

# CHECKLIST Bachelor of Engineering (Honours) – Mechatronic 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) (Mechatronic Engineering Plan code: MECTRY2342), 64 units comprising -

- 50 units, being all courses from [part A](#) - compulsory; and
- 10 units from [part B1](#) - electives, (with a minimum of 6 units at level three or higher); and
- 4 units from electives

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
50 units, being all courses 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	<b>2/20</b>  <b>2/20</b>	<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 & Linear Algebra I OR <b>MATH1071</b> Advanced Calculus & Linear Algebra I	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 & Ordinary Differential Equations OR <b>MATH1072</b> Advanced Multivariate Calculus & Ordinary Differential Equations	1,2	2	
	<b>ENGG1300</b> Introduction to Electrical Systems	2		<b>ENGG1300</b> Introduction to Electrical Systems	1,2	2	
	<b>ENGG1400</b> Engineering Mechanics: Statics & Dynamics (discontinued)	2	<b>2/20</b>	<b>ENGG1700</b> Statics & Materials	1,2	2	<b>1/21</b>
	<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>CSSE2010</b> Introduction to Computer Systems	2		<b>CSSE2010</b> Introduction to Computer Systems	1,2	2	
	<b>MATH2001</b> Advanced Calculus & Linear Algebra II	2		<b>MATH2001</b> Calculus & Linear Algebra II	1,2,S	2	
	<b>MECH2300</b> Structures & Materials	2		<b>MECH2300</b> Structures & Materials	1	2	
	<b>ELEC2004</b> Circuits, Signals & Systems	2		<b>ELEC2004</b> Circuits, Signals & Systems	2	2	
	<b>MATH2010</b> Analysis of Ordinary Differential Equations	1		<b>MATH2010</b> Analysis of Ordinary Differential Equations	1,2	1	
	<b>MECH2210</b> Intermediate Mechanical & Space Dynamics	2		<b>MECH2210</b> Dynamics I	2	2	

Once you have completed the BE(Hons) Transition Plan – Mechatronic continuation checklist, you may either email your checklist to the Faculty on [enquiries@eait.uq.edu.au](mailto:enquiries@eait.uq.edu.au) or book an appointment with an Academic Advisor directly.

	<b>METR2800</b> Mechatronic System Design Project I	2		<b>METR2800</b> Mechatronic System Design Project I	2	2	
	<b>STAT2202</b> Probability Models for Engineering & Science (discontinued)	1	<b>2/20</b>	<b>STAT2201</b> Analysis of Eng. & Scientific Data (1)	1,2	1	
	<b>ELEC2003</b> Electromechanics & Electronics (discontinued)	2	<b>1/21</b>	<b>ELEC2300</b> Fundamentals of Electromagnetism & Electromechanics	1	2	<b>1/22</b>
	<b>ELEC3004</b> Signals, Systems & Control	2		<b>ELEC3004</b> Signals, Systems & Control	1	2	
	<b>METR3100</b> Control System Implementation	2		<b>METR3100</b> Control System Implementation	1	2	
	<b>METR4201</b> Control Engineering 1	2		<b>METR4201</b> Control Engineering 1	1	2	
	<b>MECH2100</b> Machine Element Design	2		<b>MECH2100</b> Machine Element Design	2	2	
	<b>MECH3200</b> Advanced Dynamics & Vibrations	2		<b>MECH3200</b> Advanced Dynamics & Vibrations	2	2	
	<b>METR4202</b> Robotics & Automation	2		<b>METR4202</b> Robotics & Automation	2	2	
	<b>ENGG4900</b> Professional Practice and the Business Environment (discontinued)	2	<b>2/23</b>	<b>ENGG4901</b> Professional Practice and the Business Environment A or <b>ENGG4902</b> Professional Practice and the Business Environment B	1,2	2	<b>1/24</b>
	<b>METR4810</b> Mechatronic System Design Project II	2	<b>Not offered in 2022</b>	<b>METR4810</b> Mechatronic System Design Project II	1	2	
	<b>METR4900</b> Thesis/Design Project (discontinued) or <b>METR4901</b> Thesis/Design Project (discontinued)	4	<b>1/20</b> <b>2/20</b>	<b>METR4911</b> Thesis/Design Project or <b>METR4912</b> Thesis/Design Project	1 2	4	<b>1/21</b> <b>2/21</b>

✓/✗ 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	1,2	2	
	<b>PHYS1171</b> Physical Basis of Biological Systems	2		<b>PHYS1171</b> Physical Basis of Biological Systems	1,2	2	

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✓/X compl.	Part B1 - Introductory Electives	#	Last offered	If NOT completed – you can choose*:	Sem offering	#	First offered
<b>Mechanical Design</b>							
	<b>MECH2305</b> Introduction to Engineering Design and Manufacturing	2		<b>MECH2305</b> Introduction to Engineering Design and Manufacturing	1	2	
	<b>MECH3100</b> Mechanical Systems Design	2		<b>MECH3100</b> Systems Engineering Practice	2	2	
	<b>MECH3300</b> Finite Element Method & Fracture Mechanics (discontinued)	2	1/22	<b>MECH3780</b> Computational Mechanics	1	1	1/23
<b>Materials</b>							
	<b>MECH2310</b> Science & Engineering of Metals	2		<b>MECH2310</b> Science & Engineering of Metals	2	2	
	<b>MECH3301</b> Materials Selection	2		<b>MECH3301</b> Materials Selection	2	2	
<b>Embedded Systems</b>							
	<b>CSSE2310</b> Computer Systems Principles and Programming	2		<b>CSSE2310</b> Computer Systems Principles and Programming	1,2	2	
	<b>CSSE3010</b> Embedded Systems Design & Interfacing	2		<b>CSSE3010</b> Embedded Systems Design & Interfacing	1	2	
<b>Electrical and Electronic Systems</b>							
	<b>ELEC3300</b> Electrical Energy Conversion & Utilisation (discontinued)	2	2/20	<b>ELEC3310</b> Electrical Energy Conversion & Utilisation	2	2	2/21
	<b>ELEC3400</b> Electronic Circuits (discontinued)	2	1/21	<b>ELEC2400</b> Electronic Devices & Circuits	1	2	1/22
	<b>ELEC4400</b> Advanced Electronic & Power Electronics Design (discontinued)	2	2/20	<b>ELEC4410</b> Advanced Electronic & Power Electronics Design	2	2	2/21
<b>Intelligent Systems</b>							
	<b>CSSE2002</b> Programming in the Large	2		<b>CSSE2002</b> Programming in the Large	1,2	2	
	<b>COMP3506</b> Algorithms & Data Structures	2		<b>COMP3506</b> Algorithms & Data Structures	2	2	
	<b>COMP3702</b> Artificial Intelligence	2		<b>COMP3702</b> Artificial Intelligence	2	2	
	<b>COMP4702</b> Machine Learning	2		<b>COMP4702</b> Machine Learning	1	2	
<b>Sensors and Sensing</b>							
	<b>MECH3250</b> Engineering Acoustics	2		<b>MECH3250</b> Engineering Acoustics	2	2	
	<b>ELEC3100</b> Fundamentals of Electromagnetic Fields & Waves	2		<b>ELEC3100</b> Fundamentals of Electromagnetic Fields & Waves	2	2	
	<b>PHYS1002</b> Electromagnetism and Modern Physics	2		<b>PHYS1002</b> Electromagnetism and Modern Physics (semester 2 only from 2022)	2	2	

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<u>Signal and Image processing</u>							
	ELEC4620 Digital Signal Processing	2		ELEC4620 Digital Signal Processing	1,2	2	
	ELEC4630 Image Processing and Computer Vision	2		ELEC4630 Image Processing and Computer Vision	1,2	2	
	<b>MECH3750 Engineering Analysis II (discontinued)</b>	2	<b>2/22</b>	If MECH2700 & MECH3780 completed, then exemption – <b>advanced Mech Eng elective to be taken in lieu</b>		2	
<u>Thermofluid Systems</u>							
	MECH2410 Fundamentals of Fluid Mechanics	2		MECH2410 Fundamentals of Fluid Mechanics	1	2	
	MECH3400 Thermodynamics & Heat Transfer	2		MECH3400 Thermodynamics & Heat Transfer	1	2	
	MECH3410 Fluid Mechanics	2		MECH3410 Fluid Mechanics	2	2	
	ENGG1500 Engineering Thermodynamics	2		ENGG1500 Thermodynamics: Energy and the Environment	1,2	2	