



UNSW TAFE Pathways

Bachelor of Engineering (Honours) (Surveying)

Program Code: 3707

Program and Course Terminology

Terminology	Definition
Disciplinary Component	Students must complete 168 UOC (28 courses) to satisfy the core requirements of the Surveying stream and complete a minimum of 60 days in Industrial Training to graduate.
Level 1 Core Courses	Students must take 36 UOC (6 courses) in Level 1 Core Courses.
Level 2 Core Courses	Students must take 48 UOC (8 courses) in Level 2 Core Courses.
Level 3 Core Courses	Students must take 48 UOC (8 courses) in Level 3 Core Courses.
Level 4 Core Courses	Students must take 18 UOC (3 courses) in Level 4 Core Courses.
Professional Electives	Students must take 24 UOC (4 courses) in Professional Electives in their final year. GMAT4400 Land Management Project and GMAT4220 Geospatial Information Science are the recommended electives for the Surveying stream.
General Education	Students must complete 12 UOC (2 courses) of General Education courses in line with UNSW General Education Rules.
Overall Program UOC	Students must complete a 192 UOC (32 courses) across Core, Professional Electives and General Education courses to fulfil program requirements.

Students admitted to the Bachelor of Engineering (Honours) (Surveying) [BE (Hons) (Surveying)] who have completed a Diploma under the following TAFE Training Packages are eligible for credit transfer:

- CPP50121 Diploma of Surveying
- CPP50221 Diploma of Spatial Information Services

Students who have completed a **Diploma of Surveying** (AQF Level 5) will be offered credit transfer of 30 UOC (or more*) towards the BE (Hons) (Surveying). Credit will be given for the following courses:

1. [DESN1000 Engineering Design and Innovation](#) (6 UOC)
2. [GMAT1110 Surveying and Geospatial Engineering](#) (6 UOC)
3. [ENGG1400 Engineering Info Systems](#) (6 UOC) or [CVEN2101 Engineering Construction](#) (6 UOC)
4. General Education (up to 12 UOC)

Students who have completed a **Diploma of Spatial Information Services** (AQF Level 5) will be offered credit transfer of 30 UOC (or more*) towards the BE (Hons) (Surveying). Credit will be given for the following courses:

1. [DESN1000 Engineering Design and Innovation](#) (6 UOC)
2. [ENGG1811 Computing for Engineers](#) (6 UOC)
3. [ENGG1400 Engineering Info Systems](#) (6 UOC) or [CVEN2101 Engineering Construction](#) (6 UOC)
4. General Education (up to 12 UOC)

* Additional RPL may be assessed following admission on a case-by-case basis. Once credit has been applied, students will note that some study terms will present a lighter load of courses due to the limited offering of most courses in the BE (Hons) (Surveying).

Assumed Knowledge: Extension 1 Mathematics and HSC Physics

The BE (Hons) (Surveying) specifies assumed knowledge of HSC Mathematics Extension 1 and HSC Physics, to succeed with the mathematics and physics requirements of the degree.

Mathematics

A minimum expected background in mathematics equivalent to HSC Mathematics Extension 1 is needed to successfully undertake Mathematics 1A, a compulsory first year course at UNSW. For this, HSC Mathematics Extension 1 knowledge can be demonstrated (or undertaken) through the following options:

Option 1*: HSC Extension 1 (demonstrated in UAC application)

Option 2*: [MATH1011 \(Fundamental of Mathematics\)](#) (undertaken on UNSW enrolment and RPL reduced accordingly)**

Option 3*: [UNSW Maths Bridging Course](#) (undertaken on UNSW enrolment and not opting to undertake Maths1011)

** All options assume pre-existing knowledge of HSC Advanced Mathematics, which can be obtained through HSC Advanced Mathematics, or [TAFE Essential Mathematics for Higher Education](#) (TAFE Essentials). There is no direct equivalent offered at UNSW.*

***MATH1011 is equivalent to HSC Extension 1 mathematics and runs over a term. It has a restricted offering, and the enrolments structure/ permissions need to be worked out in consultation with the School of Maths and Stats for TAFE pathway students wishing to pursue BE (Hons) (Surveying).*

HSC Physics

A minimum expected background in physics equivalent to HSC Physics is needed to successfully undertake Physics 1A, a compulsory first year course. HSC Physics knowledge can be demonstrated (or undertaken) through the following options:

Option 1: HSC Physics (demonstrated in UAC application)

Option 2: [PHYS1111 \(Fundamental of Physics\)](#) (undertaken on UNSW enrolment and RPL reduced accordingly)

Option 3: [UNSW Physics Bridging Course](#) (undertaken on UNSW enrolment and not opting to undertake PHYS1111)

Sample Study Plan – Diploma of Surveying

Eligible Credit Transfer: 30 UOC (or more)*

Please note this is a sample study plan based on Term 1 commencement to be used as a guide only. Courses are subject to term course offerings, refer to the Handbook and Class Timetable to adjust study plan in line with course availability. It is recommended that students seek enrolment progression advice from their school prior to selecting subjects.

<u>First Year</u>		
Term 1	Term 2	Term 3
MATH1131 Maths 1A OR 1141 Higher Maths 1A	MATH1231 Maths 1B OR 1241 Higher Maths 1B	ENGG1811 Computing for Engineers
PHYS1121 Physics 1A OR 1131 Higher Physics 1A	DESN2000 Engineering Design and Professional Practice	GMAT2120 Surveying and Geospatial Tech
GMAT2500 Surveying Computations A		

<u>Second Year</u>		
Term 1	Term 2	Term 3
ENGG2500 Fluid Mechanics for Engineers	GMAT2700 Foundations of Geodesy & Geospatial Ref Frames	GMAT2550 Surveying Computations B
MATH2019 Engineering Mathematics 2E	CVEN2002 Engineering Computations	CVEN3101 Engineering Operations & Control
GMAT3220 Geospatial Information Systems		

<u>Third Year</u>		
Term 1	Term 2	Term 3
GMAT3100 Surveying Application and Design	GMAT3700 Precise Positioning & Apps	GMAT3420 Cadastral Surveying and Land Law
GMAT3150 Field Projects 1	Professional Elective (Recommended: GMAT4220)	GMAT3500 Remote Sensing & Photogram

<u>Fourth Year</u>		
Term 1	Term 2	Term 3
Professional Elective (Recommended: GMAT4400)	Professional Elective	GMAT4150 Field Projects 2
CVEN3501 Water Resources Engineering	CVEN4952 Research Thesis B (4 UOC) OR GMAT4060 Thesis A	Professional Elective
CVEN4951 Research Thesis A (4 UOC)		CVEN4953 Research Thesis C (4 UOC) OR GMAT4061 Thesis B

* Additional RPL may be assessed following admission on a case-by-case basis. Once credit has been applied, students will note that some study terms will present a lighter load of courses due to the limited offering of most courses in the BE (Hons) (Surveying).

Sample Study Plan – Diploma of Spatial Information Services

Eligible Credit Transfer: 30 UOC (or more)*

Please note this is a sample study plan based on Term 1 commencement to be used as a guide only. Courses are subject to term course offerings, refer to the Handbook and Class Timetable to adjust study plan in line with course availability. It is recommended that students seek enrolment progression advice from their school prior to selecting subjects.

<u>First Year</u>		
Term 1	Term 2	Term 3
MATH1131 Maths 1A OR 1141 Higher Maths 1A	GMAT1110 Surveying and Geospatial Engineering	ENGG2500 Fluid Mechanics for Engineers
PHYS1121 Physics 1A OR 1131 Higher Physics 1A	MATH1231 Maths 1B OR 1241 Higher Maths 1B	
	DESN2000 Engineering Design and Professional Practice	

<u>Second Year</u>		
Term 1	Term 2	Term 3
GMAT2500 Surveying Computations A	GMAT2700 Foundations of Geodesy & Geospatial Ref Frames	GMAT2550 Surveying Computations B
MATH2019 Engineering Mathematics 2E	CVEN2002 Engineering Computations	GMAT2120 Surveying and Geospatial Tech
		CVEN3101 Engineering Operations & Control

<u>Third Year</u>		
Term 1	Term 2	Term 3
GMAT3100 Surveying Application and Design	GMAT3700 Precise Positioning & Apps	GMAT3420 Cadastral Surveying and Land Law
GMAT3150 Field Projects 1	Professional Elective	GMAT3500 Remote Sensing & Photogram
GMAT3220 Geospatial Information Systems		

<u>Fourth Year</u>		
Term 1	Term 2	Term 3
Professional Elective (Recommended: GMAT4400)	Professional Elective	GMAT4150 Field Projects 2
CVEN3501 Water Resources Engineering	CVEN4952 Research Thesis B (4 UOC) <i>OR</i> GMAT4060 Thesis A	Professional Elective
CVEN4951 Research Thesis A (4 UOC)		CVEN4953 Research Thesis C (4 UOC) <i>OR</i> GMAT4061 Thesis B

* Additional RPL may be assessed following admission on a case-by-case basis. Once credit has been applied, students will note that some study terms will present a lighter load of courses due to the limited offering of most courses in the BE (Hons) (Surveying).