#### **Engineering**

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

# Surveying (GMATDH) / Computer Science (COMPA1) T1 Entry 2024 Sample Plan



Year 1	
	<b>COMP1511</b> Programming Fundamentals
Term 1	<b>MATH1131</b> Mathematics 1A <u>OR</u> <b>MATH1141</b> Higher Mathematics 1A
	<b>PHYS1121</b> Physics 1A <u>OR</u> <b>PHYS1131</b> Higher Physics 1A
Term 2	MATH1231 Mathematics 1B <u>OR</u> MATH1241 Higher Mathematics 1B
	COMP1531 Software Engineering Fundamentals
	<b>GMAT1110</b> Surveying and Geospatial Engineering
Term 3	COMP1521 Computer Systems Fundamentals
	<b>DESN 1000</b> Introduction to Engineering Design and Innovation

	Year 2
Term 1	ENGG2500 Fluid Mechanics for Engineers
	<b>MATH2019</b> Engineering Mathematics 2E
	GMAT2500 Surveying Computations A
Term 2	<b>DESN2000</b> Engineering Design and Professional Practice
	CVEN2002 Civil and Environmental Engineering Computations
	<b>GMAT2700</b> Foundations of Geodesy and Geospatial Reference Frames
Term 3	<b>GMAT2120</b> Surveying and Geospatial Technology
	<b>GMAT2550</b> Surveying Computations B

	Year 3
	<b>COMP2521</b> Data Structures and Algorithms
Term 1	<b>GMAT3220</b> Geospatial Information Systems
	<b>COMP3121</b> Algorithm Design and Analysis
Term 2	COMP2511 Object-Oriented Design and Programming
	Computing Elective
	COMP3900 Computer Science Project
Term 3	COMP4920 Professional Issues and Ethics in Information Technology
	CVEN3101 Engineering Operations and Control

	Year 4	
	CVEN3501 Water Resources Engineering	
Term 1	<b>GMAT3100</b> Surveying Applications and Design	
	<b>GMAT3150</b> Surveying Field Projects	
	<b>GMAT3700</b> Geodetic Positioning and Applications	
Term 2	Disciplinary Elective	
Term 3	<b>GMAT3420</b> Cadastral Surveying and Land Law	
	<b>GMAT3500</b> Remote Sensing and Photogrammetry	
	<b>GMAT4150</b> Field Projects 2	

	Year 5
	<b>CVEN4951</b> ① Honours Research Thesis A
Term 1	Computing Elective
	Disciplinary Elective
	<b>CVEN4952</b> Honours Research Thesis B <u>OR</u>
Term 2	Computing Elective
	Disciplinary Elective
	<b>CVEN4953</b> Honours Research Thesis B
Term 3	Computing Elective
	Computing Elective

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

## Surveying (GMATDH) / Computer Science (COMPA1) T2 Entry 2024 Sample Plan



Year 1	
	<b>COMP1511</b> Programming Fundamentals
Term 2	<b>GMAT1110</b> Surveying and Geospatial Engineering
	<b>MATH1131</b> Mathematics 1A <u>OR</u> <b>MATH1141</b> Higher Mathematics 1A
Term 3	<b>PHYS1121</b> Physics 1A <u>OR</u> <b>PHYS1131</b> Higher Physics 1A
	COMP1531 Software Engineering Fundamentals
Term 1	<b>DESN1000</b> Introduction to Engineering Design and Innovation
	MATH1231 Mathematics 1B <u>OR</u> MATH1241 Higher Mathematics 1B
	Computing Elective

	Year 2
Term 2	<b>DESN2000</b> Engineering Design and Professional Practice
	CVEN2002 Civil and Environmental Engineering Computations
	COMP1521 Computer Systems Fundamentals
Term 3	COMP2521 Data Structures and Algorithms
	ENGG2500 Fluid Mechanics for Engineers
Term 1	MATH2019 Engineering Mathematics 2E
	<b>GMAT2500</b> Surveying Computations A
	COMP2511 Object-Oriented Design and Programming

	Year 3
	<b>GMAT2700</b> Foundations of Geodesy and Geospatial Reference Frames
Term 2	<b>COMP3121</b> Algorithm Design and Analysis
	<b>GMAT2120</b> Surveying and Geospatial Technology
Term 3	<b>GMAT2550</b> Surveying Computations B
	Computing Elective
Term 1	<b>CVEN3501</b> Water Resources Engineering
	<b>GMAT3100</b> Surveying Applications and Design
	<b>GMAT3150</b> Surveying Field Projects

	Year 4
Term 2	<b>GMAT3700</b> Geodetic Positioning and Applications
	COMP3900 Computer Science Project
Term 3	CVEN3101 Engineering Operations and Control
	<b>GMAT3420</b> Cadastral Surveying and Land Law
	<b>GMAT3500</b> Remote Sensing and Photogrammetry
Term 1	<b>GMAT3220</b> Geospatial Information Systems
	COMP4920 Professional Issues and Ethics in Information Technology
	Disciplinary Elective

	Year 5
Term 2	<b>CVEN4951</b> ① Honours Research Thesis A
	Computing Elective
	Disciplinary Elective
	CVEN4952
	Honours Research Thesis B
Term	GMAT4150
3	Field Projects 2
	Computing Elective
	CVEN4953
Term 1	Honours Research Thesis B
	Disciplinary Elective
	Computing Elective

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

### Surveying (GMATDH) / Computer Science (COMPA1) T3 Entry 2024 Sample Plan



Year 1	
	<b>COMP1511</b> Programming Fundamentals
Term 3	MATH1131 Mathematics 1A <u>OR</u> MATH1141 Higher Mathematics 1A
	<b>PHYS1121</b> Physics 1A <u>OR</u> <b>PHYS1131</b> Higher Physics 1A
	<b>MATH1231</b> Mathematics 1B <u>OR</u> <b>MATH1241</b> Higher Mathematics 1B
Term 1	<b>DESN1000</b> Introduction to Engineering Design and Innovation
	COMP1521 Computer Systems Fundamentals
Term 2	COMP1531 Software Engineering Fundamentals
	<b>GMAT1110</b> Surveying and Geospatial Engineering

	Year 2
Term 3	COMP2521 Data Structures and Algorithms
	ENGG2500 Fluid Mechanics for Engineers
	<b>GMAT2550</b> Surveying Computations B
	MATH2019 Engineering Mathematics 2E
Term 1	<b>GMAT2500</b> Surveying Computations A
Term 2	CVEN2002 Civil and Environmental Engineering Computations
	<b>DESN2000</b> Engineering Design and Professional Practice
	<b>GMAT2700</b> Foundations of Geodesy and Geospatial Reference Frames

Year 3			
Term 3	<b>GMAT2120</b> Surveying and Geospatial Technology		
	CVEN3101 Engineering Operations and Control		
	COMP2511 Object-Oriented Design and Programming		
Term 1	COMP3121 Algorithm Design and Analysis <u>OR</u> COMP3821 Extended Algorithm Design and Analysis		
	GMAT3220 Geospatial Information Systems		
	COMP4920 Professional Issues and Ethics in Information Technology		
Term 2	COMP3900 Computer Science Project		
	<b>GMAT3700</b> Geodetic Positioning and Applications		

Term 3	<b>GMAT3420</b> Cadastral Surveying and Land Law		
	<b>GMAT3500</b> Remote Sensing and Photogrammetry	Term 3	
	Disciplinary Elective		
Term 1	CVEN3501 Water Resources Engineering		
	<b>GMAT3100</b> Surveying Applications and Design	Term 1	
	<b>GMAT3150</b> Surveying Field Projects		
Term 2	Disciplinary Elective		
	Computing Elective	Term 2	

Year 5		
Term 3	<b>CVEN4951</b> ① Honours Research Thesis A	
	<b>GMAT4150</b> Field Projects 2	
	Computing Elective	
Term 1	<b>CVEN4952</b> Honours Research Thesis B	
	Computing Elective	
	Disciplinary Elective	
Term 2	<b>CVEN4953</b> Honours Research Thesis B	
	Computing Elective	
	Computing Elective	

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