

## CHECKLIST Bachelor of Engineering (Honours) Civil Engineering Specialisation: Transition to new program (commencing 2024)

\* This checklist is for the BE(Hons) component for dual programs with Bachelor of Arts, Bachelor of Business Management, Bachelor of Commerce, Bachelor of Design, Bachelor of Economics, Bachelor of Information Technology

### 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.
- Please contact the relevant Faculty for information regarding the other component of your dual program

For the BE(Hons) component, with a specialisation in Civil Engineering:

(a) 56 units from the BE(Hons) component, comprising—

(i) 8 units for [BE\(Hons\) core courses](#), and

(ii) 36 units for a [BE\(Hons\) Civil Engineering specialisation](#), and

i. 28 units for all [Civil Engineering Compulsory Courses](#), and

ii. 2 to 4 units from [Civil Engineering Research Courses](#), and

iii. 2 to 4 units from [Civil Engineering Advanced Elective Courses](#), and

iv. 2 units from [BE\(Hons\) Program Elective Courses](#)

(iii) 8 to 12 units from [Civil Engineering Advanced Elective Courses](#), and

(iv) 0 to 4 units from [Civil Engineering Breadth Elective Courses](#)

✓/x compl.	BE(Hons) Core Courses (8 units)	Sem offering	#	First offered	Approved substitution	Last offered
8 units for all Core Courses						
	<b>ENGG1100</b> Professional Engineering	1,2	2		Course must be completed [ENGG1211 (4 units) will count as 2 units towards Part A in lieu of ENGG1100, and 2 units towards program electives]	
	<b>ENGG1001</b> Programming for Engineers or <b>CSSE1001</b> Introduction to Software Engineering	1,2 1,2	2 2		Course must be completed	
	<b>MATH1051</b> Calculus and Linear Algebra I or <b>MATH1071</b> Advanced Calculus & Linear Algebra I	1,2 1	2 2		Course must be completed	
	<b>MATH1052</b> Multivariate Calculus & Ordinary Differential Equations or <b>MATH1072</b> Advanced Multivariate Calculus & Ordinary Differential Equations	1,2 2	2 2		Course must be completed	

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## Specialisation in Civil Engineering

Complete 48 units comprising:

- i. 36 units for a BE(Hons) Civil Engineering specialisation, and
  - i. 28 units for all [Civil Engineering Compulsory Courses](#), and
  - ii. 2 to 4 units from [Civil Engineering Research Courses](#), and
  - iii. 2 to 4 units from [Civil Engineering Advanced Elective Courses](#), and
  - iv. 2 units from [BE\(Hons\) Program Elective Courses](#)
- ii. 8 to 12 units from [Civil Engineering Advanced Elective Courses](#), and
- iii. 0 to 4 units from [Civil Engineering Breadth Elective Courses](#)

✓/x compl.	Civil Engineering Specialisation (36 units)	Sem offering	#	First offered	Approved substitution	Last offered
28 units for all Compulsory Courses						
	ENGG1700 Statics and Materials	1,2	2		ENGG1400 Engineering Mechanics: Statics and Dynamics (discontinued)	2/20
	CIVL2131 Environmental Fluid Mechanics	1	2		Course must be completed	
	CIVL2135 Introduction to Environmental Engineering	1	2		CIVL2135 Environmental Issues and Sustainability in Engineering	
	CIVL2210 Soil Mechanics	2	2		Course must be completed	
	CIVL2330 Structural Mechanics	1	2		Course must be completed	
	CIVL2420 Fundamentals of Transport Engineering	2	2		CIVL2410 Sustainable Transport Engineering - Traffic Analysis (discontinued)	1/21
	CIVL2530 Statistics and Data Analysis	1	2		CIVL2530 Probability and Statistics in Engineering	
	CIVL3155 Hydrology and Free Surface Flows	2	2		CIVL3141 Hydrology and Hydrological Risk (discontinued) and CIVL3140 Hydraulics of Engineered and Natural Waterways (discontinued)  [Both courses are required to have been completed to exempt students from CIVL3155; therefore 2 units will count as a Compulsory Course and 2 units will count towards Civil Engineering Advanced Electives]	2/21  1/21
	CIVL3210 Geotechnical Engineering	1	2		Course must be completed	
	CIVL3360 Reinforced Concrete Design	2	2		CIVL2360 Design of Concrete Structures (discontinued)	2/21
	CIVL3520 Project Management and Professional Practice	2	2		CIVL3510 Project Management with Building Information Modelling (discontinued) OR ENGG4900 Professional Practice and the Business Environment (discontinued)	2/22  2/23
	CIVL3530 Data Analytics in Civil Engineering	1	2		Course must be completed	
	CIVL4170 Risk Analysis in Civil Engineering	1	2		Course must be completed	

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	<b>CIVL4518</b> Integrated Design for the Built Environment	2	2	<b>2/24</b>	<b>CIVL4514</b> Integrated Design (discontinued) <b>OR</b> <b>CIVL4516</b> Integrated Design for Environmental Management	<b>1/23</b>
	<b>Or</b> <b>CIVL4516</b> Integrated Design for Environmental Management	1	2			
<b>If both courses are completed, 2 units will count as a Compulsory Course and 2 units will count towards Civil Engineering Advanced Electives</b>						

<b>2 to 4 units from Civil Engineering Research Courses</b>						
	<b>CIVL4600</b> Research Project	1,2	2	<b>1/23</b>	<b>CIVL4560</b> Project (discontinued)	<b>2/22</b>
	<b>CIVL4604</b> Research Thesis	1,2	4	<b>1/23</b>	<b>CIVL4580</b> Research Thesis (discontinued)	<b>2/20</b>
	<b>OR</b>				<b>OR</b>	
	<b>CIVL4606</b> Research Thesis	1,2	4	<b>2/23</b>	<b>CIVL4583</b> Research Thesis (discontinued)	<b>2/22</b>
					<b>OR</b>	<b>1/21</b>
					<b>CIVL4582</b> Research Thesis (discontinued)	
					<b>OR</b>	<b>1/23</b>
					<b>CIVL4584</b> Research Thesis (discontinued)	

[2 to 4 units from Civil Engineering Advanced Elective Courses](#)

2 units from BE(Hons) Program Elective Courses

[8 to 12 units from Civil Engineering Advanced Electives](#)

0 to 4 units from Civil Engineering Breadth Electives						
	<b>MATH2001</b> Calculus and Linear Algebra II	1,2	2		<b>MATH2000</b> Calculus and Linear Algebra II (discontinued)	2/20
	<p><b>Civil Engineering Breadth Electives</b> can also be chosen from course lists for the following majors:</p> <ul style="list-style-type: none"> <li>o Environmental Engineering</li> <li>o Geotechnical Engineering</li> <li>o Mining Engineering</li> <li>o Structural Engineering</li> <li>o Transport Engineering</li> <li>o Water and Marine Engineering</li> </ul> <p><i>Courses on this list may require pre-requisites. Please seek academic advice if required.</i></p>					

Civil Engineering Advanced Elective Courses						
	<b>CIVL3220</b> Rock Mechanics	2	2		<b>MINE3121</b> Mining Geomechanics (discontinued)	<b>1/22</b>
	<b>CIVL3340</b> Structural Analysis	1	2		No substitution	
	<b>CIVL3380</b> Structural Steel Design	1	2		<b>CIVL2340</b> Design of Steel Structures (discontinued)	<b>2/22</b>
	<b>CIVL3390</b> Integrated Structural Design	2	2		<b>CIVL3350</b> Integrated Structural Design (discontinued)	<b>2/22</b>
	<b>CIVL3430</b> Sustainable Transport Engineering	1	2	<b>1/24</b>	<b>CIVL3420</b> Sustainable Transport Engineering – Planning and Design (discontinued)	<b>1/23</b>
	<b>CIVL4145</b> Groundwater Modelling and Management	2	2		<b>CIVL4140</b> Contaminant Transport Modelling (discontinued)	<b>1/21</b>
	<b>CIVL4230</b> Advanced Soil Mechanics	2	2		No substitution	
	<b>CIVL4270</b> Geotechnical Investigation	1	2		CIVL4270 Geotechnical Investigation & Testing	
	<b>CIVL4280</b> Applied Rock Mechanics	2	2		No substitution	
	<b>CIVL4333</b> Advanced Concrete Design	1	2		No substitution	
	<b>CIVL4334</b> Design of Timber Structures	2	2		No substitution	
	<b>CIVL4340</b> Wind Engineering	1	2		No substitution	
	<b>CIVL4450</b> Traffic Flow Theory and Emerging Technologies	2	2		No substitution	
	<b>CIVL4460</b> Highway Geometric Design	2	2		No substitution	
	<b>CIVL4522</b> Analytical Methods for the Design of Construction Operations	2	2		No substitution	
	<b>CIVL4525</b> Sustainable Infrastructure Design	1	2		<b>CIVL4180</b> Sustainable Built Environment (discontinued)	<b>1/20</b>
	<b>CIVL6111</b> Ocean, Coastal and Estuarine Engineering	2	2		<b>CIVL4110</b> Coastal & Estuarine Engineering (discontinued) * CIVL4110 may only be used as approved substitution for CIVL6111 OR CIVL6112 – not both	<b>2/21</b>
	<b>CIVL6112</b> Hydro and Marine Power Renewable Energy Systems	2	2		<b>CIVL4110</b> Coastal & Estuarine Engineering (discontinued) * CIVL4110 may only be used as approved substitution for CIVL6111 OR CIVL6112 – not both	<b>2/21</b>
	<b>CIVL6121</b> Environmental Hydraulics and Flood Management	1	2		<b>CIVL4120</b> Advanced Hydraulic Engineering and Structures (discontinued)	<b>2/20</b>
	<b>CIVL6210</b> Dam Engineering	2	2		No substitution	
	<b>CIVL6215</b> Ground Improvement	1	2		No substitution	
	<b>CIVL6220</b> Mine Waste Management	1	2		<b>MINE4000</b> Mine Waste Management & Landform Design (discontinued)	<b>2/22</b>
	<b>CIVL6250</b> Underground Structures	2	2	<b>2/24</b>	No substitution	

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	<b>CIVL6360</b> Advanced Structural Analysis	2	2		<b>CIVL4332</b> Advanced Structural Analysis (discontinued)	<b>2/22</b>
	<b>CIVL6410</b> Transport Network Modelling	1	2		No substitution	
	<b>CIVL6415</b> Traffic Analysis and Simulation	2	2		No substitution	
	<b>ENVE3150</b> Environmental System Dynamics and Modelling	2	2		<b>CIVL3150</b> Modelling of Environmental Systems (discontinued)	<b>2/20</b>
	<b>ENVE3160</b> Environmental Phenomena	1	2		No substitution	
	<b>ENVE4610</b> Engineering the Circular Economy	1	2	<b>1/24</b>	No substitution	
	<b>FIRE3700</b> Introduction to Fire Safety Engineering	1	2		No substitution	
	<b>FIRE4610</b> Fire Engineering Design: Solutions for Implicit Safety	1	2		No substitution	