

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



Sunshine Coast, Semester 1 2023

## 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

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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

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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  $\geq 0.5$  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 (SUNSHINE COAST)	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 (SUNSHINE COAST)	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 (SUNSHINE COAST)	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
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PLUS select 1 elective course from the undergraduate elective course options.

#### Semester 2

COURSE	SEMESTER OF OFFER (SUNSHINE COAST)	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 (SUNSHINE COAST)	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 (SUNSHINE COAST)	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 (SUNSHINE COAST)	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 (SUNSHINE COAST)	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 (SUNSHINE COAST)	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 (SUNSHINE COAST)	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 (SUNSHINE COAST)	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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