2022 Study Plan

Bachelor of Engineering (Honours) (Civil) with Bachelor of Mathematical and Computer Sciences
Computer Science Major – Semester 2 Start

THE UNIVERSITY of ADELAIDE

2022 Study Plan

Bachelor of Engineering (Honours) (Civil) with Bachelor of Mathematical and Computer Sciences
Computer Science Major – Semester 2 Start

No Major

Year 1				
S 2	MATHS 1011 Mathematics IA ☐	CEME 1002 Introduction to Infrastructure ☐	^ ENG 1001 Introduction to Engineering ☐	Level I Engineering Elective (see elective table) ☐
Year 2				
S 1	MATHS 1012 Mathematics IB ☐	CEME 1004 Engineering Mechanics - Statics ☐	ENG 1002 Programming (Matlab and C) ☐	General Elective (see notes) ☐
S 2	MATHS 2107 Statistics & Numerical Methods II ☐	CEME 2002 Structural Mechanics ☐	CEME 2005 Transportation Engineering & Surveying ☐	COMP SCI 1102 Object Oriented Programming ☐
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II ☐	CEME 2001 Strength of Materials ☐	CEME 2003 Civil Engineering Hydraulics ☐	CEME 2004 Introduction to Geo-engineering ☐
S 2	CEME 3005 Advanced Civil Engineering Hydraulics ☐	CEME 3003 Structural Steel Design ☐	CEME 3006 Geotechnical Engineering ☐	COMP SCI 2103 Algorithm Design & Data Structures ☐
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see the note section below.				
Year 4				
S 1	ENG 3004 Systems Engineering and Industry Practice ☐	CEME 3002 Reinforced Concrete Design ☐	CEME 3001 Computer Analysis of Structures and Structural Dynamics	COMP SCI 2000 Computer Systems ☐
S 2	ENG 3005 Research Method & Project Management ☐	General Elective (see notes) ☐	Civil Engineering Elective (see elective table) ☐	COMP SCI 2201 Algorithm & Data Structure Analysis ☐
Year 5				
S 1	ENG 4001A Research Project Part A ☐	CEME 3004 Hydrology for Engineers ☐	Civil Engineering Elective (see elective table) ☐	# Level III Computer Science Elective ☐
S 2	ENG 4001B Research Project Part B ☐	CEME 4050 Design Practice ☐	Civil Engineering Elective (see elective table) ☐	COMP SCI 3006 Software Engineering & Project ☐
Year 6				
S 1	Civil Engineering Elective (see elective table) ☐	Civil Engineering Elective (see elective table) ☐	# Level III Computer Science Elective ☐	# Level III Computer Science Elective ☐

Core Courses | Elective | Double Degree Courses

^ EAL: 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 LEVEL 1 ENGINEERING ELECTIVES					
S1	CEME 1001 CHEM ENG 1007 ELEC ENG 1101	Introduction to Environmental Engineering Introduction to Process Engineering Electronic Systems	**S2**	CEME 1003 CONMGNT 1000 CONMGNT 1001 MECH ENG 1007	Resources and Energy in a Circular Economy Civil Engineering Construction Materials Construction Estimation and Quantity Surveying Engineering Mechanics - Dynamics
CHOOSE FROM THE FOLLOWING CIVIL ENGINEERING ELECTIVES					
S1	CEME 4001 CEME 4002 CEME 4007 CEME 4008 CHEM ENG 4051	Advanced Reinforced Concrete Design Finite Element Theory and Practice Unsaturated Soils Soil and Ground Water Remediation Water and Wastewater Engineering	**S2**	CEME 2006 CEME 3007 CEME 4003 CEME 4006 CEME 4009 CEME 4010	Climate & Environmental Change Impact Modelling Integrated Environment Planning and Impact Assessment Wind and Earthquake Engineering Climate Risk and Resilience Decision Making for Sustainable Solutions Designing Water Resource Systems for Urban Environments
SUM	CEME 4005	Integrated Natural Hazard Risk Management			

NOTES

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Computer Science Major – Semester 2 Start

Construction Management Major

Year 1				
S 2	MATHS 1011 Mathematics IA ☐	CEME 1002 Introduction to Infrastructure ☐	^ ENG 1001 Introduction to Engineering ☐	DESST 1504 Representation I ☐
Year 2				
S 1	MATHS 1012 Mathematics IB ☐	CEME 1004 Engineering Mechanics - Statics ☐	ENG 1002 Programming (Matlab and C) ☐	DESST 2518 Construction II ☐
S 2	MATHS 2107 Statistics & Numerical Methods II ☐	CEME 2002 Structural Mechanics ☐	CEME 2005 Transportation Engineering & Surveying ☐	COMP SCI 1102 Object Oriented Programming ☐
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II ☐	CEME 2001 Strength of Materials ☐	CEME 2003 Civil Engineering Hydraulics ☐	CEME 2004 Introduction to Geo-engineering ☐
S 2	CEME 3005 Advanced Civil Engineering Hydraulics ☐	CEME 3003 Structural Steel Design ☐	CEME 3006 Geotechnical Engineering ☐	COMP SCI 2103 Algorithm Design & Data Structures ☐
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see the note section below.				
Year 4				
S 1	ENG 3004 Systems Engineering and Industry Practice ☐	CEME 3002 Reinforced Concrete Design ☐	CEME 3001 Computer Analysis of Structures and Structural Dynamics	COMP SCI 2000 Computer Systems ☐
S 2	ENG 3005 Research Method & Project Management ☐	CEME 4050 Design Practice ☐	# Level III Computer Science Elective ☐	COMP SCI 2201 Algorithm & Data Structure Analysis ☐
Year 5				
S 1	ENG 4001A Research Project Part A ☐	CEME 3004 Hydrology for Engineers ☐	Level 1 Engineering Elective (see elective table) ☐	DESST 3514 Construction III ☐
S 2	ENG 4001B Research Project Part B ☐	ENG 3303 Construction Management and Technologies ☐ ***(not available in 2022 - please contact the Director of Teaching)***	DESST 3304 Development and Construction ☐ ***(not available in 2022 - please contact the Director of Teaching)***	COMP SCI 3006 Software Engineering & Project ☐

Bachelor of Engineering (Honours) (Civil) with Bachelor of Mathematical and Computer Sciences
Computer Science Major – Semester 2 Start

Year 6				
S 1	ENG 3301 Construction Management and Technology I ***(not available in 2022 - please contact the Director of Teaching)*** ☐	ENG 3302 Cost Planning and Management ***(not available in 2022 - please contact the Director of Teaching)*** ☐	# Level III Computer Science Elective ☐	# Level III Computer Science Elective ☐

Core Courses	Elective	Double Degree Courses

^ **EAL:** 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 LEVEL 1 ENGINEERING ELECTIVES					
S1	CEME 1001 CHEM ENG 1007 ELEC ENG 1101	Introduction to Environmental Engineering Introduction to Process Engineering Electronic Systems	**S2**	CEME 1003 CONMGNT 1000 CONMGNT 1001 MECH ENG 1007	Resources and Energy in a Circular Economy Civil Engineering Construction Materials Construction Estimation and Quantity Surveying Engineering Mechanics - Dynamics

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Geotechnical Engineering Major

Year 1				
S 2	MATHS 1011 Mathematics IA ☐	CEME 1002 Introduction to Infrastructure ☐	^ ENG 1001 Introduction to Engineering ☐	ENG 1002 Programming (Matlab and C) ☐
Year 2				
S 1	MATHS 1012 Mathematics IB ☐	CEME 1004 Engineering Mechanics - Statics ☐	Level I Engineering Elective (see table below) ☐	COMP SCI 1102 Object Oriented Programming ☐
S 2	MATHS 2107 Statistics & Numerical Methods II ☐	CEME 2002 Structural Mechanics ☐	CEME 2005 Transportation Engineering & Surveying ☐	COMP SCI 2103 Algorithm Design & Data Structures ☐
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II ☐	CEME 2001 Strength of Materials ☐	CEME 2003 Civil Engineering Hydraulics ☐	CEME 2004 Introduction to Geo-engineering ☐
S 2	CEME 3005 Advanced Civil Engineering Hydraulics ☐	CEME 3003 Structural Steel Design ☐	CEME 3006 Geotechnical Engineering ☐	COMP SCI 2201 Algorithm & Data Structure Analysis ☐
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see the note section below.				
Year 4				
S 1	ENG 3004 Systems Engineering and Industry Practice ☐	CEME 3001 Computer Analysis of Structures and Structural Dynamics ☐	CEME 3002 Reinforced Concrete Design	COMP SCI 2000 Computer Systems ☐
S 2	ENG 3005 Research Method & Project Management ☐	General Elective (see notes) ☐	Civil Engineering Elective (see elective table) ☐	# Level III Computer Science Elective ☐
Year 5				
S 1	ENG 4001A Research Project Part A ☐	CEME 3004 Hydrology for Engineers ☐	CEME 4007 Unsaturated Soils ☐	MINING 3076 Geomechanics & Excavation Engineering ☐
S 2	ENG 4001B Research Project Part B ☐	CEME 4050 Design Practice ☐	# Level III Computer Science Elective ☐	COMP SCI 3006 Software Engineering & Project ☐
Year 6				
S 1	Civil Engineering Elective (see elective table) ☐	GEOLOGY 2501 Structural Geology II ☐	CEME 4008 Soil and Ground Water Remediation ☐	# Level III Computer Science Elective ☐

Core Courses	Major Courses	Elective	Double Degree Courses

^ **EAL:** 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 LEVEL 1 ENGINEERING ELECTIVES					
S1	CEME 1001 CHEM ENG 1007 ELEC ENG 1101	Introduction to Environmental Engineering Introduction to Process Engineering Electronic Systems	**S2**	CEME 1003 CONMGNT 1000 CONMGNT 1001 MECH ENG 1007	Resources and Energy in a Circular Economy Civil Engineering Construction Materials Construction Estimation and Quantity Surveying Engineering Mechanics - Dynamics
CHOOSE FROM THE FOLLOWING CIVIL ENGINEERING ELECTIVES					
S1	CEME 4001 CEME 4002 CHEM ENG 4051	Advanced Reinforced Concrete Design Finite Element Theory and Practice Water and Wastewater Engineering	**S2**	CEME 2006 CEME 3007 CEME 4003 CEME 4006 CEME 4009 CEME 4010	Climate & Environmental Change Impact Modelling Integrated Environment Planning and Impact Assessment Wind and Earthquake Engineering Climate Risk and Resilience Decision Making for Sustainable Solutions Designing Water Resource Systems for Urban Environments
SUM	CEME 4005	Integrated Natural Hazard Risk Management			

NOTES

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Computer Science Major – Semester 2 Start

Structural Engineering Major

Year 1				
S 2	MATHS 1011 Mathematics IA ☐	CEME 1002 Introduction to Infrastructure ☐	^ ENG 1001 Introduction to Engineering ☐	General Elective (see notes) ☐
Year 2				
S 1	MATHS 1012 Mathematics IB ☐	CEME 1004 Engineering Mechanics - Statics ☐	ENG 1002 Programming (Matlab and C) ☐	Level I Engineering Elective (see table below) ☐
S 2	MATHS 2107 Statistics & Numerical Methods II ☐	CEME 2002 Structural Mechanics ☐	CEME 2005 Transportation Engineering & Surveying ☐	COMP SCI 1102 Object Oriented Programming ☐
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II ☐	CEME 2001 Strength of Materials ☐	CEME 2003 Civil Engineering Hydraulics ☐	CEME 2004 Introduction to Geo-engineering ☐
S 2	CEME 3005 Advanced Civil Engineering Hydraulics ☐	CEME 3003 Structural Steel Design ☐	CEME 3006 Geotechnical Engineering ☐	COMP SCI 2103 Algorithm Design & Data Structures ☐
Internship				
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Year 4				
S 1	ENG 3004 Systems Engineering and Industry Practice ☐	CEME 3001 Computer Analysis of Structures and Structural Dynamics ☐	CEME 3002 Reinforced Concrete Design ☐	COMP SCI 2000 Computer Systems ☐
S 2	ENG 3005 Research Method & Project Management ☐	COMP SCI 2201 Algorithm & Data Structure Analysis ☐	General Elective (see notes) ☐	Civil Engineering Elective (see elective table) ☐
Year 5				
S 1	ENG 4001A Research Project Part A ☐	CEME 3004 Hydrology for Engineers ☐	Civil Engineering Elective (see elective table) ☐	# Level III Computer Science Elective ☐
S 2	ENG 4001B Research Project Part B ☐	CEME 4050 Design Practice ☐	CEME 4003 Wind and Earthquake Engineering ☐	COMP SCI 3006 Software Engineering & Project ☐
Year 6				
S 1	CEME 4001 Advanced Reinforced Concrete Design ☐	CEME 4002 Finite Element Theory and Practice ☐	# Level III Computer Science Elective ☐	# Level III Computer Science Elective ☐

Core Courses	Major Courses	Elective	Double Degree Courses

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CHOOSE FROM THE FOLLOWING LEVEL 1 ENGINEERING ELECTIVES					
S1	CEME 1001 CHEM ENG 1007 ELEC ENG 1101	Introduction to Environmental Engineering Introduction to Process Engineering Electronic Systems	**S2**	CEME 1003 CONMGNT 1000 CONMGNT 1001 MECH ENG 1007	Resources and Energy in a Circular Economy Civil Engineering Construction Materials Construction Estimation and Quantity Surveying Engineering Mechanics - Dynamics
CHOOSE FROM THE FOLLOWING CIVIL ENGINEERING ELECTIVES					
S1	CEME 4007 CEME 4008 CHEM ENG 4051	Unsaturated Soils Soil and Ground Water Remediation Water and Wastewater Engineering	**S2**	CEME 2006 CEME 3007 CEME 4006 CEME 4009 CEME 4010	Climate & Environmental Change Impact Modelling Integrated Environment Planning and Impact Assessment Climate Risk and Resilience Decision Making for Sustainable Solutions Designing Water Resource Systems for Urban Environments
SUM	CEME 4005	Integrated Natural Hazard Risk Management			

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Computer Science Major – Semester 2 Start

Water Systems Major

Year 1				
S 2	MATHS 1011 Mathematics IA ☐	CEME 1002 Introduction to Infrastructure ☐	^ ENG 1001 Introduction to Engineering ☐	General Elective (see notes) ☐
Year 2				
S 1	MATHS 1012 Mathematics IB ☐	CEME 1004 Engineering Mechanics - Statics ☐	ENG 1002 Programming (Matlab and C) ☐	Level I Engineering Elective (see table below) ☐
S 2	MATHS 2107 Statistics & Numerical Methods II ☐	CEME 2002 Structural Mechanics ☐	CEME 2005 Transportation Engineering & Surveying ☐	COMP SCI 1102 Object Oriented Programming ☐
Year 3				
S 1	MATHS 2106 Differential Equations for Engineers II ☐	CEME 2001 Strength of Materials ☐	CEME 2003 Civil Engineering Hydraulics ☐	CEME 2004 Introduction to Geo-engineering ☐
S 2	CEME 3005 Advanced Civil Engineering Hydraulics ☐	CEME 3003 Structural Steel Design ☐	CEME 3006 Geotechnical Engineering ☐	COMP SCI 2103 Algorithm Design & Data Structures ☐
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S 1	ENG 3004 Systems Engineering and Industry Practice ☐	CEME 3002 Reinforced Concrete Design ☐	CEME 3001 Computer Analysis of Structures and Structural Dynamics ☐	COMP SCI 2000 Computer Systems ☐
S 2	ENG 3005 Research Method & Project Management ☐	Civil Engineering Elective (see elective table) ☐	# Level III Computer Science Elective ☐	COMP SCI 2201 Algorithm & Data Structure Analysis ☐
Year 5				
S U M	CEME 4005 Integrated Natural Hazard Risk Management ☐			
S 1	ENG 4001A Research Project Part A ☐	CEME 3004 Hydrology for Engineers ☐	CEME 4008 Soil and Ground Water Remediation ☐	
S 2	ENG 4001B Research Project Part B ☐	CEME 4006 Climate Risk and Resilience ☐	CEME 4050 Design Practice ☐	COMP SCI 3006 Software Engineering & Project ☐

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Computer Science Major – Semester 2 Start

Year 6				
S 1	General Elective (see notes) ☐	Civil Engineering Elective (see elective table) ☐	# Level III Computer Science Elective ☐	# Level III Computer Science Elective ☐

Core Courses	Major Courses	Elective	Double Degree Courses

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S1	CEME 1001 CHEM ENG 1007 ELEC ENG 1101	Introduction to Environmental Engineering Introduction to Process Engineering Electronic Systems	**S2**	CEME 1003 CONMGNT 1000 CONMGNT 1001 MECH ENG 1007	Resources and Energy in a Circular Economy Civil Engineering Construction Materials Construction Estimation and Quantity Surveying Engineering Mechanics - Dynamics
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