

## CHECKLIST Bachelor of Engineering (Honours) – Mechatronic Engineering Specialisation: Transition to new program

\* This checklist is for the BE(Hons) component ONLY for dual programs with Bachelor of Computer Science

Full name: \_\_\_\_\_ Student Number: \_\_\_\_\_ Date: \_\_\_\_\_

### Points to note

- You need to ensure that you meet minimum program and major requirements (listed below)
- You cannot count the same course twice
- You need to ensure that you don't take courses that are incompatible with courses that you have already counted towards your program, and that any prerequisites have been met
- Please ensure you read the program rules to check for any special rules with your dual program, as course restrictions may apply
- **Please view the Bachelor of Computer Science transition checklist for the requirements for the BCompSc Core, BCompSc Major and No Major Options**

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

(a) 60 units from the BE(Hons) component, comprising—

- I. 8 units for all BE(Hons) Core Courses; and
- II. 36 units for one Specialisation in Mechatronic Engineering; and
- III. One of the following:
  - a. 16 units for one Major from Mechatronic Engineering Major Options\*, or
  - b. 16 units for Mechatronic Engineering Specialisation No Major option, and

\*Majors available in: Computer Engineering; Mining Engineering

✓/X compl.	You must complete (NEW Program requirements)	Sem offering	#	First offered	Approved substitution	Last offered
	<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 (NEW) or <b>CSSE1001</b> Introduction to Software Engineering	1,2	2	<b>1/21</b>	Course must be completed	
	<b>MATH1051</b> Calculus & Linear Algebra I or <b>MATH1071</b> Advanced Calculus & Linear Algebra I	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		Course must be completed	

✓ - course already completed X – course to be undertaken

Checked by (Faculty: Name and Date): \_\_\_\_\_

✓/x compl.	<u>2021 Mechatronic Engineering specialisation list (36 units)</u>	Sem offering	#	First offered	Approved substitution	Last offered
	36 units for all: Compulsory Courses					
	<b>ENGG1300</b> Introduction to Electrical Systems	1,2	2		Course must be completed	
	<b>ENGG1700</b> Statics & Materials (NEW)	1,2	2	1/21	<b>ENGG1400</b> Engineering Mechanics: Statics & Dynamics (discontinued)	2/20
	<b>CSSE2010</b> Introduction to Computer Systems	1,2	2		Course must be completed	
	<b>ELEC2004</b> Circuits, Signals and Systems	2	2		Course must be completed	
	<b>ELEC2300</b> Electromagnetism and Electromechanics (NEW)	1	2	1/22	<b>ELEC2003</b> Electromechanics & Electronics (discontinued).	1/21
	<b>MATH2001</b> Calculus & Linear Algebra II	1,2,S	2		<b>MATH2001</b> Advanced Calculus & Linear Algebra II	
	<b>MATH2010</b> Analysis of Ordinary Differential Equations (1) and <b>STAT2201</b> Probability Models and Data Analysis for Engineering (1)	1,2 1,2	1 1		<b>STAT2202</b> Probability Models for Engineering & Science (discontinued)	2/20
	<b>MECH2100</b> Machine Element Design	2	2		Course must be completed	
	<b>MECH2210</b> Dynamics I	2	2		Course must be completed	
	<b>MECH2300</b> Structures and Materials	1	2		Course must be completed	
	<b>METR2800</b> Mechatronic System Design Project I	2	2		Course must be completed	
	<b>METR3100</b> Control Systems Implementation	2	2		Course must be completed	
	<b>METR4201</b> Control Engineering I	1	2		Course must be completed	
	<b>METR4202</b> Robotics & Automation	2	2		Course must be completed	
	<b>METR4810</b> Mechatronic System Design Project II	1	2		Course must be completed	
	<b>METR4910/METR4911</b> Thesis/Design Project (4)	1	4	1/21	<b>METR4900/METR4901</b> Thesis/Design Project (4) (discontinued)	1/20
	<b>ENGG4900</b> Professional Practice and the Business Environment	1,2	2		Course must be completed	

Once you have completed the checklist, you may either email your checklist to the Faculty on [enquiries@eit.uq.edu.au](mailto:enquiries@eit.uq.edu.au) or book an appointment with an Academic Advisor directly.

**BE(Hons) Transition Plan – Mechatronic Engineering NEW**

**Checked by (Faculty: Name and Date):** \_\_\_\_\_

## Mechatronic Engineering No Major Option

Complete 16 units comprising -

- i. 8 units for all Mechatronic Engineering Extension Courses; and
- ii. 4 to 8 units from Mechatronic Engineering Advanced Electives; and
- iii. 0 to 4 units from any Mechatronic Engineering Breadth Electives; and
- iv. 0 to 4 units from Program Electives; and
- v. 0 to 4 units from General Electives.

✓/X compl.	8 units for all: Mechatronic Engineering Extension Courses	Sem offering	#	First offered	Approved substitution	Last offered
	<b>ELEC2400</b> <i>Electronic Circuits and Amplifiers (NEW)</i>	1	2	1/22	<b>ELEC3400</b> <i>Electronic Circuits (discontinued)</i>	1/21
	<b>ELEC3004</b> <i>Signals, Systems &amp; Control</i>	1	2		Course must be completed	
	<b>MECH3200</b> <i>Advanced Dynamics &amp; Vibrations</i>	2	2		Course must be completed	
	<b>METR6203</b> <i>Control Engineering 2</i>	1	2	1/21	<b>METR7203</b> <i>Control Engineering 2 (discontinued)</i>	1/20
	<b>4 to 8 units from: Mechatronic Engineering Advanced Electives</b>					
	<b>AERO4300</b> <i>Aerospace Composites</i>	2	2		No substitution	
	<b>AERO4450</b> <i>Aerospace Propulsion</i>	1	2		No substitution	
	<b>AERO4470</b> <i>Hypersonics</i>	1	2		No substitution	
	<b>AERO4800</b> <i>Space Engineering</i>	2	2		No substitution	
	<b>COMP3702</b> <i>Artificial Intelligence</i>	2	2		No substitution	
	<b>COMP3710</b> <i>Pattern Recognition and Analysis</i>	2	2		No substitution	
	<b>COMP4702</b> <i>Machine Learning</i>	1	2		No substitution	
	<b>CSSE3010</b> <i>Embedded Systems Design &amp; Interfacing</i>	1	2		No substitution	
	<b>CSSE4010</b> <i>Digital System Design</i>	1	2		No substitution	
	<b>CSSE4011</b> <i>Advanced Embedded Systems</i>	1	2		No substitution	
	<b>ELEC3100</b> <i>Fundamentals of Electromagnetic Fields &amp; Waves</i>	2	2		No substitution	
	<b>ELEC3310</b> <i>Electrical Energy Conversion &amp; Utilisation</i>	2	2	2/21	<b>ELEC3300</b> <i>Electrical Energy Conversion &amp; Utilisation (discontinued)</i>	2/20
	<b>ELEC4310</b> <i>Power Systems Analysis</i>	1	2	1/21	<b>ELEC4300</b> <i>Power Systems Analysis (discontinued)</i>	1/20

Once you have completed the checklist, you may either email your checklist to the Faculty on [enquiries@eit.uq.edu.au](mailto:enquiries@eit.uq.edu.au) or book an appointment with an Academic Advisor directly.

**BE(Hons) Transition Plan – Mechatronic Engineering NEW**

**Checked by (Faculty: Name and Date):** \_\_\_\_\_

	<b>ELEC4620</b> Digital Signal Processing	2	2		No substitution	
	<b>ELEC4630</b> Image Processing and Computer Vision	1	2		No substitution	
	<b>ENGG4103</b> Engineering Asset Management	1	2		No substitution	
	<b>ENGY4000</b> Energy Systems	1	2		No substitution	
	<b>FIRE3700</b> Introduction to Fire Safety Engineering	1	2		No substitution	
	<b>MATE4302</b> Electrochemistry and Corrosion	2	2	<b>2/21</b>	<b>CHEE4302 Electrochemistry &amp; Corrosion (discontinued)</b>	<b>2/20</b>
	<b>MECH3250</b> Engineering Acoustics	2	2		No substitution	
	<b>MECH3301</b> Materials Selection	2	2		No substitution	
	<b>MECH4304</b> Net Shape Manufacturing	1	2		No substitution	
	<b>MECH4950</b> Advanced Manufacturing in Practice	2	2		No substitution	
	<b>MECH4951</b> Special Topics D	1	1		No substitution	
	<b>TIMS3309</b> Technology and Innovation Management	2	2		No substitution	
	<b>0 to 4 units from: Mechatronic Engineering Breadth Electives</b>					
	<b>Mechatronic Engineering Breadth Electives can be chosen from course lists for the following majors:</b> Computer Engineering Mining Engineering					

*Courses on this list may require pre-requisites. Please seek academic advice if required.*

Once you have completed the 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.

**BE(Hons) Transition Plan – Mechatronic Engineering NEW**

**Checked by (Faculty: Name and Date):** \_\_\_\_\_

✓/X compl.	Major in Computer Engineering (16 units)	Sem offering	#	First offered	Approved substitution	Last offered
	4 units for: <b>Computer Engineering Courses for Mechatronic Engineers only</b>					
	<b>COMP3506</b> Algorithms & Data Structures	2	2		Course must be completed	
	<b>CSSE2002</b> Programming in the Large	1,2	2		Course must be completed	
	4 units for: <b>Computer Engineering Compulsory Courses</b>					
	<b>CSSE4010</b> Digital System Design	2	2		Course must be completed	
	<b>CSSE4011</b> Advanced Embedded Systems	1	2		Course must be completed	
	0 to 8 units from: <b>Computer Engineering Electives (no more than 6 units at level 1 or 2)</b>					
	<b>COMP2140</b> Web/Mobile Programming (NEW)	2	2	<b>2/22</b>	No substitution	
	<b>COMP3301</b> Operating Systems Architecture	2	2		No substitution	
	<b>COMP3702</b> Artificial Intelligence	2	2		No substitution	
	<b>COMP3710</b> Pattern Recognition and Analysis	2	2		No substitution	
	<b>COMP4403</b> Compilers and Interpreters	1	2		No substitution	
	<b>COMP4500</b> Advanced Algorithms & Data Structures	2	2		No substitution	
	<b>COMP4702</b> Machine Learning	1	2		No substitution	
	<b>CYBR3000</b> Information Security	2	2	<b>2/21</b>	<b>COMS3000 Information Security (discontinued)</b>	<b>2/20</b>
	<b>COMS3200</b> Computer Networks I	1	2		No substitution	
	<b>COMS4113</b> Photonics	1	2	<b>1/21</b>	<b>COMS4103 Photonics (discontinued)</b>	<b>1/20</b>
	<b>COMS4104</b> Microwave Engineering	1	2		No substitution	
	<b>COMS4105</b> Communication Systems	2	2		No substitution	
	<b>COMS4507</b> Advanced Topics in Security	1	2		No substitution	
	<b>COMS6200</b> Computer Networks II	1	2	<b>1/22</b>	<b>COMS4200 Computer Networks II (discontinued)</b>	<b>1/21</b>
	<b>CSSE3012</b> The Software Process	1	2	<b>1/21</b>	<b>CSSE3002 The Software Process (discontinued)</b>	<b>1/20</b>
	<b>CSSE3100</b> Reasoning About Programs	1	2		No substitution	

Once you have completed the checklist, you may either email your checklist to the Faculty on [enquiries@eit.uq.edu.au](mailto:enquiries@eit.uq.edu.au) or book an appointment with an Academic Advisor directly.

**BE(Hons) Transition Plan – Mechatronic Engineering NEW**

**Checked by (Faculty: Name and Date):** \_\_\_\_\_

	<b>CSSE3200</b> Project Design Testing and Evaluation (NEW)	2	2	<b>2/22</b>	<b>DECO2800</b> Design Computing Studio 2 - Testing & Evaluation	
	<b>CSSE4004</b> Distributed Computing	1	2		No substitution	<b>1/21</b>
	<b>CSSE4400</b> Software Architecture (NEW)	1	2	<b>1/22</b>	<b>CSSE4004</b> Distributed Computing (discontinued)	<b>1/21</b>
	<b>CSSE4630</b> Principles of Program Analysis	2	2		No substitution	
	<b>COSC3500</b> High Performance Computing	2	2		No substitution	
	<b>DECO1400</b> Introduction to Web Design	1	2		No substitution	
	<b>DECO2500</b> Human-Computer Interaction	1	2		No substitution	
	<b>ELEC3310</b> Electrical Energy Conversion & Utilisation	2	2	<b>2/21</b>	<b>ELEC3300</b> Electrical Energy Conversion & Utilisation (discontinued)	<b>2/20</b>
	<b>ELEC4310</b> Power Systems Analysis	1	2	<b>1/21</b>	<b>ELEC4300</b> Power Systems Analysis (discontinued)	<b>1/20</b>
	<b>ELEC4620</b> Digital Signal Processing	2	2		No substitution	
	<b>ELEC4630</b> Image Processing and Computer Vision	1	2		No substitution	
	<b>ENGG2800</b> Team Project I	1,2	2		No substitution	
	<b>ENGG3800</b> Team Project II	2	2		No substitution	
	<b>ENGG4800</b> Project Management	1	2		No substitution	
	<b>INFS1200</b> Introduction to Information Systems	1,2	2		No substitution	
	<b>INFS2200</b> Relational Database Systems	2	2		No substitution	
	<b>METR3100</b> Control System Implementation	1	2		No substitution	
	<b>METR4202</b> Robotics & Automation	2	2		No substitution	

Once you have completed the 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.

**BE(Hons) Transition Plan – Mechatronic Engineering NEW**

**Checked by (Faculty: Name and Date):** \_\_\_\_\_

✓/X compl.	Major in Mining Engineering (16 units)	Sem offering	#	First offered	Approved substitution	Last offered
	4 units for: Mining Engineering Courses for Mechatronic Engineers <u>only</u>					
	<b>ELEC3004</b> Signals, Systems & Control	1	2		Course must be completed	
	<b>MECH3200</b> Advanced Dynamics & Vibrations	2	2		Course must be completed	
	12 units for: Mining Engineering Compulsory Courses					
	<b>MINE3110</b> Integrated Orebody Knowledge (NEW)	2	2	2/23	<b>MINE3120</b> Resource Estimation (discontinued)	1/22
	<b>MINE3122</b> Mining Systems & Automation	1	2		<b>MINE3122</b> Mining Systems (renamed)	
	<b>MINE3123</b> Mine Planning & Sustainability	2	2		<b>MINE3123</b> Mine Planning	
	<b>MINE3129</b> Applied Mining Geomechanics (NEW)	1	2	1/23	<b>MINE4120</b> Mine Geotechnical Engineering (discontinued)	1/22
	<b>MINE4124</b> Mine Design, Feasibility and Sustainability	1	2		<b>MINE4124</b> Hard Rock Mine Design & Feasibility	
	<b>MINE4129</b> Mine Process Optimisation (NEW)	2	2	2/23	<b>MINE3125</b> Explosives and Blasting Engineering (discontinued)	2/22

Once you have completed the checklist, you may either email your checklist to the Faculty on [enquiries@eit.uq.edu.au](mailto:enquiries@eit.uq.edu.au) or book an appointment with an Academic Advisor directly.

**BE(Hons) Transition Plan – Mechatronic Engineering NEW**

**Checked by (Faculty: Name and Date):** \_\_\_\_\_