

Bachelor of / Bachelor of Engineering (Civil) (Honours) / Environmental Science



Moreton Bay, Semester 1 2024

Program structure

Introductory courses (11) 132 units

ENG101 Professional Engineering
ENG102 Engineering Statics
ENG103 Introduction to the Internet of Things
ENG104 Engineering Design
ENS103 Earth's Surface Processes
MTH103 Introduction to Applied Mathematics
MTH104 Introductory Calculus
SCI102 Biodiversity and Ecology
SCI105 Introductory Chemistry
SCI107 Physics
SCI110 Science Research Methods

Developing courses (13) 156 units

CIV200 Structural Analysis
CIV201 Geotechnical Engineering
ENS221 Plant Diversity and Ecology
ENS222 Terrestrial Vertebrate Diversity and Ecology
ENS224 Soil Properties, Processes and Rehabilitation
ENS242 Weather and Climate
ENS253 Geographic Information Science and Technology
MEC200 Thermodynamics
MEC221 Mechanics of Materials
MEC225 Engineering Materials
MTH201 Calculus II and Linear Algebra
MTH203 Numerical Analysis

PLUS 1 course from the following:

ANM203 Statistics with Teeth: Understanding Ecological Data
SCI202 Advanced Research Methods and Statistics

Graduate courses (15) 180 units

CIV300 Structural Design
CIV301 Road and Traffic Engineering
CIV330 Engineering Hydrology
CIV340 Construction Technology
CIV400 Water Supply and Wastewater Treatment systems
CIV401 Sustainable Transport Systems
CIV404 Engineering Sustainable Design
CIV451 Concrete Structures and Technology
ENG302 Engineering Project Management
ENG304 Engineering Research Methodology
ENG401 Engineering Project 1

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ENG402 Engineering Project 2
ENS321 Restoration Ecology
ENS325 Population Ecology and Genetics
GEO302 Coastal Geomorphology

Elective course (1) 12 units

Select 1 elective course (12 units) from the undergraduate elective course options.

Honours

The Bachelor of Engineering (Civil) (Honours) may be awarded with Honours. The class of Honours to be awarded to a student is dependent upon:

- the percentage results achieved by study or transfer in eleven courses (132 units) as specified in the table below;

and

- the student achieving at least 65% in ENG402 Engineering Research Project 2.

COURSES

CIV201 Geotechnical Engineering
CIV300 Structural Design
ENG302 Engineering Project Management
CIV301 Road and Traffic Engineering
ENG304 Engineering Research Methodology
ENG401 Engineering Project 1
ENG402 Engineering Project 2
CIV404 Engineering Sustainable Design
CIV400 Water Supply and Wastewater Treatment systems
CIV451 Concrete Structures and Technology
CIV401 Sustainable Transport Systems
MTH203 Numerical Analysis

A student must complete a minimum of 8 courses (96 units) in the table and the research project for an honours grade to be awarded.

The minimum levels of achievement normally required for each class of honours are shown in the following table:

| HONOURS RESULTS CLASSIFICATION | OVERALL PERCENTAGE ATTAINED IN SPECIFIED COURSES* |
|--------------------------------|---|
| Honours Class I | 80% - 100% |
| Honours Class IIA | 70% - 79% |
| Honours Class IIB | 60% - 69% |

*The percentage result shall be rounded up if ≥ 0.5 or rounded down if < 0.5 .

Note: Program structures are subject to change. Not all UniSC courses are available on every UniSC campus.

Total units: 480

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Study sequence

The Bachelor of Engineering (Civil) (Honours)/Bachelor of Environmental Science recommended study sequence is for students commencing in the current semester.

Semester 1

| COURSE | SEMESTER OF OFFER (MORETON BAY) | UNITS | REQUISITES |
|--|------------------------------------|-------|---------------------------|
| ENG101 Professional Engineering | • Semester 1 | 12 | |
| ENS103 Earth's Surface Processes | • Semester 1 | 12 | |
| MTH103 Introduction to Applied Mathematics | • Semester 1 | 12 | Anti: MTH102 |
| SCI107 Physics | • Semester 1 | 12 | Anti: SCI108 or SCI507 |

Semester 2

| COURSE | SEMESTER OF OFFER (MORETON BAY) | UNITS | REQUISITES |
|---|------------------------------------|-------|---|
| ENG102 Engineering Statics | • Not Currently Offered | 12 | Pre: (SCI107 and (MTH103 or MTH102) and enrolled in Program SC404, SC405, SC410, SC411 SC425) or AB101, UU301, UU302 or XU301 Anti: CIV1501(USQ equivalent course) |
| ENG103 Introduction to the Internet of Things | • Semester 2 | 12 | |
| ENG104 Engineering Design | • Semester 2 | 12 | Anti: ENG202 |
| MTH104 Introductory Calculus | • Semester 2 | 12 | Anti: MTH202 |

Semester 1

| COURSE | SEMESTER OF OFFER (MORETON BAY) | UNITS | REQUISITES |
|--|------------------------------------|-------|---|
| ENS253 Geographic Information Science and Technology | • Semester 1 | 12 | |
| MEC221 Mechanics of Materials | • Semester 1 | 12 | Pre: ENG102 or ENG105 Anti: ENG221 |

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| | | | |
|-------------------------------|--------------------------|----|-----------------|
| SCI105 Introductory Chemistry | • Semester 1, Semester 2 | 12 | Anti: SCI505 |
|-------------------------------|--------------------------|----|-----------------|

PLUS select 1 elective course from the undergraduate elective course options.

Semester 2

| COURSE | SEMESTER OF OFFER (MORETON BAY) | UNITS | REQUISITES |
|--|------------------------------------|-------|--------------------------|
| SCI102 Biodiversity and Ecology | • Semester 2 | 12 | Anti: ENS102 |
| CIV201 Geotechnical Engineering | • Semester 1 | 12 | Pre: ENG105 or ENG102 |
| ENS224 Soil Properties, Processes and Rehabilitation | • Semester 2 | 12 | Pre: ENS103 |
| MEC200 Thermodynamics | • Semester 2 | 12 | Pre: SCI107 |

Semester 1

| COURSE | SEMESTER OF OFFER (MORETON BAY) | UNITS | REQUISITES |
|---------------------------------------|------------------------------------|-------|--|
| SCI110 Science Research Methods | • Semester 1, Semester 2 | 12 | Anti: SCI201 or CPH261 |
| ENS221 Plant Diversity and Ecology | • Semester 1 | 12 | Pre: SCI102 Anti: ENS201 |
| MEC225 Engineering Materials | • Not Currently Offered | 12 | Pre: MTH102 or MTH103 and enrolled in program SC367, SC404, SC405, SC410, SC411, SC425, AB101, UU301, UU302 or XU301. Anti: ENG225 or MEC1201 |
| MTH201 Calculus II and Linear Algebra | • Semester 1 | 12 | Pre: MTH104 or MTH202 |

Semester 2

| COURSE | SEMESTER OF OFFER (MORETON BAY) | UNITS | REQUISITES |
|---|------------------------------------|-------|--------------------------|
| CIV200 Structural Analysis | • Semester 2 | 12 | Pre: ENG105 or ENG102 |
| ENS222 Terrestrial Vertebrate Diversity and Ecology | • Semester 2 | 12 | Pre: SCI102 |
| ENS242 Weather and Climate | • Semester 2 | 12 | |

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PLUS select 1 course from:

| COURSE | SEMESTER OF OFFER (MORETON BAY) | UNITS | REQUISITES |
|---|------------------------------------|-------|---|
| ANM203 Statistics with Teeth: Understanding Ecological Data | • Semester 2 | 12 | Pre: SCI110 or BUS101 |
| SCI202 Advanced Research Methods and Statistics | • Semester 2 | 12 | Pre: SCI110 or BUS101 Anti: ANM203 |

Semester 1

| COURSE | SEMESTER OF OFFER (MORETON BAY) | UNITS | REQUISITES |
|---------------------------------------|------------------------------------|-------|---|
| CIV330 Engineering Hydrology | • Not Currently Offered | 12 | Pre: ENG102 Anti: ENG330 |
| CIV340 Construction Technology | • Not Currently Offered | 12 | Pre: Enrolled in Program SC410, SC411, SC425, SC404 or SC405 Anti: ENG340 |
| ENG302 Engineering Project Management | • Semester 1 | 12 | |
| ENS321 Restoration Ecology | • Semester 1 | 12 | Pre: ENS221 or ENS222 or ENS282 or ENS213 or ENS214 or LFS261 Anti: ENS361 |

Semester 2

| COURSE | SEMESTER OF OFFER (MORETON BAY) | UNITS | REQUISITES |
|---|------------------------------------|-------|---|
| CIV300 Structural Design | • Semester 1 | 12 | Pre: CIV200 Anti: ENG212 |
| ENG304 Engineering Research Methodology | • Semester 2 | 12 | Pre: 192 units and enrolled in Program SC404, SC405, SC410, SC411, SC425 |
| GEO302 Coastal Geomorphology | • Semester 2 | 12 | |
| MTH203 Numerical Analysis | • Semester 2 | 12 | Pre: MTH202 or (MTH103 and MTH104) |

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Anti:
MTH532 or MTH312

Semester 1

| COURSE | SEMESTER OF OFFER (MORETON BAY) | UNITS | REQUISITES |
|--|------------------------------------|-------|---|
| CIV400 Water Supply and Wastewater Treatment systems | • Not Currently Offered | 12 | Pre: MEC200 or ENG211 |
| CIV451 Concrete Structures and Technology | • Not Currently Offered | 12 | Pre: (CIV200 or ENG212) and (ENG225 or MEC225) and enrolled in program SC410, SC425, SC411, SC404, SC405 Anti: ENG451 |
| ENG401 Engineering Project 1 | • Semester 1, Semester 2 | 12 | Pre: MEC221 or ELC200, and 228 units completed and enrolled in Program SC404, SC405, SC410, SC411 or SC425 Co: ENG302 and (ENG403 or ENG304) |
| ENS325 Population Ecology and Genetics | • Semester 1 | 12 | Pre: ENS221 or ANM203 or SCI212 |

Semester 2

| COURSE | SEMESTER OF OFFER (MORETON BAY) | UNITS | REQUISITES |
|---------------------------------------|------------------------------------|-------|---|
| CIV301 Road and Traffic Engineering | • Semester 1 | 12 | Pre: ENG104 or ENG202 or ENG206 Anti: ENG422 |
| CIV401 Sustainable Transport Systems | • Semester 1 | 12 | Pre: Enrolled in Program GC002, GD002, MC002, GC006, GD006, MC006, SC410 or SC425 |
| CIV404 Engineering Sustainable Design | • Not Currently Offered | 12 | Pre: ENG202 or ENG104 and enrolled in SC410, SC425, SC411, SC404 or SC405 Anti: ENG404 |
| ENG402 Engineering Project 2 | • Semester 1, Semester 2 | 12 | Pre: ENG401 |

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Program requirements and notes

In order to graduate you must:

- Successfully complete 480 units as outlined in the Program Structure
- Complete a minimum of 60 days of suitable work experience. Students must meet all costs associated with the acquisition of practical experience to satisfy this requirement

Program notes

- Completing this program within the specified (full-time) duration is based on studying 48 unit points per semester (normally 4 courses) and following the recommended study sequence
- The unit value of all courses 12 units unless otherwise specified
- It is each students responsibility to enrol correctly according to your course requisites, program rules and requirements and be aware of the academic calendar dates
- Courses within this program are assessed using a variety of assessment methods which may include essays, seminar presentations, reports, in-class tests and examinations
- As part of your UniSC program, you may apply to Study Overseas to undertake courses with an overseas higher education provider
- Only a full-time study option is available to international students on a Student Visa
- Refer to the Managing your progression page for help in understanding your program structure, reviewing your progress and planning remaining courses.

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