# Bachelor of Engineering (Honours) – Civil & Environmental Engineering (2342): Completion of pre-2021 program

### **IMPORTANT Notes:**

- The information contained in this document is intended as general advice only. Students must follow the program rules & requirements listed on the Programs and Courses Website relevant to the year they commence. This planner must be used in conjunction with your program duration course list and program rules.
- Students need to check future course offerings, prerequisites, incompatibilities and restrictions for all courses as these are subject to change.
- Students cannot take courses that are incompatible with courses already counted towards their program, and cannot count the same course twice.

You must complete for the BE(Hons)(Civil and Environmental Engineering Plan code: CIENVW2342), 64 units comprising –

- (i) 56 to 58 units, being all courses from part A compulsory, and
- (ii) 2 to 4 units from a combination of parts <u>B1</u> and <u>B2</u> electives, and
- (iii) 4 units from electives

## PART A

Tick the courses you have completed and nominate the alternative course you plan to choose (if required). Discontinued courses are coloured red.

√/X ompl.	Pre-2021 Part A list	#	Last offered	If NOT completed – you can choose*:	Sem offering	#	First offered
	56 to 58 units, being all courses from Part A - compulsory						
	ENGG1100 Engineering Design (2) and	2	1	ENGG1100 Professional Engineering	1,2	2	
	ENGG1200 Engineering Modelling & Problem Solving (2) (discontinued)	2	2/20	and			
	OR			* If you have not completed ENGG1200, please contact EAIT Student Admin for			
	ENGG1211 Engineering Design, Modelling & Problem Solving (4) (discontinued)	4	2/20	replacement			
	MATH1051 Calculus & Linear Algebra I OR	2		MATH1051 Calculus and Linear Algebra I OR	1,2	2	
	MATH1071 Advanced Calculus & Linear Algebra I			MATH1071 Advanced Calculus & Linear Algebra I	1	2	
	MATH1052 Multivariate Calculus & Ordinary Differential Equations OR	2		MATH1052 Multivariate Calculus & Ordinary Differential Equations OR	1,2	2	
	MATH1072 Advanced Multivariate Calculus & Ordinary Differential Equations			MATH1072 Advanced Multivariate Calculus & Ordinary Differential Equations	2	2	
	ENGG1400 Engineering Mechanics: Statics & Dynamics (discontinued)	2	2/20	ENGG1700 Statics and Materials	1,2	2	
	ENGG1500 Engineering Thermodynamics	2		ENGG1500 Thermodynamics: Energy and the Environment	1,2	2	
	CIVL2135 Environmental Issues and Sustainability in Engineering	2		CIVL2135 Introduction to Environmental Engineering	1	2	
	CIVL2330 Structural Mechanics	2		CIVL2330 Structural Mechanics	1	2	
	CIVL2410 Sustainable Transport Engineering - Traffic Analysis (discontinued)	2	1/21	CIVL2420 Fundamental of Transport Engineering	2	2	
	CIVL2530 Probability and Statistics in Engineering	2		CIVL2530 Statistics and Data Analysis	1	2	
	CIVL2131 Environmental Fluid Mechanics	2		CIVL2131 Environmental Fluid Mechanics	1	2	
	CIVL2210 Soil Mechanics	2		CIVL2210 Soil Mechanics	2	2	
	CIVL2340 Design of Steel Structures (discontinued)	2	2/22	CIVL3380 Structural Steel Design	1	2	

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CIVL3141 Hydrology and Hydrological Risk (discontinued)	2	2/21	(See Note 1) plus	1	2	
CIVES141 Hydrology and Hydrological Kisk (discontinued)	2	2/21	plus [CIVL6121 Environmental Hydraulics and Flood Management	1	2	
			[OR	2	2	
			[CIVL4145 Groundwater Modelling and Management			
CIVL3210 Geotechnical Engineering	2		CIVL3210 Geotechnical Engineering	1	2	
CIVL3340 Structural Analysis	2		CIVL3340 Structural Analysis	1	2	
CIVL3150 Modelling of Environmental Systems (discontinued)	2	2/20	ENVE3150 Environmental System Dynamics and Modelling	2	2	
CIVL3350 Integrated Structural Design (discontinued)	2	2/22	CIVL3390 Integrated Structural Design	2	2	
<b>CIVL3420</b> Sustainable Transport Engineering - Planning and Design (discontinued)	2	1/23	CIVL3430 Sustainable Transport Engineering	1	2	:
CIVL4180 Sustainable Built Environment (discontinued)	2	1/20	CIVL4140 Contaminant Transport Modelling (discontinued)			
			OR			
			CIVL4145 Groundwater Modelling and Management OR	2	2	
			CIVL4525 Sustainable Infrastructure Design	2	2	
CIVL4170 Environmental Risk Assessment and Management	2		CIVL4170 Risk Analysis in Civil Engineering	1	2	
CIVL4514 Integrated Design (discontinued)	2	1/23	CIVL4518 Integrated Design for the Built Environment	2	2	
CIVL4560 Project (discontinued)	2	2/22	CIVL4600 Research Project	1,2	2	
OR CIVL4580 Research Thesis (discontinued)		a /aa	OR I I I I I I I I I I I I I I I I I I I			
OR	4	2/20	CIVL4604 Research Thesis OR	1	4	
CIVL4583 Research Thesis (discontinued) OR	4	2/22	CIVL4606 Research Thesis	2	4	
CIVL4582 Research Thesis (discontinued) OR	4	1/21				
CIVL4584 Research Thesis (discontinued)	4	1/23				
ENGG4900 Professional Practice and the Business Environment (discontinued	) 2	2/23	ENGG4901 Professional Practice and the Business Environment A OR	1	2	:
			ENGG4902 Professional Practice and the Business Environment B	2	2	:
CHEE4012 Industrial Wastewater & Solid Waste Management (discontinued)	2	2/22	WATR6103 Advanced Wastewater and Biosolids Treatment	2	2	

#### Notes:

1. If a continuing student has

• completed CIVL3141 but not CIVL3140 then they must do CIVL3155 and complete either CIVL6121 or CIVL4145

• CIVL3141 can count as an Engineering elective if there is room in the program or will be surplus.

- completed CIVL3140 but not CIVL3141 then they must do CIVL3155 and complete either CIVL6121 or CIVL4145
  - CIVL3140 can count as an Engineering elective if there is room in the program or will be surplus.

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### PART B

√/X compl.	Part B0 - Preparatory Mathematics & Science Electives	#	Last offered	If NOT completed – you can choose*:	Sem offering	#	First offered
	CHEM1090 Introductory Chemistry	2		CHEM1090 Introductory Chemistry	1	2	
	MATH1050 Mathematical Foundations	2		MATH1050 Mathematical Foundations II	1,2	2	
	PHYS1171 Physical Basis of Biological Systems	2		PHYS1171 Physical Basis of Biological Systems	1,2	2	

√/X compl.	Part B1 - Introductory Electives	#	Last offered	If NOT completed – you can choose*:	Sem offering	#	First offered
	BIOL1040 Cells to Organisms	2		BIOL1040 Cells to Organisms	2	2	
	CHEM1100 Chemistry 1	2		CHEM1100 Chemistry 1	1,2	2	
	CSSE1001 Introduction to Software Engineering	2		CSSE1001 Introduction to Software Engineering OR ENGG1001 Programming for Engineers	1,2	2	
	ENGG1300 Introduction to Electrical Systems	2		ENGG1300 Introduction to Electrical Systems	1,2	2	
	ENGG1500 Engineering Thermodynamics	2		ENGG1500 Thermodynamics: Energy and the Environment	1,2	2	
	ENGG1600 Introduction to Research Practices - The Big Issues	2		ENGG1600 Introduction to Research Practices - The Big Issues	2	2	
	ENGG2000 Humanitarian Engineering	2		ENGG2000 Humanitarian Engineering	2	2	
	ERTH1501 Earth Processes & Geological Materials for Engineers	2		ERTH1501 Earth Processes & Geological Materials for Engineers	1	2	
	MATH2000 Calculus & Linear Algebra II (discontinued)	2	2/20	MATH2001 Calculus & Linear Algebra II	1,2	2	
	MATH2001 Advanced Calculus & Linear Algebra II	2		MATH2001 Calculus & Linear Algebra II	1,2	2	
	MINE2105 Introduction to Mining and Mineral Processing (discontinued)	2	1/21	Any B1 Elective			
	MINE3121 Mining Geomechanics (discontinued)	2	1/22	MINE3129 Applied Mining Geomechanics OR CIVL3220 Rock Mechanics	e	2	
	PHYS1002 Electromagnetism and Modern Physics	2		PHYS1002 Electromagnetism & Modern Physics	2	2	
	REDE1300 Building Construction Management & Economics (discontinued)	2	1/20	Any B1 Elective			

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√/X compl.	Part B2 – Electives	#	Last offered	If NOT completed – you can choose*:	Sem offering	#	First offered
	<b>CIVL3510</b> Project Management with Building Information Modelling (discontinued) (see Note 2)	2	2/22	Any B2 Elective			
	CIVL4110 Coastal & Estuarine Engineering (discontinued)	2	2/21	CIVL6111 Ocean, Coastal and Estuarine Engineering OR CIVL6112 Hydro and Marine Power Renewable Energy Systems	2	2	
	CIVL4120 Advanced Hydraulic Engineering and Structures (discontinued)	2	2/20	CIVL6121 Environmental Hydraulics and Flood Management	1	2	
	CIVL4170 Environmental Risk Assessment and Management	2		CIVL4170 Risk Analysis in Civil Engineering	1	2	
-	CIVL4180 Sustainable Built Environment (discontinued)	2	1/20	CIVL4525 Sustainable Infrastructure Design	2	2	
	CIVL4230 Advanced Soil Mechanics	2		CIVL4230 Advanced Soil Mechanics	2	2	
	CIVL4270 Geotechnical Investigation & Testing	2		CIVL4270 Geotechnical Investigation	1	2	
	CIVL4280 Advanced Rock Mechanics	2		CIVL4280 Applied Rock Mechanics	2	2	
	CIVL4332 Advanced Structural Analysis (discontinued)	2	2/22	CIVL6360 Advanced Structural Analysis	2	2	
	CIVL4333 Advanced Concrete Design	2		CIVL4333 Advanced Concrete Design	1	2	
	CIVL4334 Design of Timber Structures	2		CIVL4334 Design of Timber Structures	2	2	
	CIVL4340 Wind Engineering	2		CIVL4340 Wind Engineering	1	2	
	<b>CIVL4412</b> Travel Behaviour and Transport Modelling (discontinued)	2	2/21	CIVL6412 Traffic Behavioural Modelling (discontinued - only offered in Semester 2, 2022) OR Any Part B2 Elective	2		
	CIVL4450 Traffic Flow Theory and Emerging Technologies	2		CIVL4450 Traffic Flow Theory and Emerging Technologies	2	2	
	CIVL4460 Highway Geometric Design	2		CIVL4460 Highway Geometric Design	2	2	
	FIRE3700 Introduction to Fire Safety Engineering	2		FIRE3700 Introduction to Fire Safety Engineering	1	2	
	FIRE4610 Fire Engineering Design: Solutions for Implicit Safety	2		FIRE4610 Fire Engineering Design: Solutions for Implicit Safety	1	2	
	MINE4000 Mine Waste Management & Landform Design (discontinued)	2	1/22	CIVL6220 Mine Waste Management	1	2	

#### Notes:

2. If CIVL3520 was taken in place of CIVL3510 before semester 2 2024. CIVL3520 will count as a B2 elective.

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