



Faculty of Science, Technology and Engineering

Master of Civil Engineering (Sustainable Infrastructure)

Introduction

What is Civil Engineering?

Civil Engineers design and construct most of the basic infrastructure needed by society. This includes bridges, multi-storey buildings, highways, railways, tunnels, airports, domestic water supplies, irrigation systems, flood protection works, and the collection and disposal of wastes and waste water. Civil Engineers are also involved with the protection of the environment through all stages of design and construction.

About Sustainable Infrastructure

In the 21st century, sustainable infrastructure means thinking differently about what we build and how we build so that it is environmentally friendly. It also means designing and maintaining infrastructure with an eye to resource conservation over the life of the project using new materials that have minimum impact on the environment and yet are very effective.

The need for Sustainable Infrastructure

There is currently a world-wide need for sustainable infrastructure. This need has been exacerbated by the critical shortage of skilled professionals to undertake the massive infrastructure projects required to ensure future prosperity. For example, Engineers Australia estimates 70,000 engineers will have retired in the five years to 2011, but only 45,000 graduates will emerge from universities*. Similar problems are being experienced overseas, particularly in rapidly developing countries.

*The Australian Financial Review, May 4, 2009.

Studying at La Trobe University

Civil Engineering at La Trobe, Bendigo

The La Trobe University Civil Engineering programs on the Bendigo campus provide integrated learning with industry-based work experience and project opportunities as part of the course. This enables students to work in paid positions in industry under the supervision of experienced engineers. The Department of Civil Engineering and Physical Sciences has strong links with industry through its research and consulting activities, its extensive scholarship program and its graduates.

La Trobe's Bendigo Campus

La Trobe University's Bendigo campus is the University's second largest campus with more than 4,000 local and international students studying courses in this regional Victorian city. Because of the relatively small size of the campus and city, the student community is strong and inclusive. All of La Trobe University's course areas are represented in Bendigo.

The Bendigo campus is situated on 33 hectares of natural Australian bushland adjacent to the Bendigo National Park, just three kilometres from the centre of Bendigo. For more information please visit www.latrobe.edu.au/bendigo

Graduate Profile



"The course at Bendigo prepared me for work in a huge range of areas. Upon completion of the course I found it was well respected by prospective

employers and I didn't have any problems finding a graduate position. I joined the graduate program at McConnell Dowell which is a construction company that operates throughout Australia, South East Asia and the Middle East".

Carey Ashby, Bachelor of Civil Engineering



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Employment Opportunities

The need for civil engineers has increased due to the demand for sustainable infrastructure and the requirement to consider environmental and sustainability issues in future developments. In Australia, these issues are particularly relevant to the water and local government sectors. Similar career opportunities exist overseas. Our graduates are working on large scale structural projects in capital cities, on oil rigs, with mining companies, water authorities, local governments and private sectors.

Some of the companies that have employed La Trobe graduates

- Connel Wagner
- Singleton Bahen Stanfield
- AKRON Roads Pty Ltd
- Coliban Water
- Sinclair Knight Merz, Perth
- Fulton Hogan Pty Ltd
- Department of Infrastructure
- North Central Catchment Management Authority
- FRH Group
- Dunlop and Piston Earthmoving
- VicRoads

Programs of Study

Master of Civil Engineering (Sustainable Infrastructure)

Duration: one year full-time
Fees: (2011) A\$22 040* Int'l fee
Intake: February

This course consists of eight, 15 credit point units and can be completed in one year full time. The units/subjects of study are as follows:

- Australian Engineering Practice
- Concepts and Principles of Sustainability
- Climate and Environment
- Sustainable Infrastructure A
- Contemporary Sustainable Infrastructure
- Sustainable Infrastructure B
- Industry-focused elective
- Industry-focused elective

Electives can be chosen from units within the Faculty, other Faculties or external organisations, such as the Centre for Pavement Engineering Education. Elective units should be chosen in the field of the student's primary specialisation, for example local government, water industries or transport. The choice of electives is subject to approval by the course coordinator.

Master of Civil Engineering (Sustainable Infrastructure) – Honours

Duration: 2 years full-time
Fees: (2011) A\$22 040* per annum Int'l fee
Intake: February

This course consists of the eight units that comprise the Master of Civil Engineering (Sustainable Infrastructure) plus the following two 60-credit point honours units. The units/subjects of study are as follows:

- Master Honours – Part A
- Master Honours – Part B

Students will work under a supervisor on a project that may be sponsored by industry and will submit a thesis.

Further information

For further information on these courses and other Civil Engineering programs, please visit www.latrobe.edu.au/ceps

**The University reserves the right to vary fees on an annual basis. Fees will not normally rise above 7 per cent, per annum. Should the University decide to increase its fees, that increase will take effect on 1 January of the following year.*

Entry requirements

Applicants must have the equivalent of an Australian four year bachelor degree in civil engineering, structural engineering or environmental engineering. In addition, prospective international students must provide evidence of their English language proficiency. Please visit our website at www.latrobe.edu.au/international/applyhow-to/english for further details on the English language requirement.

International students can access the University's Refund Policy and Privacy Statement at: www.latrobe.edu.au/international/apply

