

Bachelor of Engineering (Honours) / Computer Science (3785)

[Robotics and Mechatronic Engineering \(MTRNBH\)](#) / [Computer Science \(COMPA1\)](#)

T1 Entry 2025 Sample Plan



Year 1		Year 2		Year 3		Year 4		Year 5	
Term 1	COMP1511 Programming Fundamentals	Term 1	COMP1531 Software Engineering Fundamentals	Term 1	ENGG2400 Mechanics of Solids 1 <u>OR</u> ENGG2500 Fluid Mechanics for Engineers <u>OR</u> MMAN2700 Thermodynamics	Term 1	MTRN3020 Modelling and Control of Mechatronic Systems	Term 1	MMAN4951 Research Thesis A
	MATH1131 Mathematics 1A <u>OR</u> MATH1141 Higher Mathematics 1A		MATH2018 Engineering Mathematics 2D <u>OR</u> MATH2019 Engineering Mathematics 2E		MMAN3200 Linear Systems and Control		MTRN4010 Advanced Autonomous Systems		Computing Elective
	PHYS1121 Physics 1A <u>OR</u> PHYS1131 Higher Physics 1A		ELEC2141 Digital Circuit Design		COMP2521 Data Structures and Algorithms		MTRN3210 Feedback and Control Systems		Discipline Elective
Term 2	MATH1231 Mathematics 1B <u>OR</u> MATH1241 Higher Mathematics 1B	Term 2	COMP1521 Computer Systems Fundamentals	Term 2	DESN3000 Strategic Design Innovation	Term 2	MTRN4230 Robotics	Term 2	MMAN4952 Research Thesis B
	ENGG1300 Engineering Mechanics		MMAN1130 Design and Manufacturing		MTRN3100 Robot Design		COMP3900 Computer Science Project		Computing Elective
Term 3	DESN1000 Introduction to Engineering Design and Innovation	Term 3	MTRN2500 Computing for Mechatronic Engineers	Term 3	COMP2511 Object-Oriented Design and Programming	Term 3	COMP4920 Professional Issues and Ethics in Information Technology	Term 3	MMAN4953 Research Thesis C
	ELEC1111 Electrical Circuit Fundamentals		MMAN2300 Engineering Mechanics 2		MTRN3500 Computing Applications in Mechatronics Systems		Computing Elective		Computing Elective
	MATH2089 Numerical Methods and Statistics		DESN2000 Engineering Design and Professional Practice				Discipline Elective		Computing Elective

NOTES

This is intended as a guide only. Courses do not need to be studied in the exact structure that they appear here.

Compulsory Training Component: There is a program requirement of 60 days approved [Industrial Training](#) ENGG4999

At least 6 UOC of discipline electives must be chosen from the "Recommended Discipline Elective" list in the handbook.

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T2 Entry 2025 Sample Plan



Year 1		Year 2		Year 3		Year 4		Year 5	
Term 2	COMP1511 Programming Fundamentals	Term 2	COMP1521 Computer Systems Fundamentals	Term 2	COMP2511 Object-Oriented Design and Programming	Term 2	MTRN3100 Robot Design	Term 2	MMAN4951 Research Thesis A
	MATH1131 Ⓞ Mathematics 1A		ENGG1300 Engineering Mechanics		COMP3900 Computer Science Project		MTRN4230 Robotics		Computing Elective
	PHYS1121 Physics 1A <u>OR</u> PHYS1131 Higher Physics 1A		MMAN1130 Design and Manufacturing		DESN3000 Strategic Design Innovation		Computing Elective		Discipline Elective
Term 3	DESN1000 Introduction to Engineering Design and Innovation	Term 3	MATH2018 Engineering Mathematics 2D <u>OR</u> MATH2019 Engineering Mathematics 2E	Term 3	MMAN2300 Engineering Mechanics 2	Term 3	MTRN3500 Computing Applications in Mechatronics Systems	Term 3	MMAN4952 Research Thesis B
	COMP1531 Software Engineering Fundamentals		DESN2000 Engineering Design and Professional Practice		MTRN2500 Computing for Mechatronic Engineers		Recommended Discipline Elective		Computing Elective
Term 1	ELEC1111 Electrical Circuit Fundamentals	Term 1	COMP2521 Data Structures and Algorithms	Term 1	COMP3121 Algorithm Design and Analysis <u>OR</u> COMP3821 Extended Algorithm Design and Analysis	Term 1	MTRN4010 Advanced Autonomous Systems	Term 1	MMAN4953 Research Thesis C
	ELEC2141 Digital Circuit Design		ENGG2400 Mechanics of Solids 1 <u>OR</u> ENGG2500 Fluid Mechanics for Engineers <u>OR</u> MMAN2700 Thermodynamics		MTRN3210 Feedback and Control Systems		COMP4920 Professional Issues and Ethics in Information Technology		Computing Elective
	MATH1231 Mathematics 1B <u>OR</u> MATH1241 Higher Mathematics 1B		MATH2089 Numerical Methods and Statistics		MTRN3020 Modelling and Control of Mechatronic Systems				Discipline Elective

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Compulsory Training Component: There is a program requirement of 60 days approved [Industrial Training](#) ENGG4999

Ⓞ Students can take MATH1131 or MATH1141 depending on term offerings. At least 6 UOC of discipline electives must be chosen from the "Recommended Discipline Elective" list in the handbook.

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T3 Entry 2025 Sample Plan



Year 1		Year 2		Year 3		Year 4		Year 5	
Term 3	COMP1511 Programming Fundamentals	Term 3	MMAN1130 Design and Manufacturing	Term 3	MTRN2500 Computing for Mechatronic Engineers	Term 3	MTRN3500 Computing Applications in Mechatronics Systems	Term 3	MMAN4951 Research Thesis A
	MATH1131 Mathematics 1A OR MATH1141 Higher Mathematics 1A		COMP1531 Software Engineering Fundamentals		DESN2000 Engineering Design and Professional Practice		Recommended Discipline Elective		Computing Elective
	PHYS1121 Physics 1A OR PHYS1131 Higher Physics 1A		COMP1521 Computer Systems Fundamentals				Computing Elective		Discipline Elective
Term 1	MATH1231 Mathematics 1B OR MATH1241 Higher Mathematics 1B	Term 1	MATH2018 Engineering Mathematics 2D OR MATH2019 Engineering Mathematics 2E	Term 1	COMP3121 Algorithm Design and Analysis OR COMP3821 Extended Algorithm Design and Analysis	Term 1	MTRN3020 Modelling and Control of Mechatronic Systems	Term 1	MMAN4952 Research Thesis B
	ELEC1111 Electrical Circuit Fundamentals		COMP2521 Data Structures and Algorithms		ENGG2400 Mechanics of Solids 1 OR ENGG2500 Fluid Mechanics for Engineers OR MMAN2700 Thermodynamics		MTRN4010 Advanced Autonomous Systems		Computing Elective
	ELEC2141 Digital Circuit Design		MATH2089 Numerical Methods and Statistics		MTRN3210 Feedback and Control Systems		COMP4920 Professional Issues and Ethics in Information Technology		Computing Elective
Term 2	DESN1000 Introduction to Engineering Design and Innovation	Term 2	MMAN2300 Engineering Mechanics 2	Term 2	COMP3900 Computer Science Project	Term 2	MTRN3100 Robot Design	Term 2	MMAN4953 Research Thesis C
	ENGG1300 Engineering Mechanics		COMP2511 Object-Oriented Design and Programming		DESN3000 Strategic Design Innovation		MTRN4230 Robotics		Computing Elective
					Discipline Elective				Discipline Elective

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This is intended as a guide only. Courses do not need to be studied in the exact structure that they appear here.

Compulsory Training Component: There is a program requirement of 60 days approved [Industrial Training](#) ENGG4999

At least 6 UOC of discipline electives must be chosen from the "Recommended Discipline Elective" list in the handbook.