Bachelor of Engineering (Geomatic Eng.) Program Structure

The first three years of this new program will be taught in 2000. The entire new program will be implemented by 2001.

0 1 4				G . A		
3 7 1	Session 1			Session 2		
Year 1	Credit units (HPW)			Credit units		
(HPW)	Credit u	ппіз (тт. м	,	Cledit uit	112	
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 and Comps	6(5)	
Year 2						
GMAT2700	Geometry of Coord. Ref. Systems	6(5)	GMAT2200	Geog. Info. Systems & CAD	6(5)	
GMAT2100	Electronic Surveying Instrumentation	6(5)	GMAT2300	Analysis of Observations	3(3)	
GMAT2350	Computing for Spatial Info. Sc	3(3)	GMAT2110	Electronic & GPS Position. Technol.	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)				
Structure for	r years 3 and 4 of the program depends	on the elec	ctives chosen b	y students. Two examples are given be	low.	
Cadastral/	Land Development Stream					
Year 3						
GMAT3200	Geospatial Information Tech & App	6	GMAT3500	Photogrammetry & Remote Sensing	6	
GMAT3400	Cadastral Surveying 1	3	GMAT3410	Land Economics and Valuation	3	
CVEN0646	Water and Wastewater Engineering	3	CVEN0656	Soil and Pavement Engineering	3	
GMAT3100	Surveying Applications	6	GMAT3150	Field Projects	6	
PLAN1093	Planning Perspectives	3	GMAT3450	Cadastral Surveying 2	3	
	General Education	3		General Education	3	
Year 4						
GMAT4700	Project Management 1	3	GMAT4750	Project Management 2	3	
GMAT4000	Thesis Part A	3	GMAT4001	Thesis Part B	9	
GMAT4850	Geomatic Eng for Sustainability	3	GMAT4020	Project in Geomatic Engineering	6	
GMAT4400	Land Management & Devel. Project 1	3	GMAT4450	Land Management & Devel. Project 2	3	
GMAT4410	Land Subdivision & Development	3		Elective	3	
GMAT4900	Principles of GNSS Positioning Elective	6				
	Elective	3				
GIS/GPS S	Stream					
Year 3						
GMAT3200	Geospatial Information Tech & App	6	GMAT3500	Photogrammetry & Remote Sens.	6	
GMAT3400	Cadastral Surveying 1	3	GMAT3410	Land Economics and Valuation	3	
	Comp Sci & Eng Electives	12		Comp Sci &Eng Electives	12	
	General Education	3		General Education	3	
Year 4						
GMAT4700	Project Management 1	3	GMAT4750	Project Management 2	3	
GMAT4000	Thesis Part A	3	GMAT4001	Thesis Part B	9	
GMAT4900	Principles of GNSS Positioning	6	GMAT4910	Modern Navigation & Positioning	6	
	Comp Sci & Eng Electives	6		Comp Sci & Eng Electives	6	
GMAT4850	Geomatic Eng for Sustainability	3				
	Elective	3				

 $Other\ electives\ and\ arrangements\ of\ electives\ are\ possible\ with\ the\ approval\ of\ the\ Head\ of\ School$

Bachelor of Engineering (Geomatic Eng.), Bachelor of Arts

	Session 1			Session 2	
Year 1					
GMAT1100 GMAT1300 MATH1131 PHYS1189	Credit Principles of Surveying Computing Applics in Geomatics Mathematics 1A or Higher Physics I (GE)	t units (HP) 6(5) 6(4) 6(6) 6(6)	W) GMAT1400 GMAT1200 MATH1231 GMAT1150	Credit units (H Land Studies in Geomatics Visualisation of Spatial Data Mathematics 1B or Higher Survey Methods and Comps	PW) 6(5) 6(4) 6(6) 6(5)
Year 2					
GMAT2700 GMAT2100 MATH2829 PHYS2969	Geometry of Coord. Ref. Systems Electronic Surveying Instrumentation Statistics SU Physics of Measurements BA first level elective	6(5) 6(5) 3(3) 3(3) 6	GMAT2200 GMAT2110 MATH2019	Geog. Info. Systems & CAD Electronic & GPS Position. Technol. Engineering Mathematics 2CE BA first level elective	6(5) 6(5) 6(5) 6
Year 3					
GMAT2350 GMAT3200 GMAT3400	Computing for Spatial Info. Sc Geospatial Information Tech & App Cadastral Surveying 1 BA electives Year 3 electives	3 6 3 6 6	GMAT2300 GMAT3500 GMAT3410	Analysis of Observations Photogrammetry & Remote Sensing Land Economics and Valuation BA electives Year 3 electives	3 6 3 6 6
Year 3 elec	etives				
GMAT3100 PLAN1093 CVEN0646	Surveying Applications Planning Perspectives Water and Wastewater Engineering	6 3 3	GMAT3150 GMAT3450 CVEN0656	Field Projects Cadastral Surveying 2 Soil and Pavement Engineering	6 3 3
Other electiv	es are possible with the approval of the	Head of Sc	hool		
Year 4					
GMAT4700 GMAT4000 GMAT4850	Project Management 1 Thesis Part A Geomatic Eng for Sustainability BA electives Year 4 electives	3 3 6 9	GMAT4750 GMAT4001	Project Management 2 Thesis Part B BA electives Year 4 electives	3 9 6 6
Year 4 elec	ctives				
GMAT4900 GMAT4400 GMAT4410 GMAT9121 GMAT0580	Any remaining year 3 elective Principles of GNSS Positioning Land Management & Devel. Project 1 Land Subdivision & Development Network and Deformation Analysis Mining Surveying	6 3 3 6 3	GMAT4910 GMAT4450 GMAT4020 GMAT9211 PLAN1022	Any remaining year 3 elective Modern Navigation & Positioning Land Management & Devel. Project 2 Project in Geomatic Engineering Introduction to Geodesy The Development Process	6 3 6 6 3
Other electives are possible with the approval of the Head of School					
Year 5	BA electives GMAT electives	12 12		BA electives GMAT electives	12 12

Session 2

Bachelor of Engineering (Geomatic Eng.), Bachelor of Science (Computer Sc.)

Session 1

	Session 1			Session 2	
Year 1	Credit units	(HPW)		Credit units (H	IPW)
GMAT1100 COMP1011 MATH1131 PHYS1189	Computing 1A 6 Mathematics 1A or Higher 6	6(5) 6(6) 6(6) 6(6)	COMP1021 GMAT1150 MATH1231 GMAT	Computing 1B Survey Methods and Comps Mathematics 1B or Higher Year 1 GMAT elective	6 (6) 6 (5) 6 (6) 6 (4-5)
Year 1 elective is either GMAT1400 Land Studies in Geomatics 6 (5), or GMAT1200 Visualisation of Spatial Data 6 (4)					
Year 2					
GMAT2700 GMAT2100 MATH2829 MATH1081 PHYS2969	Geometry of Coord. Ref. Systems Electronic Surveying Instrumentation Statistics SU Discrete Mathematics Physics of Measurements	6 (5) 6 (5) 3 (3) 6 (6) 3 (3)	GMAT2200 GMAT2300 GMAT2110 COMP2011	Geog. Info. Systems & CAD Analysis of Observations Electronic & GPS Position. Technol. Data Organisation Year 2 free elective	6(5) 3(3) 6(5) 6(5) 3(2)
Year 3					
GMAT3200 GMAT3400 COMP2	Geospatial Information Tech & App Cadastral Surveying 1 A level 2 computing elective	6 6	GMAT3500 GMAT3410 COMP2 GMAT3450	Photogrammetry & Remote Sensing Land Economics and Valuation A level 2 computing elective Cadastral Surveying 2	6 3 6 3
	Year 3 electives	9	GIVII II 5-150	Year 3 electives	6
Year 3 electiv	es chosen from:				
CVEN0646 GMAT3100	Water and Wastewater Engineering Surveying Applications Planning Perspectives General Education	3 6 3 3	CVEN0656 GMAT3150	Soil and Pavement Engineering Field Projects General Education	3 6 3
Year 4					
COMP3	Project Management 1 A level 3 computing elective Geomatic Eng for Sustainability Year 4 GMAT Electives	3 6 3 12	GMAT4750 COMP3 GMAT	Project Management 2 A level 3 computing elective Year 4 GMAT Electives	3 6 15
Year 4 GMAT electives chosen from:					
GMAT4400 GMAT4900	Land Subdivision & Development Land Management & Devel. Project 1 Principles of GNSS Positioning Network and Deformation Analysis	3 3 6 6	GMAT4020 GMAT4450 GMAT4910 GMAT9211	Project in Geomatic Engineering Land Management & Devel. Project 2 Modern Navigation and Pos. Tech. Introduction to Geodesy	6 3 6 6
Year 5					
COMP3	Thesis Part A 2 level 3Comp Sci &Eng Electives Year 5 Electives es may be chosen from any of the remai	3 12 9 ining GMA	GMAT4001 COMP3 T year 4 electi	Thesis Part B A level 3 Comp Sci &Eng Elective Year 5 Electives ves or COMP level 3 or 4 courses.	9 6 9

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

The School of Geomatic Engineering 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 (Geom. Eng.) degree, progress and conversion will be determined on an individual student basis by the program authority.

COMP elective courses:

COMP2021 Digital System Structures	COMP3231 Operating Systems
COMP2041 Software Construction: Techniques and Tools	COMP3241 Real-Time Sys: Spec, Design & Implementation
COMP2411 Logic and Logic Programming	COMP3311 Database Systems
COMP3111 Software Engineering	COMP3331 Computer Networks and Applications
COMP3121 Algorithms and Programming Techniques	COMP3411 Artificial Intelligence
COMP3131 Parsing and Translation	COMP3421 Computer Graphics
COMP3211 Computer Organisation and Design	COMP3511 Human Computer Interaction
COMP3221 Microprocessors and Interfacing	