

**MONASH**  
**ENVIRONMENTAL**  
**ENGINEERING**

[monash.edu/engineering/  
environmental](http://monash.edu/engineering/environmental)

# WHAT DO ENVIRONMENTAL ENGINEERS DO?

By minimising environmental problems through sustainable development, environmental engineers make a genuine difference to our world. By improving the knowledge on air, water and land quality, they help restore the environment.

Environmental engineers work closely with a range of other professionals and with the community.

They routinely:

- develop sustainable building and transport system in harmony with the environment
- design and implement sustainable manufacturing technologies to minimise industrial pollution
- remediate or rehabilitate contaminated sites
- reduce catchment soil erosion and salinity
- evaluate, monitor, regulate and minimise the environmental risks and impacts of engineering projects
- develop environmental management systems
- ensure the provision and distribution of clean water supplies
- design, construct, operate and manage wastewater treatment facilities.



## CAREERS IN ENVIRONMENTAL ENGINEERING

Our growing population and improving living standards continue to provide many local and international employment opportunities in government organisations, consultancies and contracting firms, research and development organisations, and education and technology transfer.

Environmental engineers also work for large companies and industry, universities and the CSIRO in interdisciplinary teams to manage environmental problems through the application of scientific, engineering and interpersonal skills.

### AS A GRADUATE YOU CAN WORK ON ENVIRONMENTAL ISSUES SUCH AS:

- air pollution control
- solid and hazardous waste management
- sustainable buildings
- water supply and resource management
- storm water management
- water and wastewater treatment
- resource efficiency
- land management
- environmental management systems
- environmental impact assessment



# ENVIRONMENTAL ENGINEERING AT MONASH

The environmental engineering course at Monash is multidisciplinary, providing the necessary skills to solve, implement and manage engineering activities from a sustainability perspective. You can select units from four streams and choose complementary units from science, geography or arts.

## SPECIALISE AREAS

- **URBAN INFRASTRUCTURE & RESOURCES MANAGEMENT**  
sustainable infrastructure design, smart and green buildings, transport systems
- **WATER TREATMENT & RESOURCES MANAGEMENT**  
water and waste water treatment, hydrology and catchment management, sustainable urban water systems
- **WASTE TREATMENT & MANAGEMENT**  
domestic and industrial waste treatment, waste to materials, waste to energy and management
- **SOIL & GEOMECHANICS**  
remediation and rehabilitation of contaminated sites, environmental impact and risk assessment, fate and transport of pollutants
- **SUSTAINABLE PROCESSING**  
cleaner production technologies, sustainable resource processing, environmental technologies

ALL MONASH ENGINEERING SPECIALISATIONS CONSIDER SUSTAINABILITY, BUT AS AN ENVIRONMENTAL ENGINEERING STUDENT, YOU WILL LEARN TO CONSIDER VARIOUS PERSPECTIVES AND STRIKE A BALANCE.



# 1

## LEVEL 1

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

# 2

## LEVEL 2

Increases the engineering content with a mixture of core engineering units, mathematics and some environmentally directed units to begin to integrate the content gained from other units.

# 3

## LEVEL 3

Some core engineering units continue plus more units from your specialist elective stream. You'll be introduced to more environmentally focused engineering units, including monitoring and control technologies in energy, air, water, wastewater and soils. Their environmental implications such as climate change and associated impacts will also be introduced.

# 4

## LEVEL 4

Provides high level applications for earlier studies through substantial engineering design and research projects, complemented by environmental impact assessment and management systems and economics, as well as other advanced elective units and interdisciplinary units.

# ENVIRONMENTAL ENGINEERING DOUBLE DEGREES

## ENVIRONMENTAL ENGINEERING/SCIENCE

Adding a science degree provides greater depth on the physical processes underlying the environment. You can combine environmental engineering with all areas of science, such as chemistry, physics, mathematics, geology and many others.

## ENVIRONMENTAL ENGINEERING/COMMERCE

You can combine environmental engineering with many areas, such as economics, management, finance and many others – all of which relate to the development of many engineering technologies and projects (eg. economics of climate change, financing of renewable energy).

## ENVIRONMENTAL ENGINEERING/ARTS

Study environmental engineering alongside languages, geography, development studies, and many areas of arts – allowing you greater insight into the human aspects of current sustainable development challenges or potentially a more global career.

## COURSE RECOGNITION

All the environmental engineering programs offered by Monash University are fully accredited with Engineers Australia. Australia is a signatory to the Washington Accord, enabling Monash University engineering graduates to work in any country in the world that is also a signatory, without needing to re-qualify.

## COURSE DETAILS

**Location:** Clayton

**Indicative ATAR:** 91.80\*

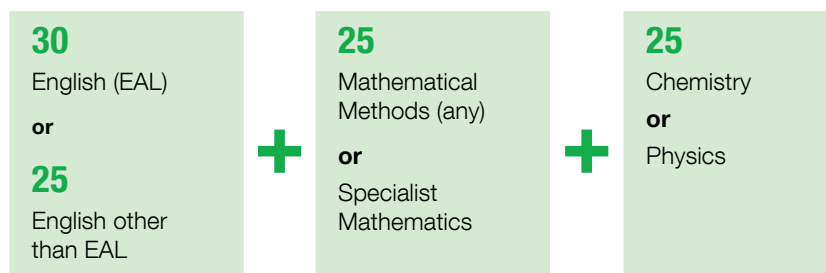
**Indicative IB Score:** 34\*

**Duration:** 4 years

**Degree awarded:** Bachelor of Environmental Engineering (Honours)

\*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).

### VCE prerequisites (units 3 and 4)



### International baccalaureate subject prerequisites

<b>4</b> English A SL <b>or</b>	<b>3</b> English A HL <b>or</b>	<b>4</b> Literature + Performance SL <b>or</b>	<b>5</b> English B SL <b>or</b>	<b>4</b> English B HL <b>or</b>	<b>5</b> English AB SL
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<b>4</b> Mathematics SL	<b>or</b>	<b>3</b> Mathematics HL	<b>or</b>	<b>3</b> Further Mathematics HL
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<b>4</b> Chemistry SL	<b>or</b>	<b>3</b> Chemistry HL	<b>or</b>	<b>4</b> Physics SL	<b>or</b>	<b>3</b> Physics HL
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## ENTERING THE ENVIRONMENTAL ENGINEERING BRANCH

After you have successfully completed your first year, you may select the environmental engineering stream.

## HOW TO APPLY

### Domestic 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](http://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](http://monash.edu/study/international)

## ENQUIRIES

Contact Monash Future Students to find out more:

Phone: 1800 MONASH (666 274)

Email: [future@monash.edu](mailto:future@monash.edu)

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

**Ms Irene Sgouras**

Phone: +61 3 9905 4971

Email: [irene.sgouras@monash.edu](mailto:irene.sgouras@monash.edu)

[monash.edu/engineering/environmental](http://monash.edu/engineering/environmental)

# WHAT IS ENVIRONMENTAL ENGINEERING?

## Our graduates have varied and diverse career options

Few other branches of engineering have such a profound impact on our health and quality of life.

Environmental engineering is all about energy and resource use and minimising waste, while at the same time providing the community with the development opportunities it needs to grow.

A mature and growing multidisciplinary branch of engineering, it involves the implementation and management of engineering solutions and programs that are in harmony with the principles of sustainable development.

Environmental engineers work in a variety of organisations, including:

- engineering consulting firms
- industries that need sustainable manufacturing systems – mining, chemical, manufacturing, etc.
- private and municipal agencies that supply drinking water and treat wastewater
- companies treating and disposing of hazardous waste
- government agencies monitoring and regulating environmental issues
- universities that teach and conduct research on environmental issues
- international agencies that aid developing nations
- local government authorities.



## Further information

[monash.edu/engineering/environmental](https://monash.edu/engineering/environmental)

**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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