# B-ENG Civil Engineering stream

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| **Year and Campus:** | 2015 |
| **Coordinator:** | Dr Sam Yuen stsy@unimelb.edu.au |
| **Contact:** | **Melbourne School of Engineering**<br>Ground Floor, Old Engineering (Building 173)<br>Current students:<br>Email: **13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au)**<br>Phone: 13MELB (13 6352)<br>+61 3 9035 5511 |
| **Overview:** | **THERE IS NO FURTHER INTAKE INTO THIS COURSE. COURSE STRUCTURE ONLY APPLIES TO STUDENTS COMMENCING PRIOR TO 2010**.<br>The Civil Engineering stream of the Bachelor of Engineering<br>See Bachelor of Engineering (B-ENG) |
| **Learning Outcomes:** | See Bachelor of Engineering (B-ENG) |
| **Structure & Available Subjects:** | **THERE IS NO FURTHER INTAKE INTO THIS COURSE. COURSE STRUCTURE ONLY APPLIES TO STUDENTS COMMENCING PRIOR TO 2010**.<br>Completion of 400 points of study.<br>The structure of the Bachelor of Engineering degree requires completion of specific subjects as part of this stream. The majority of subjects have one or more prerequisites and therefore the sequence in which subjects are taken is very important. It is unlikely that prerequisite waivers will be granted for these engineering subjects and therefore students should take care to select subjects in one study period that satisfy prerequisites for subjects in later study periods. |
| **Subject Options:** | The following subjects are required for this stream of the Bachelor of Engineering. |

### First Year (100 points normally taken in Year 1)

| Subject | Study Period Commencement: | Credit Points: |
|---|---|---|
| ENGR10003 Engineering Systems Design 2 | Summer Term, Semester 2 | 12.50 |
| ENGR10004 Engineering Systems Design 1 | Semester 1, Semester 2 | 12.50 |
| MAST10005 Calculus 1 | Semester 1, Semester 2 | 12.50 |
| MAST10006 Calculus 2 | Semester 1, Semester 2 | 12.50 |

Plus

- Two breadth subjects (i.e. 25.00 credit points total)
- Two science subjects (i.e. 25.00 credit points total)

N.B.

- Students who have completed VCE Specialist Mathematics (or equivalent) are exempt from MAST10005 Calculus 1 and should therefore enrol in MAST10006 Calculus 2 and MAST10007 Linear Algebra.
- Students with a high level of achievement in mathematics may enrol in both MAST10008 Accelerated Mathematics 1 and MAST10009 Accelerated Mathematics 2 instead of both MAST10006 Calculus 2 and MAST10007 Linear Algebra.
- Science subjects could be chosen to keep options open for other streams of engineering (e.g. chemistry, informatics and physics subjects) or be chosen for disciplines not directly related to engineering.

### Second Year (100 points normally taken in Year 2)

**Core** (total 62.5 points)

| Subject | Study Period Commencement: | Credit Points: |
|---|---|---|
| ENEN20002 Earth Processes for Engineering | Semester 2 | 12.50 |
| ENGR20003 Engineering Materials | Semester 2 | 12.50 |
| ENGR20004 Engineering Mechanics | Summer Term, Semester 1, Semester 2 | 12.50 |
| MAST10007 Linear Algebra | Summer Term, Semester 1, Semester 2 | 12.50 |
| MAST20029 Engineering Mathematics | Summer Term, Semester 1, Semester 2 | 12.50 |

Plus

- Two breadth subjects (25.00 credit points)
- One science or engineering elective (12.50 credit points)

N.B.

- Students who have completed VCE Specialist Mathematics (or equivalent) and completed either both MAST10006 Calculus 2 and MAST10007 Linear Algebra or both MAST10008 Accelerated Mathematics 1 and MAST10009 Accelerated Mathematics 2 in Year 1 can replace MAST10007 Linear Algebra in the table above with a science elective.
- A science elective is any subject available as science credit in the Bachelor of Science course (B-SCI). Refer to **Science-credited subjects - new generation B-SCI and B-ENG (../../view/current/%21B-SCI-SPC%2B1021)** for a full list of subjects. Science electives may have prerequisites.
- An engineering elective is any subject offered by the Melbourne School of Engineering and requires the approval of the stream coordinator.

## Third Year (100 points normally taken in Year 3)

**Please note:** In 2013 *ENGR30001 Fluid Mechanics & Thermodynamics* was replaced with *ENGR30002 Fluid Mechanics*. Students who have completed ENGR30001 are not required to completed ENGR30002

**Core** (total 100 points)

| Subject | Study Period Commencement: | Credit Points: |
|---|---|---|
| CVEN30008 Engineering Risk Analysis | Semester 1 | 12.50 |
| CVEN90043 Sustainable Infrastructure Engineering | Semester 1 | 12.50 |
| CVEN90044 Engineering Site Characterisation | Semester 1 | 12.50 |
| ENGR30002 Fluid Mechanics | Semester 1, Semester 2 | 12.50 |
| CVEN30009 Structural Theory and Design | Semester 2 | 12.50 |
| CVEN30010 Systems Modelling and Design | Semester 2 | 12.50 |
| CVEN90045 Engineering Project Implementation | Semester 2 | 12.50 |
| CVEN90048 Transport Systems | Semester 2 | 12.50 |

## Fourth Year (100 points normally taken in Year 4)

**Core** (total 62.5 points)

| Subject | Study Period Commencement: | Credit Points: |
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| CVEN90049 Structural Theory and Design 2 | Semester 1 | 12.50 |
| CVEN90050 Geotechnical Engineering | Semester 1 | 12.50 |
| CVEN90051 Civil Hydraulics | Semester 2 | 12.50 |
| CVEN90052 Integrated Design | Not offered 2015 | 25 |

**Civil Engineering Electives** (total 37.5 points)

| Subject | Study Period Commencement: | Credit Points: |
|---|---|---|
| CVEN90024 High Rise Structures | Semester 1 | 12.50 |
| ENEN90006 Solid Wastes to Sustainable Resources | Semester 1 | 12.50 |
| ENEN90029 Water and Waste Water Management | Semester 1 | 12.50 |
| ENGM90007 Project Management Practices | Semester 1 | 12.50 |
| CVEN90016 Concrete Design and Technology | Semester 2 | 12.50 |
| CVEN90027 Geotechnical Applications | Semester 2 | 12.50 |
| CVEN90035 Structural Theory and Design 3 | Semester 2 | 12.50 |
| ENEN90005 Environmental Management ISO 14000 | Semester 2 | 12.50 |
| ENEN90011 Energy Efficiency Technology | Semester 2 | 12.50 |
| ENGM90006 Engineering Contracts and Procurement | Semester 2 | 12.50 |
| CVEN90056 IE Research Project 3 | Semester 1, Semester 2 | 12.50 |

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| **Notes:** | Credit may not be obtained for both ENGR30001 Fluid Mechanics & Thermodynamics and ENGR30002 Fluid Mechanics |
| **Related Course(s):** | Bachelor of Engineering |