Vehicle power system and vehicle body design.	80.90 (C/B)
	Biomedical *Any maths*	Bioinformatics, Biomedical Signal and Image processing, Biomedical instrumentation, Cell Biology, Chemistry, Circuit Theory, Engineering biomechanics and biomaterials, Human physiology, Implant and Rehab Engineering, Physics, Programming.	85.55 (C)
	Chemical *	Chemical sciences, Environmental, Food science and biotechnology, Metallurgical, Petroleum, Rheology.	80.00 (C)
	Civil & Infrastructure	Civil engineering management, Computer modelling, Construction management, Engineering (civil), Engineering (environmental), Engineering (geoengineering), Engineering (structural analysis and design), Engineering (transport engineering), Irrigation and water management, Mechanics (structural), Project management, Risk analysis and management, Roads and road design, Software applications, Water quality management, Water resources engineering.	85.05 (C/B)
	Computer & Network	Computer and network security, Computer engineering, Computer networks, Embedded systems, Internet communications, Microprocessor, Microprocessor control systems, Mobile and cloud networks and computing, Multimedia engineering (audio), Multimedia engineering (image), Multimedia engineering (speech), Multimedia engineering (video signal processing), Network engineering, Network infrastructure design and performance, Network management and software-defined networking, Reconfigurable processors and devices, Signal and systems, Telecommunications (systems and networks), Wireless technologies.	80.35 (C)
	Electrical	Control systems, Electrical distribution, Electrical energy conversion, Electrical engineering, Electrical transmission, Industrial automation, Microprocessor control systems.	80.00 (C)
	Electrical & Electronic	Circuits and electronics, Communication systems, Computer engineering, Computer networks, Control systems, Digital and analogue electronics, Electrical systems, Electronic systems, Photonics, Signal processing, Wireless technologies.	80.60 (C)
	Environmental	Chemical engineering, Civil engineering, Environmental analysis, Environmental engineering, Geology, Hydrogeology, Hydrology, Infrastructure management, Land contamination, Pollution control, Process engineering, Sustainability, Transport engineering, Urban systems, Waste water treatment, Water engineering, Water management.	81.35 (C/B)

RMIT C – City C/B – City & Bundoora	**Mechanical**	Computer-aided engineering and design, Dynamics and control, Energy conservation and renewable energy, Engineering and society, Engineering mathematics, Fluid mechanics, Industrial aerodynamics and computational fluid dynamics, Manufacturing, Mechanical design, Mechanics of machines, Mechatronics, Professional research project, Solid mechanics and materials, Thermodynamics.	80.30 (C/B)
	Software Engineering	Algorithms and data structures, Artificial intelligence, Computer architecture, Computer operating systems, Database systems, Industrial collaboration and experience, Networks and data communications, Object-oriented design, Object-oriented modelling, Object-oriented programming, Object-oriented software engineering, Operating systems, Problem solving, Programming, Programming (C), Programming (Java), Project management, Software development, Software engineering, Software engineering practices.	90.05 (C)
	Sustainable Systems	Advanced life cycle and systems assessment, Chemistry fundamentals, Computer-aided design, Electrical energy systems, Engineering Capstone Project, Engineering Computing, Fluid mechanics, Intelligent transport systems, Manufacturing management, Mathematics, Statistics, Sustainable energy systems, Sustainable engineering logistics systems, Sustainable engineering materials, Sustainable system design, Sustainable transport systems, Systems engineering principles, Thermodynamics.	80.05 (C/B)
	Telecommunications	Antennas, Circuits and electronics, Communication systems and theories, Digital signal processing, Electronic systems, Electronics, Engineering (communication), Engineering (electronics), Engineering (telecommunications), Engineering design, Fibre optical technology, Industrial and Defence radar technologies, Internet Engineering, Modern network engineering, Network security, Optoelectronics and Photonics, Satellite communications, Telecommunications (transmission systems), Wireless and Mobile communications, Wireless technologies.	n/a (C)
SWINBURNE H – Hawthorn * Professional Degree # Any maths required R.C. – Range of Criteria used for selection	**Engineering**	Architectural engineering, Biomedical engineering, Civil engineering, Construction engineering, Electrical and electronic engineering, Mechanical engineering, Product design engineering, Robotics and mechatronics, Software engineering, Telecommunications engineering.	76.10 (H) 85.00 (H) *
	Engineering Practice #	Biomedical engineering, Civil engineering, Construction engineering, Electrical and electronic engineering, Industry 4.0, Internet of things and people, Mechanical engineering, Product design engineering, Products designed for people, Robotics and mechatronics, Smart cities, Software engineering, Telecommunications engineering.	R.C. (H)

VICTORIA FP – Footscray Park **#** Engineering degrees at VU require <u>any maths</u>	**Architectural #**	Architecture, Building (design), Building (technology), Building law and building practice, Computer-aided design, Construction, Design, Engineering, Engineering (architectural), Engineering (electrical), Engineering (mechanical), Environment and sustainability, Environmental comfort and life safety design, Green building design, Management, Sustainable building design.	n/a (FP)
	Civil #	Civil engineering, Computer-aided design, Construction, Construction management, Environmental engineering, Geosciences, Hydraulics and hydrology, Land and water management, Management, Project management, Roads and road design, Structural engineering and design, Surveying, Sustainable development, Transport and traffic engineering, Water resources engineering.	n/a (FP)
	Electrical & Electronic #	Digital and analogue electronics, Electrical engineering management, Engineering (communication), Engineering (computer systems), Engineering (computer), Engineering (electrical generation), Engineering (electrical), Engineering (electronics), Engineering design, Microelectronics, Microprocessors, Telecommunications.	n/a (FP)
	Electrical & Sports #	Actuators, Biomechanics, Data analysis, Electrical and electronic engineering, Sensors, Software development, Wearable electronics.	n/a (FP)
	Mechanical #	Automotive design, Computer-aided design, Design (product development), Engineering, Engineering (manufacturing), Engineering (mechanical), Industrial engineering, Manufacturing management, Mechanical design, Mechanical engineering, Mechanics (fluid mechanics), Mechanics (solid mechanics), Production processes, Project management.	n/a (FP)