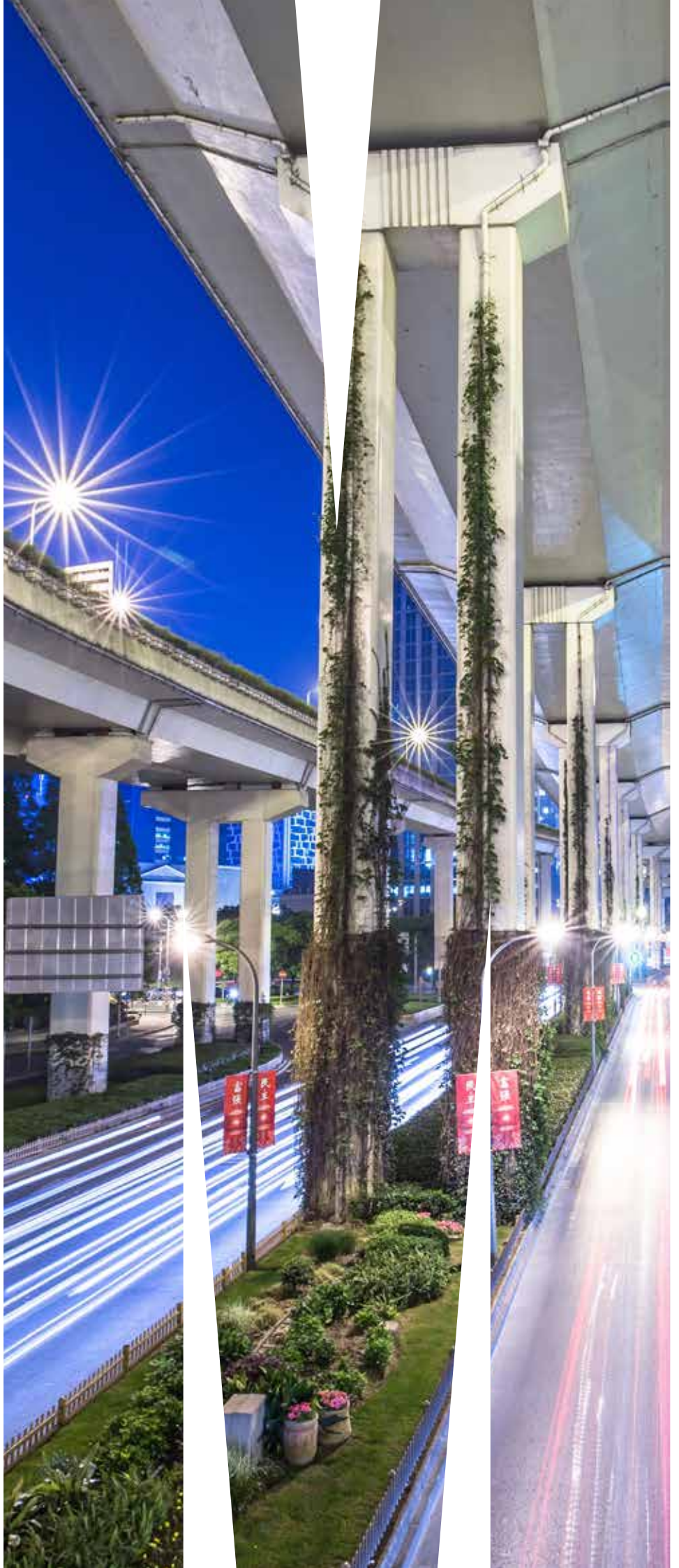




MONASH
University

MONASH
CIVIL ENGINEERING

monash.edu/engineering/civil



**GROUP
OF EIGHT
AUSTRALIA**

MAKING AN IMPACT

Studying in Monash University's Department of Civil Engineering puts you alongside some of the country's best engineering minds.

Civil engineers improve systems and processes that allow humans and nature to coexist with minimal impact. Modern society could not function without them.

We need civil engineers to smartly manage existing civil infrastructure, to design and build more sustainable transportation systems, to construct more livable commercial and industrial complexes and to better control water supply and pollution. We need efficient, cost-effective and innovative monitoring and maintenance of infrastructure such as roads, bridges and buildings.

Civil engineering at Monash encompasses four major fields of activity: structural, water, transport, and geotechnical engineering. Other specialisations available from the Civil Engineering Department are Environmental Engineering and Resources Engineering which includes Mining and Renewable Energy.

The latest education techniques, such as computer-assisted and project-based learning, are applied and developed by enthusiastic teachers. We emphasise a balanced approach between theory and practical studies. Recognising the importance of a solid educational environment that responds to individual students' needs, supporting and encouraging interaction between students and staff.

The Civil Engineering Department is home to the Monash Institute of Transport Studies, Monash Water for Liveability Centre, Cooperative Research Centre for Water Sensitive Cities, the SPARC Hub and ARC Nanocomm Hub for nanoscience based construction materials.



WHAT DO CIVIL ENGINEERS DO?

- Investigate, design and manage the construction of multi-storey buildings.
- Design a water supply system for a new city.
- Provide smart mobility solutions underpinned by technological advances to traffic congestion problems.
- Manage the maintenance of the large bridges that link most cities' major arterials.
- Develop new ways of tackling climate change through geological sequestration of carbon dioxide.
- Prevent contamination of soil and ground water from industrial activities.
- Develop 'green buildings' that produce more electricity than they consume.
- Design systems to control erosion in rivers and protect people from the devastation of floods.
- Design a road, freeway or tunnel and manage its construction.
- Develop ways of treating and reusing stormwater and waste water to preserve precious resources.
- Develop mathematical or physical models of systems, such as soils, water currents or traffic flows, to study behaviour and develop better management approaches for systems.
- Interpret and organise drawings, plans, construction methods and procedures.
- Work with consortiums to design eco-tourism resorts.
- Run training courses for other engineers to keep them abreast of specialist skills.
- Work in mining extraction and processing of ores from the earth.

Established in 1961, the Department of Civil Engineering at Monash University has a solid reputation of teaching and leading research in civil engineering. It has a long and productive history in the areas of geomechanics, structural, transport and water engineering.

A WORLD OF OPTIONS IN CIVIL ENGINEERING



Local and international opportunities abound in private industry, government, construction engineering management, mining, marine and resort developments, property development, and consulting firms.

Recent graduates from the department have gone on to exciting positions in private industry with companies such as AECOM, Jacobs (previously SKM), GHD Pty Ltd, Hyder Consulting Pty Ltd and Thiess Pty Ltd. Major government bodies such as VicRoads and Melbourne Water have employed others, while many are working in international aid and on development projects to solve global and humanitarian challenges, such as the impact of climate change on infrastructure, providing cost effective and sustainable infrastructure in remote and under privileged communities and ensuring clean and safe drinking water supplies. You might even start your own company.



CIVIL ENGINEERING AT MONASH

Civil engineering at Monash offers a common first-year program as part of the Bachelor of Engineering course, giving you time to develop an understanding of the diverse range of engineering fields before choosing a discipline. At the end of first year, you can apply to enter civil engineering, based on your academic results.

It's a four-year degree if undertaken full-time, or up to eight years as a part-time student.

You automatically qualify for a degree with honours for high academic achievement throughout the course as a whole – no additional time is required. If you achieve a final overall average of first-class honours, you're guaranteed a scholarship to undertake research studies after the final year of your undergraduate degree.

COURSE OUTLINE

1

LEVEL 1

The first level of the course has units common across engineering disciplines. At the end of your first year, you can choose to specialise in civil engineering.

2

LEVEL 2

Specialisation in civil engineering begins. Study is project-based, linking theory and practical applications. Units are taught around major group projects in the areas of structural, transport, water and geomechanics engineering. The project-based approach continues into later levels.

3

LEVEL 3

Develop professional skills. Deepen your knowledge with technical electives in management, engineering investigation, transport, structural, water, and geomechanics engineering.

4

LEVEL 4

Continue your technical electives. Coursework includes an independent research project unit, capstone design, and specialised units from the Department of Civil Engineering.

DOUBLE YOUR OPPORTUNITIES

In double degree programs, the units from each course are mixed in each year of study, allowing you to gain two degrees in five or six years.

Civil engineering can be combined with a number of complementary disciplines, allowing you to enhance your educational experience and career options. Why not combine language study through a double degree in arts? Or gain a business advantage with a double degree in commerce or law?

Double degrees are available with:

- Architectural design
- Biomedical science
- Commerce
- Arts
- Law
- Science.

You can also extend your studies with vertical double and earn both a Bachelor of Engineering (Honours) and Masters degree, in just five years.

COURSE RECOGNITION

The Bachelor of Civil Engineering (Honours) accredited by Monash University is fully accredited with Engineers Australia. Australia is a signatory to the Washington Accord, enabling Monash engineering graduates to work in any country in the world that is also a signatory, without needing to requalify.

Meg's career has seen her take part in multibillion dollar highway projects and major infrastructure works, including working on the Woolgoolga to Ballina Pacific Highway upgrade.

"It's exciting to be a part of one of Australia's largest infrastructure improvement works. I can't wait until one day I can go on a road trip to Queensland and see my project a reality."

MEG PANOZZO

Engineer – NSW & ACT Transport, Arup.
Bachelor of Civil Engineering (Honours) and Bachelor of Arts.





BUILD YOUR GLOBAL FUTURE

Civil engineers are some of the most sought-after graduates in industry.

You can find civil engineers in a myriad of areas, including designing, building and managing just about everything from a major freeway or railway, to a water storage reservoir, oil rig platform, harbour facility, or environmentally-friendly structure. Many civil engineers also work in the mining, oil, and gas industry.

NEXT STEPS

COURSE DETAILS

Location: Clayton
Indicative ATAR: 91.80*
Indicative IB Score: 34*
Duration: 4 years
Degree awarded: Bachelor of Civil Engineering (Honours)

VCE PREREQUISITES (UNITS 3 AND 4)

30 English (EAL) or 25 English other than EAL	+	25 Mathematical Methods (any) or Specialist Mathematics	+	25 Chemistry or Physics
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INTERNATIONAL BACCALAUREATE SUBJECT PREREQUISITES

4 English A SL	3 English A HL	4 Literature + Performance SL	5 English B SL	4 English B HL	5 English AB SL
or	or	or	or	or	
+					
4 Mathematics SL	3 Mathematics HL	3 Further Mathematics HL			
+					
4 Chemistry SL	3 Chemistry HL	4 Physics SL	3 Physics HL		

*The scores provided are to be used as a guide only and are either the lowest selection rank to which an offer was made in 2019 or an estimate (E).

ENTERING THE CIVIL ENGINEERING SPECIALISATION

After you have successfully completed your first year, you may apply for entry into the civil engineering specialisation.

HOW TO APPLY

DOMESTIC (AUSTRALIAN) AND ONSHORE INTERNATIONAL STUDENTS

If you are an Australian or New Zealand citizen, an Australian permanent resident, or you are an international student studying an Australian Year 12 or IB in Australia or New Zealand, apply through the Victorian Tertiary Admission Centre (VTAC).

Visit: vtac.edu.au

INTERNATIONAL STUDENTS

International students should apply directly to Monash University and must have completed an equivalent qualification to the Victorian Certificate of Education (VCE) and the prerequisite subjects or equivalent.

For more information visit: monash.edu/study/international

ENQUIRIES

Contact Monash Future Students to find out more.

T: 1800 MONASH (666 274)

E: future@monash.edu

For more detailed information about the Bachelor of Engineering degree in the field of civil engineering, including double degrees and credit transfer possibilities, contact the course administration officer:

Ms Irene Sgouras

T: +61 3 9905 4971

E: irene.sgouras@monash.edu

monash.edu/engineering/civil

Further information

monash.edu/engineering/civil

1800 MONASH (1800 666 274)

The information in this brochure was correct at the time of publication (July 2019).
Monash University reserves the right to alter this information should the need arise.
You should always check with the relevant Faculty office when considering a course.

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