CHECKLIST Bachelor of Engineering (Honours) – Mechanical Engineering: 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) (Mechanical Engineering) - a Single Major or Extended Major, or Major & Minor; 64 units comprising -

a. a major - 52 units, comprising-
   (i) 46 units, being all courses from part A (listed below); and
   (ii) 6 units from part B - advanced electives; and; and
b. 12 units from electives
   (i) a minimum of 4 units from courses on the BE(Hons) list, other than courses on the BE Year 1 part D list, and
   (ii) a maximum of 4 units from courses on the BE(Hons) Year 1 part D list, and
   (iii) a maximum of 4 units from level one courses not on the BE(Hons) list

OR

a. an extended major - 60 units, comprising-
   (i) 46 units, being all courses from part A - compulsory; and
   (ii) 14 units from the combination of part B and C electives, (with a minimum of 8 units from part B); and
b. 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
	46 units, being all courses from Part A – compulsory						
	ENGG1100 Engineering Design (2) **and** **ENGG1200** Engineering Modelling & Problem Solving **(2)** (discontinued) **OR** **ENGG1211** Engineering Design, Modelling & Problem Solving (4) (discontinued)	2 2 4	**2/20** **2/20**	**ENGG1100** Professional Engineering and * if you have not completed ENGG1200, please contact EAIT Student Admin	1,2	2	
	MATH1051 Calculus & Linear Algebra I **OR** **MATH1071** Advanced Calculus & Linear Algebra I	2		**MATH1051** Calculus & Linear Algebra I **OR** **MATH1071** Advanced Calculus & Linear Algebra I	1,2	2	
	MATH1052 Multivariate Calculus & Ordinary Differential Equations **OR** **MATH1072** Advanced Multivariate Calculus & Ordinary Differential Equations	2		**MATH1052** Multivariate Calculus & Ordinary Differential Equations **OR** **MATH1072** Advanced Multivariate Calculus & Ordinary Differential Equations	1,2	2	
	ENGG1400 Engineering Mechanics: Statics & Dynamics (discontinued)	2	**2/20**	**ENGG1700** Statics & Materials	1,2	2	**1/21**
	ENGG1500 Engineering Thermodynamics	2		**ENGG1500** Engineering Thermodynamics	1	2	
	ENGG1300 Introduction to Electrical Systems	2		**ENGG1300** Introduction to Electrical Systems	1,2	2	
	MATH2000 Calculus & Linear Algebra II (discontinued) **or** **MATH2001** Advanced Calculus & Linear Algebra II	2	**2/21**	**MATH2001** Calculus & Linear Algebra II	1,2,S	2	

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	MECH2300 Structures & Materials	2		**MECH2300** Structures & Materials	1	2	
	MECH2305 Introduction to Engineering Design and Manufacturing	2		**MECH2305** Introduction to Engineering Design and Manufacturing	1	2	
	MECH2410 Fundamentals of Fluid Mechanics	2		**MECH2410** Fundamentals of Fluid Mechanics	1	2	
	MECH2100 Machine Element Design	2		**MECH2100** Machine Element Design	2	2	
	MECH2210 Intermediate Mechanical & Space Dynamics	2		**MECH2210** Dynamics I	2	2	
	MECH2700 Engineering Analysis I	2		**MECH2700** Engineering Analysis I	2	2	
	MATH2010 Analysis of Ordinary Differential Equations AND **STAT2201** Analysis of Engineering & Scientific Data	2		**MATH2010** Analysis of Ordinary Differential Equations AND **STAT2201** Analysis of Engineering & Scientific Data	1,2 1,2	1 1	
	MECH3400 Thermodynamics & Heat Transfer	2		**MECH3400** Thermodynamics & Heat Transfer	1	2	
	MECH3600 Engineering Management & Communication (discontinued)	2	**1/22**	**MECH3610** Systems Engineering Principles	1	2	**1/23**
	MECH3300 Finite Element Method & Fracture Mechanics (discontinued)	2	**1/22**	**MECH3780** Computational Mechanics	1	2	**1/23**
	MECH3100 Mechanical Systems Design	2		**MECH3100** Systems Engineering Practice	2	2	
	MECH3200 Advanced Dynamics & Vibrations	2		**MECH3200** Advanced Dynamics & Vibrations	2	2	
	MECH3410 Fluid Mechanics	2		**MECH3410** Fluid Mechanics	2	2	
	METR4201 Control Engineering 1	2		**METR4201** Control Engineering 1	1	2	
	ENGG4900 Professional Practice and the Business Environment (discontinued)	2	**2/23**	**ENGG4901** Professional Practice and the Business Environment A **OR** **ENGG4902** Professional Practice and the Business Environment B	1,2	2	**1/24**
	MECH4500 Engineering Thesis (discontinued) **MECH4501** Engineering Thesis (discontinued) **ENGG4011** Professional Engineering Project (6) (discontinued) **OR** **MECH4552** Major Design Project (discontinued)	4 4 6 4	**2/20** **2/20** **2/20** **1/20**	**ENGG4600** Engineering Thesis **ENGG4601** Engineering Thesis **ENGG4013** Professional Engineering Project (discontinued) **OR** **MECH4552** Major Design Project (discontinued)	1 2 1,2 2	4	**1/21** **2/21** **2/21**

Extended Major

If you are enrolled in the extended major, you must enrol in an additional 8 units from introductory or advanced electives from Part B1 or B2, including a minimum of 6 units from Part B2.

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✓/X compl.	Part B1 - Introductory Electives	#	Last offered	If NOT completed – you can choose*:	Sem offering	#	First offered
	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 1,2	2 2	
	ENGG1600 Introduction to Research Practices - The Big Issues	2		**ENGG1600** Introduction to Research Practices - The Big Issues	2	2	
	PHYS1002 Electromagnetism and Modern Physics	2		**PHYS1002** Electromagnetism and Modern Physics	2	2	
	ENGG2000 Humanitarian Engineering	2		**ENGG2000** Humanitarian Engineering	1,2	2	

✓/X compl.	Part B2 – Advanced Electives	#	Last offered	If NOT completed – you can choose*:	Sem offering	#	First offered
	AERO4300 Aerospace Composites	2		**AERO4300** Aerospace Composites	2	2	
	AERO4450 Aerospace Propulsion	2		**AERO4450** Aerospace Propulsion	1	2	
	AERO4470 Hypersonics	2		**AERO4470** Hypersonics	1	2	
	AERO4800 Space Engineering	2		**AERO4800** Space Engineering	1	2	
	CHEE4302 Electrochemistry & Corrosion (discontinued)	2	**2/20**	**MATE4302** Electrochemistry and Corrosion	2	2	**2/21**
	ELEC2003 Electromechanics & Electronics (discontinued)	2	**1/21**	**ELEC2300** Electromagnetism and Electromechanics	1	2	**1/22**
	ENGG4103 Engineering Asset Management	2		**ENGG4103** Engineering Asset Management	1	2	
	ENGY4000 Energy Systems	2		**ENGY4000** Energy Systems	1	2	
	FIRE3700 Introduction to Fire Safety Engineering	2		**FIRE3700** Introduction to Fire Safety Engineering	1	2	
	MECH2310 Science & Engineering of Metals	2		**MECH2310** Science & Engineering of Metals	2	2	
	MECH3250 Engineering Acoustics	2		**MECH3250** Engineering Acoustics	2	2	

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	MECH3301 Materials Selection	2		**MECH3301** Materials Selection	2	2	
	MECH3750 Engineering Analysis II (discontinued)	2	**2/22**	If **MECH2700** & **MECH3780 OR MECH2700** & **MECH3300** completed, then exemption – **advanced Mech Eng elective to be taken in lieu**		2	
	MECH4304 Net Shape Manufacturing	2		**MECH4304** Net Shape Manufacturing	1	2	
	MECH4950 Advanced Manufacturing in Practice	2		**MECH4950** Advanced Manufacturing in Practice	2	2	
	MECH4951 Special Topics D (discontinued)	1		**Any BE Elective**			
	MECH6480 Computational Fluid Dynamics	2		**MECH6480** Computational Fluid Dynamics	2	2	
	METR3100 Control System Implementation	2		**METR3100** Control System Implementation	1	2	
	METR4202 Robotics & Automation	2		**METR4202** Robotics & Automation	2	2	
	PHYS2082 Space Science & Stellar Astrophysics	2		**PHYS2082** Space Science & Stellar Astrophysics	2	2	
	TIMS3309 Fundamentals of Technology and Innovation Management	2		**TIMS3309** Fundamentals of Technology and Innovation Management	2	2	

✓/x compl.	Part B3 - Electives	#	Last offered	If NOT completed – you can choose*:	Sem offering	#	First offered
	ENGY4000 Energy Systems	2		**ENGY4000** Energy Systems	1	2	
	MECH3250 Engineering Acoustics	2		**MECH3250** Engineering Acoustics	2	2	
	MECH3750 Engineering Analysis II (discontinued)	2	**2/22**	If **MECH2700** & **MECH3780 OR MECH2700** & **MECH3300** completed, then exemption – **advanced Mech Eng elective to be taken in lieu**		2	
	METR3100 Control System Implementation	2		**METR3100** Control System Implementation	1	2	

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