

## Bachelor of Engineering (Surveying & Spatial Information Systems) Program Structure

UOC: unit of credit - HPW: hours per week

Year 1	Session 1	UOC (HPW)	Session 2	UOC (HPW)	
GMAT1100	Principles of Surveying	6 (5)	GMAT1150	Survey Methods & Comps	6 (5)
GMAT1300	Comp Applies in Geomatics	6 (4)	GMAT1200	Visualisation of Spatial Data	6 (4)
PHYS1189	Physics I	6 (6)	GMAT1400	Land Studies in Geomatics	6 (5)
MATH1131	Mathematics 1A or	6 (6)	MATH1231	Mathematics 1B or	6 (6)
or MATH1141	Higher Mathematics 1A	6 (6)	or MATH1242	Higher Mathematics 1B	6 (6)
<b>Year 2</b>					
GMAT2100	Elect Surv Instrumentation	6 (5)	GMAT2110	Elect & GPS Positioning Tech	6 (5)
GMAT2350	Comp for Spatial Info Sc	3 (3)	GMAT2200	Geog Info Systems & CAD	6 (5)
GMAT2700	Geometry of Coord Ref Sys	6 (5)	GMAT2300	Analysis of Observations	3 (3)
MATH2829	Statistics SU	3 (3)	MATH2019	Engineering Mathematics 2CE	6 (5)
PHYS2969	Physics of Measurements	3 (3)		General Education	3 (2)
	General Education	3 (2)			
<b>Year 3</b>					
GMAT3200	Geospatial Info Tech & App	6 (5)	GMAT3150	Field Projects	6 (5)
GMAT3400	Cadastral Surveying 1	3 (3)	GMAT3410	Land Econ & Valuation	3 (2)
	General Education	3 (2)	GMAT3500	Photog & Rem Sensing	6 (5)
	Electives	12		General Education	3 (2)
				Electives	6
<i>Electives</i>					
GMAT3100	Surveying Applications	6 (5)	GMAT3450	Cadastral Surveying 2	3 (3)
COMP1011	Computing 1A	6 (6)	COMP1011	Computing 1A	6 (6)
CVEN0646	Water & Wastewater Eng	3 (3)	COMP1021	Computing 1B	6 (6)
MATH1081	Discrete Mathematics	6 (6)	COMP2011	Data Organisation	6 (5)
BENV2901	City Planning Today	3 (2)	CVEN0656	Soil & Pavement Eng	3 (3)
			MATH1081	Discrete Mathematics	6 (6)
<b>Year 4</b>					
GMAT4000	Thesis Part A	3 (2)	GMAT4001	Thesis Part B	9 (8)
GMAT4700	Project Management 1	3 (3)	GMAT4750	Project Management 2	3 (3)
GMAT4850	Geom Eng for Sustainability	3 (3)		Electives	12
	Electives	15			
<i>Electives</i>					
GMAT4020	Project in Geomatic Eng	6 (5)	GMAT4020	Project in Geomatic Eng	6 (5)
GMAT4400	Land Mgt & Devel Project 1	3 (2)	GMAT4450	Land Mgt & Devel Project 2	3 (2)
GMAT4410	Land Subdiv & Develop	3 (3)	GMAT4910	Modern Nav & Pos Tech	6 (5)
GMAT4900	Principl of GNSS Pos	6 (5)	GMAT9211	Introduction to Geodesy	6 (3)
GMAT9121	Network & Deform Analysis	6 (3)	PLAN1022	The Development Process	3
GEOG3911	Environmental Impact Assess6		PLAN2012	Economic Dev Planning	3
			PLAN3032	Integrated Plann 3-New Dev	6

Plus any remaining Year 3 electives.

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Other COMP electives may be chosen once COMP1011, COMP1021 and MATH1081 have been completed. Other electives are available, with the approval of the Head of School.

The School has available a list of suggested subject selections for course streams in Cadastral Surveying and Land Development, as well as GPS and Geographic Information Systems. Please contact the School Office. 60 days Professional Practice experience is a requirement of this program.

## Bachelor of Engineering (Surveying & Spatial Information Systems) / Bachelor of Arts

Year 1	Session 1	UOC (HPW)	Session 2	UOC (HPW)	
GMAT1100	Principles of Surveying	6(5)	GMAT1150	Survey Methods and Comps	6(5)
GMAT1300	Comp Applies in Geomatics	6(4)	GMAT1200	Visualisation of Spatial Data	6(4)
MATH1131	Mathematics 1A or Higher	6(6)	GMAT1400	Land Studies in Geomatics	6(5)
PHYS1189	Physics I (GE)	6(6)	MATH1231	Mathematics 1B or Higher	6(6)

### Year 2

GMAT2100	Elect Surv Instrumentation	6(5)	GMAT2110	Elect & GPS Positioning Tech	6(5)
GMAT2700	Geometry of Coord Ref Sys	6(5)	GMAT2200	Geog Info Systems & CAD	6(5)
MATH2829	Statistics SU	3(3)	MATH2019	Engineering Mathematics 2CE	6(5)
PHYS2969	Physics of Measurements	3(3)		BA first level elective	6
	BA first level elective	6			

### Year 3

GMAT2350	Comp for Spatial Info Sc	3	GMAT2300	Analysis of Observations	3
GMAT3200	Geospatial Info Tech & App	6	GMAT3500	Photog & Rem Sensing	6
GMAT3400	Cadastral Surveying 1	3	GMAT3410	Land Economics and Valuation	3
	BA electives	6		BA electives	6
	Year 3 electives	6		Year 3 electives	6

#### Electives

GMAT3100	Surveying Applications	6	GMAT3150	Field Projects	6
BENV2901	City Planning Today	3	GMAT3450	Cadastral Surveying 2	3
CVEN0646	Water and Wastewater Eng	3	CVEN0656	Soil and Pavement Eng	3

Other electives are possible with the approval of the Head of School

### Year 4

GMAT4000	Thesis Part A	3	GMAT4001	Thesis Part B	9
GMAT4700	Project Management 1	3	GMAT4750	Project Management 2	3
GMAT4850	Geomatic Eng for Sustainability	3		BA electives	6
	BA electives	6		Year 4 electives	6
	Year 4 electives	9			

#### Electives

	Any remaining year 3 elective			Any remaining year 3 elective	
GMAT4020	Project in Geomatic Eng	6	GMAT4020	Project in Geomatic Eng	6
GMAT4400	Land Mgt & Devel. Project 1	3	GMAT4450	Land Mgt & Devel. Project 2	3
GMAT4410	Land Subdiv & Develop	3	GMAT4910	Modern Nav & Pos Tech	6
GMAT4900	Principles of GNSS Pos	6	GMAT9211	Introduction to Geodesy	6
GMAT9121	Network & Deformation Analysis	6	PLAN1022	The Development Process	3
GEOG3911	Environmental Impact Assess	6			

Other electives are possible with the approval of the Head of School

### Year 5

BA electives	12	BA electives	12
GMAT electives	12	GMAT electives	12

60 days Professional Practice experience is a requirement of this program.

## Bachelor of Engineering (Surveying & Spatial Information Systems) / Bachelor of Science (Computer Sc.)

Year 1	Session 1	UOC (HPW)	Session 2	UOC (HPW)	
GMAT1100	Principles of Surveying	6(5)	GMAT1150	Survey Methods and Comps	6(5)
COMP1011	Computing 1A	6(6)	COMP1021	Computing 1B	6(6)
MATH1131	Mathematics 1A or Higher	6(6)	MATH1231	Mathematics 1B or Higher	6(6)
PHYS1189	Physics I (GE)	6(6)	GMAT	Year 1 GMAT elective	6(4 or 5)

Year 1 elective is either GMAT1400 Land Studies in Geomatics 6(5), or GMAT1200 Visualisation of Spatial Data 6(4)

### Year 2

GMAT2100	Electr Surv Instrumentation	6(5)	GMAT2110	Elect & GPS Positioning Tech	6(5)
GMAT2700	Geometry of Coord Ref Sys	6(5)	GMAT2200	Geog. Info. Systems & CAD	6(5)
MATH2829	Statistics SU	3(3)	GMAT2300	Analysis of Observations	3(3)
MATH1081	Discrete Mathematics	6(6)	COMP2011	Data Organisation	6(5)
PHYS2969	Physics of Measurements	3(3)		Year 2 free elective	3(2)

### Year 3

GMAT3200	Geospatial Info Tech & App	6	GMAT3410	Land Econ & Valuation	3
GMAT3400	Cadastral Surveying 1	3	GMAT3450	Cadastral Surveying 2	3
COMP2	A level 2 computing elective	6	GMAT3500	Photog & Rem Sensing	6
	Year 3 electives	9	COMP2	A level 2 computing elective	6
				Year 3 electives	6

#### Electives

GMAT3100	Surveying Applications	6	GMAT3150	Field Projects	6
BENV2901	City Planning Today	3	CVEN0656	Soil & Pavement Eng	3
CVEN0646	Water & Wastewater Eng	3		General Education	3
	General Education	3			

### Year 4

GMAT4700	Project Management 1	3	GMAT4750	Project Management 2	3
GMAT4850	Geomatic Eng for Sustainability	3	COMP3	A level 3 computing elective	6
COMP3	A level 3 computing elective	6			
GMAT	Year 4 GMAT Electives	12	GMAT	Year 4 GMAT Electives	15

#### Electives

GMAT4020	Project in Geomatic Eng	6	GMAT4020	Project in Geomatic Eng	6
GMAT4410	Land Subdiv & Develop	3	GMAT4450	Land Mgt & Devel. Project 2	3
GMAT4400	Land Mgt & Devel. Project 1	3	GMAT4910	Modern Nav & Pos Tech	6
GMAT4900	Principles of GNSS Pos	6	GMAT9211	Introduction to Geodesy	6
GMAT9121	Network & Deform Analysis	6			

### Year 5

GMAT4000	Thesis Part A	3	GMAT4001	Thesis Part B	9
COMP3	2 level 3 Comp Sci & Eng Elect	12	COMP3	A level 3 Comp Sci & Eng Elect	6
	Year 5 Electives	9		Year 5 Electives	9

Year 5 electives may be chosen from any of the remaining GMAT year 4 electives or COMP level 3 or 4 courses.

COMP elective subjects: COMP2021, COMP2041, COMP2411, COMP3111, COMP3121, COMP3131, COMP3211, COMP3221, COMP3231, COMP3241, COMP3311, COMP3331, COMP3411, COMP3421, COMP3511.

Other electives or arrangements of electives are possible with the approval of the Head of School.

The School is the program authority. Students may choose to do 3 units of General Education in year 2 and another 3 units in year 3. It is possible to revert to the single BE degree, progress and conversion will be determined on an individual student basis by the program authority. 60 days Professional Practice experience is a requirement of this program.

## Bachelor of Engineering (Surveying & Spatial Information Systems) / Master of Commerce

Year 1	Session 1	UOC (HPW)	Session 2	UOC(HPW)	
GMAT1100	Principles of Surveying	6 (5)	GMAT1400	Land Studies in Geomatics	6 (5)
GMAT1300	Computing Applies in Geomatics	6 (4)	GMAT1200	Visualisation of Spatial Data	6 (4)
MATH1131	Mathematics 1A or Higher	6 (6)	MATH1231	Mathematics 1B or Higher	6 (6)
PHYS1189	Physics I (GE)	6 (6)	GMAT1150	Survey Methods & Comps	6 (5)

### Year 2

GMAT2700	Geometry of Coord Ref Sys	6 (5)	GMAT2200	Geog Info Systems & CAD	6 (5)
GMAT2100	Electronic Surveying Instrumentation	6 (5)	GMAT2300	Analysis of Observations	3 (3)
GMAT2350	Comp for Spatial Info Sc	3 (3)	GMAT2110	Elect & GPS Positioning Tech	6 (5)
MATH2829	Statistics SU	3 (3)	MATH2019	Engineering Mathematics 2CE	6 (5)
PHYS2969	Physics of Measurements	3 (3)		General Education	3 (2)
	General Education	3 (2)			

### Year 3

GMAT3200	Geospatial Info Tech & App	6	GMAT3150	Field Projects	6
GMAT3400	Cadastral Surveying 1	3	GMAT3410	Land Econ & Valuation	3
	General Education	3	GMAT3500	Photog & Rem Sensing	6
	Electives	12		General Education	3
				Electives	6

#### Electives

CVEN0646	Water and Wastewater Eng	3	CVEN0656	Soil & Pavement Eng	3
GMAT3100	Surveying Applications	6	GMAT3450	Cadastral Surveying 2	3
BENV2901	City Planning Today	3			

Other electives with the approval of the Head of School

### Year 4

	One MComm Course	6		Two MComm Course	12
GMAT4850	Geomatic Eng for Sustainability	3	GMAT4750	Project Management 2	3
	Electives	15		Electives	9

#### Electives

GMAT4000	Thesis Part A	3	GMAT4001	Thesis Part B	9
GMAT4020	Project in Geomatic Eng	6	GMAT4450	Land Mgt & Devel Project 2	3
GMAT4400	Land Mgt & Devel Project 1	3	GMAT4910	Modern Nav & Pos Tech	6
GMAT4410	Land Subdivision and Development	3	PLAN1022	The Development Process	3
GMAT4900	Principles of GNSS Pos	6	PLAN2012	Economic Dev Planning	3
GEOG3911	Environmental Impact Assess	3	PLAN3032	Integrated Planning 3 – New Dev	6

Other electives with the approval of the Head of School.

### Year 5

Six non-core MComm electives

### Year 6

Two non-core MComm electives

60 days Professional Practice experience is a requirement of this program.