

2022 Study Plan  
Bachelor of Engineering (Honours) (Environmental & Climate Solutions)  
with Bachelor of Mathematical and Computer Sciences – Computer Science Major  
Semester 1 Start

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Semester 1 Start

No Major

Year 1				
S 1	MATHS 1011 Mathematics IA <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	^ ENG 1001 Introduction to Engineering <input type="checkbox"/>	CEME 1001 Introduction to Environmental Engineering <input type="checkbox"/>
S 2	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENV BIOL 1002 Ecological Issues I <input type="checkbox"/>	CEME 1002 Introduction to Infrastructure <input type="checkbox"/>	CEME 1003 Resources and Energy in a Circular Economy <input type="checkbox"/>
Year 2				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	CEME 2003 Civil Engineering Hydraulics <input type="checkbox"/>	CEME 2004 Introduction to Geo-engineering <input type="checkbox"/>	CHEM ENG 2017 Transport Processes in the Environment <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	CEME 2006 Climate & Environmental Change Impact Modelling <input type="checkbox"/>	CEME 2005 Transportation Engineering & Survey <input type="checkbox"/>	COMP SCI 1102 Object Oriented Programming <input type="checkbox"/>
Year 3				
S 1	ENG 3004 Systems Engineering and Industry Practice <input type="checkbox"/>	CEME 3004 Hydrology for Engineers <input type="checkbox"/>	GEOG 2129 Introductory Geographic Information Systems <input type="checkbox"/>	COMP SCI 2103 Algorithm Design & Data Structures <input type="checkbox"/>
S 2	ENG 3005 Research Method & Project Management <input type="checkbox"/>	CEME 3005 Advanced Civil Engineering Hydraulics <input type="checkbox"/>	CEME 3007 Integrated Environment Planning & Impact Assessment <input type="checkbox"/>	COMP SCI 2201 Algorithm & Data Structure Analysis <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of <a href="#">internship</a> during the course of their studies – see the note section below.				
Year 4				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	Environmental & Climate Solutions Elective – Set 1 (see elective table) <input type="checkbox"/>	Environmental & Climate Solutions Elective – Set 1 (see elective table) <input type="checkbox"/>	COMP SCI 2000 Computer Systems <input type="checkbox"/>
S 2	ENG 4001B Research Project Part B <input type="checkbox"/>	CEME 4010 Designing Water Resource Systems for Urban Environments <input type="checkbox"/>	CEME 4009 Environmental Decision Making <input type="checkbox"/>	COMP SCI 3006 Software Engineering & Project <input type="checkbox"/>

## 2022 Study Plan

# Bachelor of Engineering (Honours) (Environmental & Climate Solutions) with Bachelor of Mathematical and Computer Sciences – Computer Science Major Semester 1 Start

Year 5				
S 1	CEME 4008 Soil and Ground Water Remediation <input type="checkbox"/>	Environmental & Climate Solutions Elective – Set 2 (see elective table) <input type="checkbox"/>	Environmental & Climate Solutions Elective – Set 2 (see elective table) <input type="checkbox"/>	#Level III Computer Science Elective <input type="checkbox"/>
S 2	Environmental & Climate Solutions Elective – Set 1 (see elective table) <input type="checkbox"/>	Environmental & Climate Solutions Elective – Set 2 (see elective table) <input type="checkbox"/>	#Level III Computer Science Elective <input type="checkbox"/>	#Level III Computer Science Elective <input type="checkbox"/>
Core Courses		Double Degree Courses	Elective	

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

### CHOOSE FROM THE FOLLOWING ENVIRONMENTAL AND CLIMATE SOLUTIONS ELECTIVES – SET 1

S1	GEOG 2139	Environmental Management	S2	ENTREP 3000 GEOG 2135 GEOG 2142 GEOLOGY 3502	Innovation and Creativity Urban Futures Climate Change Mineral and Energy Resources III
SUMMER	ENTREP 3000	Innovation and Creativity			

### CHOOSE FROM THE FOLLOWING ENVIRONMENTAL AND CLIMATE SOLUTIONS ELECTIVES – SET 2

S1	ECON 3500 ENTREP 3006 MINING 4117	Resource and Environmental Economics III Energy Management, Economics and Policy Mining and Environment	S2	CEME 4006	Climate Risk and Resilience
SUMMER	CEME 4005	Integrated Natural Hazard Risk Management	WINTER	ENTREP 3006	Energy Management, Economics and Policy

#### NOTES

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Semester 1 Start

Climate Solutions Major

Year 1				
S 1	MATHS 1011 Mathematics IA <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	<sup>^</sup> ENG 1001 Introduction to Engineering <input type="checkbox"/>	CEME 1001 Introduction to Environmental Engineering <input type="checkbox"/>
S 2	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENV BIOL 1002 Ecological Issues I <input type="checkbox"/>	CEME 1002 Introduction to Infrastructure <input type="checkbox"/>	CEME 1003 Resources and Energy in a Circular Economy <input type="checkbox"/>
Year 2				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	CEME 2003 Civil Engineering Hydraulics <input type="checkbox"/>	CEME 2004 Introduction to Geo-engineering <input type="checkbox"/>	CHEM ENG 2017 Transport Processes in the Environment <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	CEME 2005 Transportation Engineering & Survey <input type="checkbox"/>	CEME 2006 Climate & Environmental Change Impact Modelling <input type="checkbox"/>	COMP SCI 1102 Object Oriented Programming <input type="checkbox"/>
Year 3				
S 1	ENG 3004 Systems Engineering and Industry Practice <input type="checkbox"/>	CEME 3004 Hydrology for Engineers <input type="checkbox"/>	GEOG 2129 Introductory Geographic Information Systems <input type="checkbox"/>	COMP SCI 2103 Algorithm Design & Data Structures <input type="checkbox"/>
S 2	ENG 3005 Research Method & Project Management <input type="checkbox"/>	CEME 3005 Advanced Civil Engineering Hydraulics <input type="checkbox"/>	CEME 3007 Integrated Environment Planning & Impact Assessment <input type="checkbox"/>	COMP SCI 2201 Algorithm & Data Structure Analysis <input type="checkbox"/>
Internship				
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Year 4				
S U M	CEME 4005 Integrated Natural Hazard Risk Management <input type="checkbox"/>			
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	Environmental & Climate Solutions Elective – Set 1 (see elective table) <input type="checkbox"/>	#Level III Computer Science Elective <input type="checkbox"/>	COMP SCI 2000 Computer Systems <input type="checkbox"/>
S 2	ENG 4001B Research Project Part B <input type="checkbox"/>	GEOG 2142 Climate Change <input type="checkbox"/>	CEME 4010 Designing Water Resource Systems for Urban Environments <input type="checkbox"/>	COMP SCI 3006 Software Engineering & Project <input type="checkbox"/>

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# Bachelor of Engineering (Honours) (Environmental & Climate Solutions) with Bachelor of Mathematical and Computer Sciences – Computer Science Major Semester 1 Start

Year 5					
S 1	Environmental & Climate Solutions Elective – Set 1 (see elective table) <input type="checkbox"/>	Environmental & Climate Solutions Elective – Set 2 (see elective table) <input type="checkbox"/>	CEME 4008 Soil and Ground Water Remediation <input type="checkbox"/>		
S 2	CEME 4009 Decision Making for Sustainable Solutions <input type="checkbox"/>	CEME 4006 Climate Risk and Resilience <input type="checkbox"/>	#Level III Computer Science Elective <input type="checkbox"/>	#Level III Computer Science Elective <input type="checkbox"/>	
Core Courses		Double Degree Courses	Elective		

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

CHOOSE FROM THE FOLLOWING ENVIRONMENTAL AND CLIMATE SOLUTIONS ELECTIVES – SET 1					
S1	GEOG 2139	Environmental Management	S2	ENTREP 3000 GEOG 2135 GEOG 2142 GEOLOGY 3502	Innovation and Creativity Urban Futures Climate Change Mineral and Energy Resources III
SUMMER	ENTREP 3000	Innovation and Creativity			
CHOOSE FROM THE FOLLOWING ENVIRONMENTAL AND CLIMATE SOLUTIONS ELECTIVES – SET 2					
S1	ECON 3500 ENTREP 3006 MINING 4117	Resource and Environmental Economics III Energy Management, Economics and Policy Mining and Environment	S2		
SUMMER	CEME 4005	Integrated Natural Hazard Risk Management	WINTER	ENTREP 3006	Energy Management, Economics and Policy

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Semester 1 Start

Renewable Energy Major

Year 1				
S 1	MATHS 1011 Mathematics IA <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	<sup>^</sup> ENG 1001 Introduction to Engineering <input type="checkbox"/>	CEME 1001 Introduction to Environmental Engineering <input type="checkbox"/>
S 2	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENV BIOL 1002 Ecological Issues I <input type="checkbox"/>	CEME 1002 Introduction to Infrastructure <input type="checkbox"/>	CEME 1003 Resources and Energy in a Circular Economy <input type="checkbox"/>
Year 2				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	CEME 2003 Civil Engineering Hydraulics <input type="checkbox"/>	CEME 2004 Introduction to Geo-engineering <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	CEME 2005 Transportation Engineering & Survey <input type="checkbox"/>	CEME 2006 Climate & Environmental Change Impact Modelling <input type="checkbox"/>	COMP SCI 1102 Object Oriented Programming <input type="checkbox"/>
Year 3				
S 1	ENG 3004 Systems Engineering and Industry Practice <input type="checkbox"/>	CEME 3004 Hydrology for Engineers <input type="checkbox"/>	GEOG 2129 Introductory Geographic Information Systems <input type="checkbox"/>	CHEM ENG 2017 Transport Processes in the Environment <input type="checkbox"/>
S 2	ENG 3005 Research Method & Project Management <input type="checkbox"/>	CEME 3005 Advanced Civil Engineering Hydraulics <input type="checkbox"/>	CEME 3007 Integrated Environment Planning & Impact Assessment <input type="checkbox"/>	COMP SCI 2103 Algorithm Design & Data Structures <input type="checkbox"/>
Internship				
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Year 4				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	CEME 4008 Soil and Ground Water Remediation <input type="checkbox"/>	COMP SCI 2000 Computer Systems <input type="checkbox"/>	COMP SCI 2201 Algorithm & Data Structure Analysis <input type="checkbox"/>
S 2	ENG 4001B Research Project Part B <input type="checkbox"/>	CEME 4010 Designing Water Resource Systems for Urban Environments <input type="checkbox"/>	CEME 4009 Decision Making for Sustainable Solutions <input type="checkbox"/>	Environmental & Climate Solutions Elective – Set 1 or 2 (see elective table) <input type="checkbox"/>

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Year 5					
S 1	MECH ENG 4064 Renewable Power Technologies <input type="checkbox"/>	Environmental & Climate Solutions Elective – Set 1 or 2 (see elective table) <input type="checkbox"/>	COMP SCI 3006 Software Engineering & Project <input type="checkbox"/>	#Level III Computer Science Elective <input type="checkbox"/>	
S 2	CHEM ENG 4048 Biofuels, Biomass and Wastes <input type="checkbox"/>	ELEC ENG 4111 Distributed Generation Technologies <input type="checkbox"/>	#Level III Computer Science Elective <input type="checkbox"/>	#Level III Computer Science Elective <input type="checkbox"/>	
Core Courses		Double Degree Courses	Elective		

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### CHOOSE FROM THE FOLLOWING ENVIRONMENTAL AND CLIMATE SOLUTIONS ELECTIVES – SET 1

S1	GEOG 2139	Environmental Management	S2	ENTREP 3000 GEOG 2135 GEOG 2142 GEOLOGY 3502	Innovation and Creativity Urban Futures Climate Change Mineral and Energy Resources III
SUMMER	ENTREP 3000	Innovation and Creativity			

### CHOOSE FROM THE FOLLOWING ENVIRONMENTAL AND CLIMATE SOLUTIONS ELECTIVES – SET 2

S1	ECON 3500 ENTREP 3006 MINING 4117	Resource and Environmental Economics III Energy Management, Economics and Policy Mining and Environment	S2	CEME 4006	Climate Risk and Resilience
SUMMER	CEME 4005	Integrated Natural Hazard Risk Management	WINTER	ENTREP 3006	Energy Management, Economics and Policy

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Semester 1 Start

Smart Technologies Major

Year 1				
S 1	MATHS 1011 Mathematics IA <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	<sup>^</sup> ENG 1001 Introduction to Engineering <input type="checkbox"/>	CEME 1001 Introduction to Environmental Engineering <input type="checkbox"/>
S 2	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENV BIOL 1002 Ecological Issues I <input type="checkbox"/>	CEME 1002 Introduction to Infrastructure <input type="checkbox"/>	CEME 1003 Resources and Energy in a Circular Economy <input type="checkbox"/>
Year 2				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	CEME 2003 Civil Engineering Hydraulics <input type="checkbox"/>	CEME 2004 Introduction to Geo-engineering <input type="checkbox"/>	CHEM ENG 2017 Transport Processes in the Environment <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	CEME 2005 Transportation Engineering & Survey <input type="checkbox"/>	CEME 2006 Climate & Environmental Change Impact Modelling <input type="checkbox"/>	COMP SCI 1102 Object Oriented Programming <input type="checkbox"/>
Year 3				
S 1	ENG 3004 Systems Engineering and Industry Practice <input type="checkbox"/>	CEME 3004 Hydrology for Engineers <input type="checkbox"/>	GEOG 2129 Introductory Geographic Information Systems <input type="checkbox"/>	COMP SCI 2103 Algorithm Design & Data Structures <input type="checkbox"/>
S 2	ENG 3005 Research Method & Project Management <input type="checkbox"/>	CEME 3005 Advanced Civil Engineering Hydraulics <input type="checkbox"/>	CEME 3007 Integrated Environment Planning & Impact Assessment <input type="checkbox"/>	COMP SCI 2201 Algorithm & Data Structure Analysis <input type="checkbox"/>
Internship				
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Year 4				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	Environmental & Climate Solutions Elective – Set 2 (see elective table) <input type="checkbox"/>	#Level II or III Computer Science Elective <input type="checkbox"/>	COMP SCI 2000 Computer Systems <input type="checkbox"/>
S 2	ENG 4001B Research Project Part B <input type="checkbox"/>	MECH ENG 3032 Micro-Controller Programming <input type="checkbox"/>	CEME 4010 Designing Water Resource Systems for Urban Environments <input type="checkbox"/>	COMP SCI 3006 Software Engineering & Project <input type="checkbox"/>



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Year 5				
S 1	COMP SCI 3001 Computer Networks & Applications <input type="checkbox"/>	CEME 4008 Soil and Ground Water Remediation <input type="checkbox"/>	#Level II or III Computer Science Elective <input type="checkbox"/>	#Level III Computer Science Elective <input type="checkbox"/>
S 2	CEME 4009 Decision Making for Sustainable Solutions <input type="checkbox"/>	COMP SCI 4412 Secure Software Engineering <input type="checkbox"/>	#Level III Computer Science Elective <input type="checkbox"/>	#Level III Computer Science Elective <input type="checkbox"/>
Core Courses		Double Degree Courses	Elective	

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CHOOSE FROM THE FOLLOWING ENVIRONMENTAL AND CLIMATE SOLUTIONS ELECTIVES – SET 2					
S1	ECON 3500 ENTREP 3006 MINING 4117	Resource and Environmental Economics III Energy Management, Economics and Policy Mining and Environment	S2	CEME 4006	Climate Risk and Resilience
SUMMER	CEME 4005	Integrated Natural Hazard Risk Management	WINTER	ENTREP 3006	Energy Management, Economics and Policy

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