Engineering

Bachelor of Engineering (Honours) / Science (3767)

Mechanical Engineering (MECHAH) / Physics (PHYSL1)

T1 Entry 2025 Sample Plan

Year 1	
Term 1	**DESN1000** Introduction to Engineering Design and Innovation
	MATH1131 Mathematics 1A OR **MATH1141** Higher Mathematics 1A
	PHYS1121 Physics 1A OR **PHYS1131** Higher Physics 1A
	SCIF0000 (0 UoC) Introduction to University
Term 2	**MATH1231** Mathematics 1B OR **MATH1241** Higher Mathematics 1B
	PHYS1221 Physics 1B OR **PHYS1231** Higher Physics 1B
	MMAN1130 Design and Manufacturing
Term 3	**ELEC1111** Electrical Circuit Fundamentals
	ENGG1300 Engineering Mechanics

Year 2	
Term 1	**MATH2089** Numerical Methods and Statistics
	PHYS2111 Quantum Physics
	ENGG1811 Computing for Engineers OR **COMP1511** Programming Fundamentals OR **COMP1911** Computing 1A
Term 2	**ENGG2400** Mechanics of Solids 1
	MMAN2300 Engineering Mechanics 2
	MATH2121 Theory and Applications of Differential Equations OR **MATH2221** Higher Theory and Applications of Differential Equations
Term 3	**DESN2000** Engineering Design and Professional Practice
	MATH2069 Mathematics 2A

Year 3	
Term 1	**ENGG2500** Fluid Mechanics for Engineers
	Employability Experience Course
	Physics Elective
Term 2	**PHYS2114** Electromagnetism
	Physics Elective
Term 3	**MMAN2700** Thermodynamics
	SCIF1000 Skills in Science
	Employability Experience Course

Year 4	
Term 1	**MECH3110** Mechanical Design 1
	MMAN3400 Mechanics of Solids 2
	Recommended Discipline Elective
Term 2	**MMAN3200** Linear Systems and Control
	DESN3000 Strategic Design Innovation
	MECH3610 Advanced Thermofluids
Term 3	**Recommended Discipline Elective**
	Discipline Elective

Year 5	
Term 1	**MMAN4951** Research Thesis A
	PHYS3112 Experimental and Computational Physics
	PHYS3113 Thermal Physics and Statistical Mechanics
Term 2	**MMAN4952** Research Thesis B
	MECH4100 Mechanical Design 2
	PHYS3111 Quantum Mechanics
Term 3	**MMAN4953** Research Thesis C
	Discipline Elective
	Recommended Discipline Elective
	SCIF3010 (0 UoC) Graduation Portfolio

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 18 UOC of discipline electives must be chosen from the “Recommended Discipline Elective:” list in the handbook.

Engineering

Bachelor of Engineering (Honours) / Science (3767)

Mechanical Engineering (MECHAH) / Physics (PHYSL1)

T2 Entry 2025 Sample Plan

Year 1	
Term 2	**MATH1131** Mathematics 1A OR **MATH1141** Higher Mathematics 1A
	PHYS1121 Physics 1A OR **PHYS1131** Higher Physics 1A
	ENGG1300 Engineering Mechanics
	SCIF0000 (0 UoC) Introduction to University
Term 3	**PHYS1221** Physics 1B OR **PHYS1231** Higher Physics 1B
	MATH1231 Mathematics 1B OR **MATH1241** Higher Mathematics 1B
	DESN1000 Introduction to Engineering Design and Innovation
Term 1	**MMAN2700** Thermodynamics
	ELEC1111 Electrical Circuit Fundamentals

Year 2	
Term 2	**MMAN1130** Design and Manufacturing
	ENGG2400 Mechanics of Solids 1
	MMAN2300 Engineering Mechanics 2
Term 3	**DESN2000** Engineering Design and Professional Practice
	MATH2069 Mathematics 2A
	ENGG1811 Computing for Engineers OR **COMP1511** Programming Fundamentals OR **COMP1911** Computing 1A
Term 1	**PHYS2111** Quantum Physics
	MATH2089 Numerical Methods and Statistics

Year 3	
Term 2	**MATH2121** Theory and Applications of Differential Equations OR **MATH2221** Higher Theory and Applications of Differential Equations
	PHYS2114 Electromagnetism
	Employability Experience Course
Term 3	**ENGG2500** Fluid Mechanics for Engineers
	SCIF1000 Skills in Science
	Recommended Discipline Elective
Term 1	**Physics Elective**
	Discipline Elective

Year 4	
Term 2	**MMAN3200** Linear Systems and Control
	DESN3000 Strategic Design Innovation
	MECH3610 Advanced Thermofluids
Term 3	**Physics Elective**
	Employability Experience Course
Term 1	**MECH3110** Mechanical Design 1
	MMAN3400 Mechanics of Solids 2
	Discipline Elective

Year 5	
Term 2	**MMAN4951** Research Thesis A
	MECH4100 Mechanical Design 2
	PHYS3111 Quantum Mechanics
Term 3	**MMAN4952** Research Thesis B
	Recommended Discipline Elective
	Recommended Discipline Elective
Term 1	**MMAN4953** Research Thesis C
	PHYS3112 Experimental and Computational Physics
	PHYS3113 Thermal Physics and Statistical Mechanics
	SCIF3010 (0 UoC) Graduation Portfolio

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Compulsory Training Component: There is a program requirement of 60 days approved Industrial Training ENGG4999

At least 18 UOC of discipline electives must be chosen from the “Recommended Discipline Elective:” list in the handbook.

Engineering

Bachelor of Engineering (Honours) / Science (3767)

Mechanical Engineering (MECHAH) / Physics (PHYSL1)

T3 Entry 2025 Sample Plan

UNSW SYDNEY

	Year 1	Year 2	Year 3	Year 4	Year 5
Term 3	**DESN1000** Introduction to Engineering Design and Innovation	**ENGG1811** Computing for Engineers OR **COMP1511** Programming Fundamentals OR **COMP1911** Computing 1A	**ENGG2500** Fluid Mechanics for Engineers	**Employability Experience Course**	**MMAN4951** Research Thesis A
	MATH1131 Mathematics 1A OR **MATH1141** Higher Mathematics 1A	**MATH2069** Mathematics 2A	**SCIF1000** Skills in Science	**Discipline Elective**	**Physics Elective**
	PHYS1121 Physics 1A OR **PHYS1131** Higher Physics 1A	**DESN2000** Engineering Design and Professional Practice	**Recommended Discipline Elective**	**Recommended Discipline Elective**	**Recommended Discipline Elective**
	SCIF0000 (0 UoC) Introduction to University				
Term 1	**ELEC1111** Electrical Circuit Fundamentals	**PHYS2111** Quantum Physics	**MATH2089** Numerical Methods and Statistics	**MECH3110** Mechanical Design 1	**MMAN4952** Research Thesis B
	MATH1231 Mathematics 1B OR **MATH1241** Higher Mathematics 1B	**MMAN2700** Thermodynamics	**Physics Elective**	**MMAN3400** Mechanics of Solids 2	**PHYS3112** Experimental and Computational Physics
	PHYS1221 Physics 1B OR **PHYS1231** Higher Physics 1B				**PHYS3113** Thermal Physics and Statistical Mechanics
Term 2	**MMAN1130** Design and Manufacturing	**ENGG2400** Mechanics of Solids 1	**PHYS3111** Quantum Mechanics	**MECH3610** Advanced Thermofluids	**MMAN4953** Research Thesis C
	ENGG1300 Engineering Mechanics	**PHYS2114** Electromagnetism	**MMAN2300** Engineering Mechanics 2	**MMAN3200** Linear Systems and Control	**MECH4100** Mechanical Design 2
		MATH2121 Theory and Applications of Differential Equations OR **MATH2221** Higher Theory and Applications of Differential Equations	**Employability Experience Course**	**DESN3000** Strategic Design Innovation	**Discipline Elective**
					SCIF3010 (0 UoC) Graduation Portfolio

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Compulsory Training Component: There is a program requirement of 60 days approved Industrial Training ENGG4999

At least 18 UOC of discipline electives must be chosen from the “Recommended Discipline Elective:” list in the handbook.