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

Mechatronic Engineering (MTRNAH) / Computer Science (COMPA1)
T1 Entry 2024 Sample Plan

	Year 1		Year 2		Year 3		Year 4		Year 5
Term 1	COMP1511 Programming Fundamentals MATH1131 Mathematics 1A OR MATH1141 Higher Mathematics 1A PHYS1121 Physics 1A OR PHYS1131 Higher Physics 1A	Term 1	COMP1531 Software Engineering Fundamentals MATH2019 Engineering Mathematics 2E ELEC2141 Digital Circuit Design	Term 1	ENGG2400 Mechanics of Solids 1 OR ENGG2500 Fluid Mechanics for Engineers OR MMAN2700 Thermodynamics MMAN3200 Linear Systems and Control COMP2521 Data Structures and Algorithms	Term 1	MTRN3020 Modelling and Control of Mechatronic Systems MTRN4010 Advanced Autonomous Systems COMP3900 Computer Science Project	Term 1	MMAN4951 Research Thesis A Computing Elective Disciplinary Elective
Term 2	MATH1231 Mathematics 1B OR MATH1241 Higher Mathematics 1B ENGG1300 Engineering Mechanics	Term 2	COMP1521 Computer Systems Fundamentals MMAN1130 Design and Manufacturing	Term 2	DESN3000 Strategic Design Innovation MTRN3100 Robot Design COMP2511 Object-Oriented Design and Programming	Term 2	MTRN4230 Robotics Computing Elective	Term 2	MMAN4952 Research Thesis B Computing Elective Disciplinary Elective
Term 3	DESN1000 Introduction to Engineering Design and Innovation ELEC1111 Electrical Circuit Fundamentals MATH2089 Numerical Methods and Statistics	Term 3	MTRN2500 Computing for Mechatronic Engineers MMAN2300 Engineering Mechanics 2 DESN2000 Engineering Design and Professional Practice	Term 3	COMP3121 Algorithm Design and Analysis MTRN3500 Computing Applications in Mechatronics Systems	Term 3	COMP4920 Professional Issues and Ethics in Information Technology Computing Elective Disciplinary Elective	Term 3	MMAN4953 Research Thesis C Computing Elective Elective*

NOTES

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*Additional elective must be taken from the Faculty of Engineering or the School of Computer Science

	Year 1		Year 2	Year 3	Year 4	Year 5
Term 2	COMP1511 Programming Fundamentals	Term 2	COMP1521 Computer Systems Fundamentals	COMP2511 Object-Oriented Design and Programming	MTRN3100 Robot Design	MMAN4951 Research Thesis A
	MATH1131① Mathematics 1A		ENGG1300 Engineering Mechanics	MMAN3200 Linear Systems and Control	MTRN4230 Robotics	Computing Elective
	PHYS1121 Physics 1A OR PHYS1131 Higher Physics 1A		MMAN1130 Design and Manufacturing	DESN3000 Strategic Design Innovation	Computing Elective	Disciplinary Elective
Term 3	DESN1000 Introduction to Engineering Design and Innovation	Term 3	MMAN2300 Engineering Mechanics 2	MATH2019 Engineering Mathematics 2E	MTRN3500 Computing Applications in Mechatronics Systems	MMAN4952 Research Thesis B
	COMP1531 Software Engineering Fundamentals		DESN2000 Engineering Design and Professional Practice	MTRN2500 Computing for Mechatronic Engineers	Disciplinary Elective	Computing Elective
			MATH2089 Numerical Methods and Statistics		Computing Elective	Disciplinary Elective
Term 1	ELEC1111 Electrical Circuit Fundamentals	Term 1	COMP2521 Data Structures and Algorithms	COMP3121 Algorithm Design and Analysis OR COMP3821 Extended Algorithm Design and Analysis	MTRN4010 Advanced Autonomous Systems	MMAN4953 Research Thesis C
	ELEC2141 Digital Circuit Design		ENGG2400 Mechanics of Solids 1 OR ENGG2500 Fluid Mechanics for Engineers OR MMAN2700 Thermodynamics	COMP3900 Computer Science Project	COMP4920 Professional Issues and Ethics in Information Technology	Computing Elective
	MATH1231 Mathematics 1B OR MATH1241 Higher Mathematics 1B			MTRN3020 Modelling and Control of Mechatronic Systems		Disciplinary Elective

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①Students can take MATH1131 or MATH1141 depending on term offerings

	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		Disciplinary Elective		Computing Elective
	PHYS1121 Physics 1A OR PHYS1131 Higher Physics 1A		COMP1521 Computer Systems Fundamentals				Computing Elective		Disciplinary Elective
Term 1	MATH1231 Mathematics 1B OR MATH1241 Higher Mathematics 1B	Term 1	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		MMAN3200 Linear Systems and Control		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
					Disciplinary Elective				Disciplinary Elective

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