

# 2022 Study Plan THE UNIVERSITY of ADELAIDE Bachelor of Engineering (Honours) (Civil) with Bachelor of Mathematical and Computer Sciences

No Major	2
Construction Management Major	4
Geotechnical Engineering Major	6
Structural Engineering Major	8
Water Systems Major	10



# THE UNIVERSITY Bachelor of Engineering (Honours) (Civil) with Bachelor of Mathematical and Computer Sciences Mathematics Major – Semester 2 Start

No Major

						110 1114	,			
			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		General Elective Suggestion: CEME 2006 Environmental Modelling and Simulation				
			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		# Level II or III Mathematics Elective				
	Internship									
	All Engineering students commencing fro	om 2019 are required to complete a minimu	um of	8 weeks of <u>internship</u> 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		# Level II or III Mathematics Elective				
S 2	ENG 3005 Research Method & Project Management	Civil Engineering Elective (see elective table)		# Level II or III Mathematics Elective		# Level III Mathematics Elective				
			Year	5						
S 1	ENG 4001A Research Project Part A	CEME 3004 Hydrology for Engineers		Civil Engineering Elective (see elective table)		# Level II or III Mathematics Elective				
S 2	ENG 4001B Research Project Part B	CEME 4050 Design Practice		Civil Engineering Elective (see elective table)		# Level III Mathematics Elective				
			Year	6						
S 1	Civil Engineering Elective (see elective table)	Civil Engineering Elective (see elective table)		# Level III Mathematics Elective		# Level III Mathematics Elective				
Cor	re Courses Flective	Double Degree Courses								

<sup>^</sup> 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	E LEVEL 1 ENGINEERING ELECTIVES					
	CEME 1001 Introduction to Environmental Engineering			CEME 1003	Resources and Energy in a Circular Economy			
S1	CHEM ENG 1007	Introduction to Process Engineering	S2	CONMGNT 1000	Civil Engineering Construction Materials			
31	ELEC ENG 1101	Electronic Systems	32	CONMGNT 1001	Construction Estimation and Quantity Surveying			
				MECH ENG 1007	Engineering Mechanics - Dynamics			
		IVES						
	CEME 4001	Advanced Reinforced Concrete Design		CEME 2006	Climate & Environmental Change Impact Modelling			
	CEME 4002	Finite Element Theory and Practice		CEME 3007	Integrated Environment Planning and Impact Assessment			
S1	CEME 4007	Unsaturated Soils	S2	CEME 4003	Wind and Earthquake Engineering			
31	CEME 4008	Soil and Ground Water Remediation	32	CEME 4006	Climate Risk and Resilience			
	CHEM ENG 4051	Water and Wastewater Engineering		CEME 4009	Decision Making for Sustainable Solutions			
				CEME 4010	Designing Water Resource Systems for Urban Environments			
SUM	CEME 4005	Integrated Natural Hazard Risk Management						

#### **NOTES**

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

**Construction Management Major** 

				Year :	1				
S	MATHS 1011		CEME 1002		^ ENG 1001		Level I Engineering Elective		
2	Mathematics IA		Introduction to Infrastructure		Introduction to Engineering		(see elective table)		
				Year :	2				
S	MATHS 1012	$\neg$	CEME 1004		ENG 1002	_ 	DESST 2518		
1	Mathematics IB		Engineering Mechanics - Statics		Programming (Matlab and C)		Construction II		
S	MATHS 2107	$\neg$	CEME 2002		CEME 2005		DESST 1504		
2	Statistics & Numerical Methods II	╙╽	Structural Mechanics	╙╹	Transportation Engineering & Surveying	Ш	Representation I		
				Year :	3				
S	MATHS 2106		CEME 2001		CEME 2003		CEME 2004		
1	Differential Equations for Engineers II	$\sqcup$	Strength of Materials	$\sqcup$	Civil Engineering Hydraulics	Ш	Introduction to Geo-engineering		
_	CEME 3005	$\neg$	CEME 3003		CEME 3006		# Level II or III Mathematics Elective		
S 2	Advanced Civil Engineering Hydraulics		Structural Steel Design		Geotechnical Engineering				
	Internship								
	All Engineering students commencing f	fron	n 2019 are required to complete a minimu	m of	8 weeks of <u>internship</u> during the course of t	their	studies – see the note section below.		
				Year	4				
S	ENG 3004		CEME 3002		CEME 3001	_ '	DESST 3514		
1	Interdisciplinary Professional Practice	$\Box$	Reinforced Concrete Design	$\sqcup$	Computer Analysis of Structures and		Construction III		
_					Structural Dynamics				
S	ENG 3005		# Level II or III Mathematics Elective		# Level II or III Mathematics Elective		# Level III Mathematics Elective		
2	Research Method & Project  Management	╙╽				Ш			
	Management			Year	5				
ς .	ENG 4001A		CEME 3004		# Level III Mathematics Elective		# Level II or III Mathematics Elective		
1	Research Project Part A		Hydrology for Engineers		" Level IIIac.i.e.i.ac.ob Liebaive		The Level III of III Mathematics 2.555		
	ENG 4001B		ENG 3303		ENG 3304		CEME 4050		
	Research Project Part B		Construction Management and		Development and Construction		Design Practice		
S			Technologies				J		
2			(not available in 2022 - please contact		(not available in 2022 - please contact	_		_	
			the Director of Teaching)		the Director of Teaching)				



	Year 6								
	ENG 3301		ENG 3302		# Level III Mathematics Elective	# Level III Mathematics Elective			
	Construction Manag	ement and	Cost Planning and Manag	gement					
5	Technology I								
1	(not available in 202	22 - please contact	(not available in 2022 - p	olease contact					
	the Director of Teac	hing)	the Director of Teaching,	)					
Core Courses Major Courses Elective Double Degree Course		rses							

<sup>^</sup> 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										
<b>S1</b>	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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Bachelor of Engineering (Honours) (Civil) with Bachelor of Mathematical and Computer Sciences Mathematics Major – Semester 2 Start

Geotechnical Engineering Major

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			Yea	ar 1	1					
S	MATHS 1011	$\Box$	CEME 1002	٦l	^ ENG 1001		Level I Engineering Elective			
2	Mathematics IA	ш	Introduction to Infrastructure		Introduction to Engineering		(see elective table)			
	Year 2									
S	MATHS 1012		CEME 1004	$\neg \Gamma$	ENG 1002		General Elective	]		
1	Mathematics IB	ш	Engineering Mechanics - Statics	4	Programming (Matlab and C)	Ш	(see notes)	Ш		
S	MATHS 2107		CEME 2002	٦Ī	CEME 2005		# Level II or III Mathematics Elective			
2	Statistics & Numerical Methods II	ш	Structural Mechanics	-1	Transportation Engineering & Surveying	Ш		Ш		
	Year 3									
S	MATHS 2106	]	CEME 2001	$\neg \Gamma$	CEME 2003	_	CEME 2004			
1	Differential Equations for Engineers II	Ш	Strength of Materials	4	Civil Engineering Hydraulics	Ш	Introduction to Geo-engineering	니		
S	CEME 3005		CEME 3003	7	CEME 3006		# Level II or III Mathematics Elective			
2	Advanced Civil Engineering Hydraulics	ш	Structural Steel Design	ᅦ	Geotechnical Engineering	Ш		Ш		
	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.									
			Yea	ar 4	4					
_	ENG 3004		CEME 3002		CEME 3001		# Level II or III Mathematics Elective			
S	Systems Engineering and Industry		Reinforced Concrete Design		Computer Analysis of Structures and					
1	Practice		j		Structural Dynamics					
S	ENG 3005		Civil Engineering Elective	_	Civil Engineering Elective		# Level II or III Mathematics Elective			
2	Research Method & Project		(see elective table)		(see elective table)					
	Management									
				ar !						
S	ENG 4001A		MINING 3076	_,	CEME 4008		CEME 3004			
1	Research Project Part A	Ш	Geomechanics & Excavation	ᅫ	Soil and Ground Water Remediation		Hydrology for Engineers			
			Engineering							
S	ENG 4001B	П	CEME 4050	٦l	# Level III Mathematics Elective		# Level III Mathematics Elective			
2	Research Project Part B		Design Practice	_						
			Yea	ar (	6					
S	CEME 4007		GEOLOGY 2501	$\prod$	# Level III Mathematics Elective		# Level III Mathematics Elective			
1	Unsaturated Soils	Ш	Structural Geology II	4		Ш				
<u> </u>	e Courses Major Courses Flective		Double Degree Courses							

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		CHOOSE FROM THE FOLLOWING	LEVEL :	LENGINEERING ELEC	TIVES			
<b>S1</b>	CEME 1001 CHEM ENG 1007 ELEC ENG 1101	Introduction to Environmental Engineering Introduction to Process Engineering Electronic Systems	<b>S2</b>	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	VING CIVIL ENGINEERING ELECTIVES					
<b>S1</b>	CEME 4001 CEME 4002 CHEM ENG 4051	Advanced Reinforced Concrete Design Finite Element Theory and Practice Water and Wastewater Engineering	<b>S2</b>	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						

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Structural Engineering 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		General Elective (see notes)				
	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		# Level II or III Mathematics Elective				
	Internship									
	All Engineering students commencing fr	om 2019 are required to complete a mi	nimum 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		# Level II or III Mathematics Elective				
S 2	ENG 3005 Research Method & Project Management	# Level II or III Mathematics Elective		# Level II or III Mathematics Elective		# Level III Mathematics Elective				
			Year	5						
S 1	ENG 4001A Research Project Part A	CEME 3004 Hydrology for Engineers		Civil Engineering Elective (see elective table)		Civil Engineering Elective (see elective table)				
	5110 40045	CEME 4003 Wind and Earthquake		CEME 4050		# Level III Mathematics Elective				
S 2	ENG 4001B Research Project Part B	Engineering		Design Practice						
S 2		•	Year		_					
S 2 S 1		•	Year			# Level III Mathematics Elective				

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		CHOOSE FROM THE FOLLOWING	LEVEL 1 ENGINEERING ELECTIVES					
<b>S1</b>	CEME 1001 CHEM ENG 1007 ELEC ENG 1101	Introduction to Environmental Engineering Introduction to Process Engineering Electronic Systems	<b>S2</b>	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	NG CIVIL ENGINEERING ELECTIVES					
<b>S1</b>	CEME 4007 CEME 4008 CHEM ENG 4051	Unsaturated Soils Soil and Ground Water Remediation Water and Wastewater Engineering	\$2	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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# 2022 Study Plan THE UNIVERSITY Bachelor of Engineering (Honours) (Civil) with Bachelor of Mathematical and Computer Sciences

Mathematics Major – Semester 2 Start

Water Systems Major

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				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		General Elective (see notes)			
	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		# Level II or III Mathematics Elective			
	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		# Level II or III Mathematics Elective			
S 2	ENG 3005 Research Method & Project Management		Civil Engineering Elective (see elective table)		# Level II or III Mathematics Elective		# Level II or III Mathematics Elective			
				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		# Level III Mathematics Elective			
S 2	ENG 4001B Research Project Part B		CEME 4006 Climate Risk and Resilience		CEME 4050 Design Practice		# Level III Mathematics Elective			



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S 1	S Civil Engineering Elective (see elective table)		# Level III Mathematics Elective		# Level III Mathematics Elective
Cor	e Courses	Major Courses	Elective	Double Degree Cour	ırses

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CHOOSE FROM THE FOLLOWING LEVEL 1 ENGINEERING ELECTIVES					
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CHOOSE FROM THE FOLLOWING CIVIL ENGINEERING ELECTIVES					
<b>S1</b>	CEME 4001 CEME 4002 CEME 4007 CHEM ENG 4051	Advanced Reinforced Concrete Design Finite Element Theory and Practice Unsaturated Soils Water and Wastewater Engineering	S2	CEME 2006 CEME 3007 CEME 4003 CEME 4009 CEME 4010	Climate & Environmental Change Impact Modelling Integrated Environment Planning and Impact Assessment Wind and Earthquake Engineering Decision Making for Sustainable Solutions Designing Water Resource Systems for Urban Environments

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