

# CHECKLIST Bachelor of Engineering (Honours)/Master of Engineering – Civil Engineering (2350): 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)/ME (Civil Engineering Plan code: CIVENX2350), 80 units comprising –

- 56 units from [part A](#) - compulsory, and
- 20 units from the combination of parts [B1](#), [B2](#), and [part N](#) - electives; with
  - a minimum of 8 units from [part B2](#); and
  - a minimum of 6 units from [part N](#) and
- 4 units from electives, being courses on the BE(Hons)/ME list or other courses approved by the executive dean.

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

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	<b>CIVL2340</b> Design of Steel Structures (discontinued)	2	2/22	<b>CIVL3380</b> Structural and Steel Design	1	2	
	<b>CIVL2360</b> Design of Concrete Structures (discontinued)	2	2/21	<b>CIVL3360</b> Reinforced Concrete Design	2	2	
	<b>CIVL3140</b> Hydraulics of Engineered and Natural Waterways (discontinued) and <b>CIVL3141</b> Hydrology and Hydrological Risk (discontinued)	2	1/21 2/21	<b>CIVL3155</b> Hydrology and free surface flows (See Note 1) plus [ <b>CIVL6121</b> Environmental Hydraulics and Flood Management OR [ <b>CIVL4145</b> Groundwater Modelling and Management	2 1 2	2 2 2	
	<b>CIVL3210</b> Geotechnical Engineering	2		<b>CIVL3210</b> Geotechnical Engineering	1	2	
	<b>CIVL3340</b> Structural Analysis	2		<b>CIVL3340</b> Structural Analysis	1	2	
	<b>CIVL3350</b> Integrated Structural Design (discontinued)	2	2/22	<b>CIVL3390</b> Integrated Structural Design	2	2	
	<b>CIVL3420</b> Sustainable Transport Engineering - Planning and Design (discontinued)	2	1/23	<b>CIVL3430</b> Sustainable Transport Engineering	1	2	1/24
	<b>CIVL3510</b> Project Management with Building Information Modelling (discontinued)	2	2/22	Any B2 Elective			
	<b>CIVL4514</b> Integrated Design (discontinued)	2	1/23	<b>CIVL4518</b> Design in the Built Environment	2	2	2/24
	<b>ENGG4900</b> Professional Practice and the Business Environment (discontinued)	2	2/23	<b>ENGG4901</b> Professional Practice and the Business Environment A OR <b>ENGG4902</b> Professional Practice and the Business Environment B	1 2	2 2	1/24 2/24
	<b>CIVL4516</b> Integrated Design for Environmental Management	2		<b>CIVL4516</b> Integrated Design for the Natural Environment	2	2	
	<b>CIVL7500</b> Research Thesis OR <b>CIVL7501</b> Research Thesis	8 8		<b>CIVL7500</b> Research Thesis OR <b>CIVL7501</b> Research Thesis	1 2	8 8	
	<b>ENGG7701</b> Engineering Grand Challenges	2		<b>ENGG7701</b> Engineering Grand Challenges	2	2	

**Notes:**

- If a continuing student has
  - completed **CIVL3141** but not **CIVL3140** then they must do **CIVL3155**
  - completed **CIVL3140** but not **CIVL3141** then they must do **CIVL3155**

**PART B**

✓/X compl.	Part B0 - Preparatory Mathematics & Science Electives	#	Last offered	If NOT completed – you can choose*:	Sem offering	#	First offered
	<b>CHEM1090</b> Introductory Chemistry	2		<b>CHEM1090</b> Introductory Chemistry	1	2	
	<b>MATH1050</b> Mathematical Foundations	2		<b>MATH1050</b> Mathematical Foundations II	1,2	2	
	<b>PHYS1171</b> Physical Basis of Biological Systems	2		<b>PHYS1171</b> 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
	<b>CHEM1100</b> Chemistry 1	2		<b>CHEM1100</b> Chemistry 1	1,2	2	
	<b>CSSE1001</b> Introduction to Software Engineering	2		<b>CSSE1001</b> Introduction to Software Engineering OR <b>ENGG1001</b> Programming for Engineers	1,2	2	
	<b>ENGG1300</b> Introduction to Electrical Systems	2		<b>ENGG1300</b> Introduction to Electrical Systems	1,2	2	
	<b>ENGG1500</b> Engineering Thermodynamics	2		<b>ENGG1500</b> Engineering Thermodynamics	1,2	2	
	<b>ENGG1600</b> Introduction to Research Practices - The Big Issues	2		<b>ENGG1600</b> Introduction to Research Practices - The Big Issues	2	2	
	<b>ENGG2000</b> Humanitarian Engineering	2		<b>ENGG2000</b> Humanitarian Engineering	2	2	
	<b>ERTH1501</b> Earth Processes & Geological Materials for Engineers	2		<b>ERTH1501</b> Earth Processes and Geological Materials for Engineers	1	2	
	<b>MATH2000</b> Calculus & Linear Algebra II (discontinued)	2	2/20	<b>MATH2001</b> Calculus and Linear Algebra II	1,2	2	
	<b>MATH2001</b> Advanced Calculus & Linear Algebra II	2		<b>MATH2001</b> Calculus and Linear Algebra II	1,2	2	
	<b>MINE2105</b> Introduction to Mining and Mineral Processing (discontinued)	2	1/21	Any B1 Elective			
	<b>MINE3121</b> Mining Geomechanics (discontinued)	2	1/22	<b>MINE3129</b> Applied Mining Geomechanics OR <b>CIVL3220</b> Rock Mechanics	1 2	2 2	
	<b>PHYS1002</b> Electromagnetism and Modern Physics	2		<b>PHYS1002</b> Electromagnetism and Modern Physics	2	2	
	<b>REDE1300</b> Building Construction Management & Economics (discontinued)	2	1/20	Any B1 Elective			

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Part B2 – Advanced Electives	#	Last offered	If NOT completed – you can choose*:	Sem offering	#	First offered
Minimum of 8 units (max of 14 units) from Part B2 - Electives						
<b>CHEE4012</b> Industrial Wastewater & Solid Waste Management (discontinued)	2	2/22	<b>WATR6103</b> Advanced Wastewater and Biosolids Treatment	2	2	
<b>CIVL3150</b> Modelling of Environmental Systems (discontinued)	2	2/20	<b>ENVE3150</b> Environmental System Dynamics and Modelling	2	2	
<b>CIVL4110</b> Coastal & Estuarine Engineering (discontinued)	2	2/21	<b>CIVL6111</b> Ocean, Coastal and Estuarine Engineering OR <b>CIVL6112</b> Hydro and Marine Power Renewable Energy Systems	2 2	2 2	
<b>CIVL4120</b> Advanced Hydraulic Engineering and Structures (discontinued)	2	2/20	<b>CIVL6121</b> Environmental Hydraulics and Flood Management	1	2	
<b>CIVL4140</b> Contaminant Transport Modelling (discontinued)	2	1/21	<b>CIVL4145</b> Groundwater Modelling and Management	2	2	
<b>CIVL4170</b> Environmental Risk Assessment and Management	2		<b>CIVL4170</b> Risk Analysis in Civil Engineering	1	2	
<b>CIVL4180</b> Sustainable Built Environment (discontinued)	2	1/20	<b>CIVL4525</b> Sustainable Infrastructure Design	2	2	
<b>CIVL4230</b> Advanced Soil Mechanics	2		<b>CIVL4230</b> Advanced Soil Mechanics	2	2	
<b>CIVL4270</b> Geotechnical Investigation & Testing	2		<b>CIVL4270</b> Geotechnical Investigation and Testing	1	2	
<b>CIVL4280</b> Advanced Rock Mechanics	2		<b>CIVL4280</b> Applied Rock Mechanics	2	2	
<b>CIVL4332</b> Advanced Structural Analysis (discontinued)	2	2/22	<b>CIVL6360</b> Advanced Structural Analysis	2	2	
<b>CIVL4333</b> Advanced Concrete Design	2		<b>CIVL4333</b> Advanced Concrete Design	1	2	
<b>CIVL4334</b> Design of Timber Structures	2		<b>CIVL4334</b> Design of Timber Structures	2	2	
<b>CIVL4340</b> Wind Engineering	2		<b>CIVL4340</b> Wind Engineering	1	2	
<b>CIVL4412</b> Travel Behaviour and Transport Modelling (discontinued)	2	2/21	<b>CIVL6412</b> Traffic Behavioural Modelling (discontinued - only offered in Semester 2, 2022) OR Any Part B2 Advanced Elective	2	2	
<b>CIVL4450</b> Traffic Flow Theory and Emerging Technologies	2		<b>CIVL4450</b> Traffic Flow Theory and Emerging Technologies	2	2	
<b>CIVL4460</b> Highway Geometric Design	2		<b>CIVL4460</b> Highway Geometric Design	2	2	
<b>CIVL4522</b> Analytical Methods for the Design of Construction Operations	2		<b>CIVL4522</b> Analytical Methods for the Design of Construction Operations	2	2	
<b>CIVL4560</b> Project (discontinued)	2	2/22	<b>CIVL4600</b> Research Project	1,2	2	

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	<b>CIVL4580</b> Research Thesis (discontinued) <b>OR</b> <b>CIVL4583</b> Research Thesis (discontinued))	4	<b>2/20</b>	<b>CIVL4604</b> Research Thesis	1	2	
	<b>CIVL4582</b> Research Thesis (discontinued) <b>OR</b> <b>CIVL4584</b> Research Thesis (discontinued)	4	<b>1/21</b>	<b>CIVL4606</b> Research Thesis	1	2	
	<b>FIRE3700</b> Introduction to Fire Safety Engineering	2		<b>FIRE3700</b> Introduction to Fire Safety Engineering	1	2	
	<b>FIRE4610</b> Fire Engineering Design: Solutions for Implicit Safety	2		<b>FIRE4610</b> Fire Engineering Design: Solutions for Implicit Safety	1	2	
	<b>MINE4000</b> Mine Waste Management & Landform Design (discontinued)	2	<b>1/22</b>	<b>CIVL6220</b> Mine Waste Management	1	2	

## Part N

✓/x compl.	Part N - Electives	#	Last offered	If NOT completed – you can choose*:	Sem offering	#	First offered
Minimum of 6 units (max of 12 units) from Part N - Electives							
	<b>CIVL7131</b> Urban Hydrology	2		<b>CIVL7131</b> Urban Hydrology	1	2	
	<b>CIVL7135</b> Environmental Sensor Systems and Monitoring Techniques (discontinued)	2	<b>1/22</b>	<b>Any Part N elective</b>			
	<b>CIVL7155</b> Environmental Fluid Mechanics - Modelling Applications (discontinued)	2	<b>1/20</b>	<b>Any Part N elective</b>			
	<b>CIVL7215</b> Ground Improvement & Remediation Technologies (discontinued)	2	<b>1/22</b>	<b>CIVL6215</b> Ground Improvement and Remediation Technologies	1	2	
	<b>CIVL7225</b> Dam and Embankment Engineering (discontinued)	2	<b>2/22</b>	<b>CIVL6210</b> Dam Engineering	2	2	
	<b>CIVL7350</b> Design of Composite Structures (discontinued)	2	<b>1/20</b>	<b>Any Part N elective</b>			
	<b>CIVL7415</b> Spatial and Quantitative Methods for Transport Data Analytics	2		<b>CIVL7415</b> Transport Data Analytics	1	2	
	<b>CIVL7425</b> Strategic Transport Modelling (discontinued)	2	<b>1/21</b>	<b>CIVL6412</b> Traffic Behavioural Modelling (discontinued - only offered in Semester 2, 2022) <b>OR</b> <b>Any Part N elective</b>			
	<b>FIRE7660</b> Structural Fire Engineering	2		<b>FIRE7660</b> Structural Fire Engineering	1	2	
	<b>CIVL7235</b> Underground Structures (discontinued)	2	<b>2/22</b>	<b>CIVL6250</b> Underground Structures	2	2	<b>2/24</b>
	<b>CIVL7315</b> Advanced Concrete Structures and Concrete Technology	2		<b>CIVL7315</b> Advanced Concrete Structures and Concrete Technology	2	2	
	<b>CIVL7360</b> Computational Design and Digital Workflows	2		<b>CIVL7360</b> Computational Design and Digital Workflows	2	2	
	<b>CIVL7435</b> Traffic Simulation: Methods and Applications (discontinued)	2	<b>2/22</b>	<b>CIVL6415</b> Traffic Analysis and Simulation	2	2	

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	<b>CIVL7505</b> Research Methods for Civil Engineers (discontinued)	2	<b>2/23</b>	<b>ENGG7518</b> Research Methods for Engineers OR Any Part N elective			<b>2/24</b>
	<b>FIRE7620</b> Fire Dynamics	2		<b>FIRE7620</b> Fire Dynamics	2	2	