

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

## Surveying (GMATDH) / Computer Science (COMPA1)

### T1 Entry 2025 Sample Plan



Year 1		Year 2		Year 3		Year 4		Year 5	
Term 1	<b>COMP1511</b> Programming Fundamentals	Term 1	<b>ENGG2500</b> Fluid Mechanics for Engineers	Term 1	<b>COMP2521</b> Data Structures and Algorithms	Term 1	<b>CVEN3501</b> Water Resources Engineering	Term 1	<b>CVEN4951</b> ① Honours Research Thesis A
	<b>MATH1131</b> Mathematics 1A <u>OR</u> <b>MATH1141</b> Higher Mathematics 1A		<b>MATH2018</b> Engineering Mathematics 2D <u>OR</u> <b>MATH2019</b> Engineering Mathematics 2E		<b>GMAT3220</b> Geospatial Information Systems		<b>GMAT3100</b> Surveying Applications and Design		<b>Computing Elective</b>
	<b>PHYS1121</b> Physics 1A <u>OR</u> <b>PHYS1131</b> Higher Physics 1A		<b>GMAT2500</b> Surveying Computations A				<b>GMAT3150</b> Surveying Field Projects		<b>Discipline Elective*</b>
Term 2	<b>MATH1231</b> Mathematics 1B <u>OR</u> <b>MATH1241</b> Higher Mathematics 1B	Term 2	<b>DESN2000</b> Engineering Design and Professional Practice	Term 2	<b>COMP3121</b> Algorithm Design and Analysis	Term 2	<b>GMAT3700</b> Geodetic Positioning and Applications	Term 2	<b>CVEN4952</b> Honours Research Thesis B <u>OR</u>
	<b>COMP1531</b> Software Engineering Fundamentals		<b>CVEN2002</b> Civil and Environmental Engineering Computations		<b>COMP2511</b> Object-Oriented Design and Programming		<b>Discipline Elective</b>		<b>Computing Elective</b>
	<b>GMAT1110</b> Surveying and Geospatial Engineering		<b>GMAT2700</b> Foundations of Geodesy and Geospatial Reference Frames		<b>Computing Elective</b>				<b>Discipline Elective*</b>
Term 3	<b>COMP1521</b> Computer Systems Fundamentals	Term 3	<b>GMAT2120</b> Surveying and Geospatial Technology	Term 3	<b>COMP3900</b> Computer Science Project	Term 3	<b>GMAT3420</b> Cadastral Surveying and Land Law	Term 3	<b>CVEN4953</b> Honours Research Thesis B
	<b>DESN1000</b> Introduction to Engineering Design and Innovation		<b>GMAT2550</b> Surveying Computations B		<b>COMP4920</b> Professional Issues and Ethics in Information Technology		<b>GMAT3500</b> Remote Sensing and Photogrammetry		<b>Computing Elective</b>
					<b>CVEN3101</b> Engineering Operations and Control		<b>GMAT4150</b> Field Projects 2		<b>Computing Elective</b>

**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

① Students can take alternative thesis options. Please see the Handbook for available options and adjust study plan accordingly. \*Recommended Discipline Elective Courses: GMAT4400, GMAT4220.

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

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## T2 Entry 2025 Sample Plan



Year 1		Year 2		Year 3		Year 4		Year 5	
Term 2	<b>COMP1511</b> Programming Fundamentals	Term 2	<b>DESN2000</b> Engineering Design and Professional Practice	Term 2	<b>GMAT2700</b> Foundations of Geodesy and Geospatial Reference Frames	Term 2	<b>GMAT3700</b> Geodetic Positioning and Applications	Term 2	<b>CVEN4951</b> <sup>ⓐ</sup> Honours Research Thesis A
	<b>GMAT1110</b> Surveying and Geospatial Engineering		<b>CVEN2002</b> Civil and Environmental Engineering Computations		<b>COMP3121</b> Algorithm Design and Analysis		<b>COMP3900</b> Computer Science Project		<b>Computing Elective</b>
			<b>COMP1521</b> Computer Systems Fundamentals				<b>Discipline Elective*</b>		
Term 3	<b>MATH1131</b> Mathematics 1A <b>OR</b> <b>MATH1141</b> Higher Mathematics 1A	Term 3	<b>COMP2521</b> Data Structures and Algorithms	Term 3	<b>GMAT2120</b> Surveying and Geospatial Technology	Term 3	<b>CVEN3101</b> Engineering Operations and Control	Term 3	<b>CVEN4952</b> Honours Research Thesis B
	<b>PHYS1121</b> Physics 1A <b>OR</b> <b>PHYS1131</b> Higher Physics 1A		<b>ENGG2500</b> Fluid Mechanics for Engineers		<b>GMAT2550</b> Surveying Computations B		<b>GMAT3420</b> Cadastral Surveying and Land Law		<b>GMAT4150</b> Field Projects 2
	<b>COMP1531</b> Software Engineering Fundamentals				<b>Computing Elective</b>		<b>GMAT3500</b> Remote Sensing and Photogrammetry		<b>Computing Elective</b>
Term 1	<b>DESN1000</b> Introduction to Engineering Design and Innovation	Term 1	<b>MATH2018</b> Engineering Mathematics 2D <b>OR</b> <b>MATH2019</b> Engineering Mathematics 2E	Term 1	<b>CVEN3501</b> Water Resources Engineering	Term 1	<b>GMAT3220</b> Geospatial Information Systems	Term 1	<b>CVEN4953</b> Honours Research Thesis B
	<b>MATH1231</b> Mathematics 1B <b>OR</b> <b>MATH1241</b> Higher Mathematics 1B		<b>GMAT2500</b> Surveying Computations A		<b>GMAT3100</b> Surveying Applications and Design		<b>COMP4920</b> Professional Issues and Ethics in Information Technology		<b>Discipline Elective*</b>
	<b>Computing Elective</b>		<b>COMP2511</b> Object-Oriented Design and Programming		<b>GMAT3150</b> Surveying Field Projects		<b>Discipline Elective</b>		<b>Computing Elective</b>

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<sup>ⓐ</sup>Students can take alternative thesis options. Please see the Handbook for available options and adjust study plan accordingly. \*Recommended Discipline Elective Courses: GMAT4400, GMAT4220.

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

## Surveying (GMATDH) / Computer Science (COMPA1)

### T3 Entry 2025 Sample Plan



Year 1		Year 2		Year 3		Year 4		Year 5	
Term 3	<b>COMP1511</b> Programming Fundamentals	Term 3	<b>COMP2521</b> Data Structures and Algorithms	Term 3	<b>GMAT2120</b> Surveying and Geospatial Technology	Term 3	<b>GMAT3420</b> Cadastral Surveying and Land Law	Term 3	<b>CVEN4951</b> <sup>①</sup> Honours Research Thesis A
	<b>MATH1131</b> Mathematics 1A <b>OR</b> <b>MATH1141</b> Higher Mathematics 1A		<b>ENGG2500</b> Fluid Mechanics for Engineers		<b>CVEN3101</b> Engineering Operations and Control		<b>GMAT3500</b> Remote Sensing and Photogrammetry		<b>GMAT4150</b> Field Projects 2
	<b>PHYS1121</b> Physics 1A <b>OR</b> <b>PHYS1131</b> Higher Physics 1A		<b>GMAT2550</b> Surveying Computations B		<b>COMP2511</b> Object-Oriented Design and Programming		<b>Discipline Elective</b>		<b>Computing Elective</b>
Term 1	<b>MATH1231</b> Mathematics 1B <b>OR</b> <b>MATH1241</b> Higher Mathematics 1B	Term 1	<b>MATH2018</b> Engineering Mathematics 2D <b>OR</b> <b>MATH2019</b> Engineering Mathematics 2E	Term 1	<b>COMP3121</b> Algorithm Design and Analysis <b>OR</b> <b>COMP3821</b> Extended Algorithm Design and Analysis	Term 1	<b>CVEN3501</b> Water Resources Engineering	Term 1	<b>CVEN4952</b> Honours Research Thesis B
	<b>DESN1000</b> Introduction to Engineering Design and Innovation		<b>GMAT2500</b> Surveying Computations A		<b>GMAT3220</b> Geospatial Information Systems		<b>GMAT3100</b> Surveying Applications and Design		<b>Computing Elective</b>
	<b>COMP1521</b> Computer Systems Fundamentals				<b>COMP4920</b> Professional Issues and Ethics in Information Technology		<b>GMAT3150</b> Surveying Field Projects		<b>Discipline Elective*</b>
Term 2	<b>COMP1531</b> Software Engineering Fundamentals	Term 2	<b>CVEN2002</b> Civil and Environmental Engineering Computations	Term 2	<b>COMP3900</b> Computer Science Project	Term 2	<b>Discipline Elective*</b>	Term 2	<b>CVEN4953</b> Honours Research Thesis B
	<b>GMAT1110</b> Surveying and Geospatial Engineering		<b>DESN2000</b> Engineering Design and Professional Practice		<b>GMAT3700</b> Geodetic Positioning and Applications		<b>Computing Elective</b>		<b>Computing Elective</b>
			<b>GMAT2700</b> Foundations of Geodesy and Geospatial Reference Frames						<b>Computing Elective</b>

<b>NOTES</b>	<b>This is intended as a guide only. Courses do not need to be studied in the exact structure that they appear here.</b>
	Compulsory Training Component: There is a program requirement of 60 days approved <a href="#">Industrial Training</a> ENGG4999
	<sup>①</sup> <b>Students can take alternative thesis options. Please see the Handbook for available options and adjust study plan accordingly.</b> *Recommended Discipline Elective Courses: GMAT4400, GMAT4220.