Curriculum
The Bachelor of Science in Geomatics Engineering degree requires 120 credits. For credit toward the degree, a grade of "C" or better must be received in each course listed, except for humanities and social science courses not applied toward Writing Across Curriculum (Gordon Rule) writing requirements. In addition, all prerequisites for each mathematics, science or engineering course must be completed with a grade of "C" or better before enrollment is permitted. The degree components are listed below.

Intellectual Foundations Program -- 39 credits		
Foundations of Written Communication Courses - 6 credits		
College Writing 1 (1), (2)	ENC 1101	3
College Writing 2 (1), (2)	ENC 1102	3
Foundations of Mathematics and Quantitative Reasoning Courses - 6 credits		
Calculus with Analytic Geometry 1 (1), (4)	MAC 2311	4
Introductory Statistics	STA 2023	3
Foundations of Science and the Natural World Courses - 6 credits		
General Physics for Engineers 1 (1)	PHY 2048 **and**	3
General Physics 1 Lab	PHY 2048L	1
Students must take one additional course from the list below:		
General Chemistry 1	CHM 2045 **and**	3
General Chemistry 1 Lab	CHM 2045L	1
Physical Geology/Evolution of the Earth	GLY 2010C	4
Foundations of Society and Human Behavior Courses - 6 credits (1), (3)		
Foundations of Global Citizenship Courses - 6 credits (1), (3)		
Foundations of Humanities Courses - 6 credits (1), (3)		
Total		**39**

Additional Basic Mathematics and Sciences Electives - 15 credits		
Introduction to Calculus with Applications	MAC 2210 or	4
Calculus with Analytic Geometry 2	MAC 2312	4
Or any mathematics course for which one of the math courses is a direct prerequisite		
Introduction to Physical Geography	GEO 2200C	3
Select any two courses from Foundations of Science and the Natural World Group A or B not already taken for credit		8

Business Electives - ~~Select two courses - 6 credits~~ Select one course – 3 credits		
Principles of Accounting 1	ACG 2021	3
Entrepreneurship	ENT 4024	3
Entrepreneurial Assistance Project	ENT 4934	3
Introduction to Business	GEB 2011	3
Information Systems Fundamentals	ISM 2000	3
Introduction to Management and Organizational Behavior	MAN 3025	3

Principles of Real Estate	REE 3043	3

Engineering Fundamentals - ~~12 credits~~ 15 credits		
Fundamentals of Engineering	EGN 1002	3
Geomatics	SUR 3103 **and**	2
Geomatics Lab	SUR 3103L	1
Introduction to Mapping and GIS (5) OR	GIS 3015C or	3
GIS for Civil Engineering Applications	CGN4321	3
Engineering Graphics Elective		
Computer-Aided Design	CGN 2327 **or**	3
Engineering Graphics	EGN 1111C	3
Computer Programming Elective		
Introduction to Programming in C	COP 2220 **or**	3
Computer Applications in Engineering 1	EGN 2213	3

Construction Engineering Core - ~~12 credits~~ 6 credits		
~~Construction Project Management~~	~~CCE 4031~~	~~3~~
~~Introduction to Laser Mapping Technology~~	~~CCE 4514C~~	~~3~~
Engineering and Construction Surveying	SUR 3205	2
Engineering and Construction Surveying Lab	SUR 3205L	1
~~Thermal Infrared Remote Sensing and Applications~~	~~SUR 4384 or~~	~~3~~
Construction Project Management or	CCE 4031 or	3
Introduction to Transportation Engineering (5)	TTE 3004C	3

Surveying Engineering Core - 12 credits		
Automated Surveying and Mapping	SUR 3141 **and**	2
Automated Surveying and Mapping Lab	SUR 3141L	1
Measurement Theory and Data Analysis	SUR 3520	3
Cadastral Principles and Legal Aspects	SUR 4403	3
Geodesy and Geodetic Positioning	SUR 4530 **and**	2
Geodesy and Geodetic Positioning Lab	SUR 4530L	1

Reality Capture Core - 6 credits		
Thermal Infrared Remote Sensing and Applications	SUR 4384	3
Digital Photogrammetry Principles and Applications	SUR 4331	2
Digital Photogrammetry Principles and Applications Lab	SUR 4331L	1
Introduction to Laser Mapping Technology	CCE 4514C	3

Capstone Design - 6 credits		
Subdivision Design	SUR 4463 **and**	2

Land Subdivision and Platting Lab	SUR 3463L	1
Capstone Elective - Select one		
RI: Civil, Environmental and Geomatics Engineering Design 1	CGN 4803C **or**	3
Engineering Technology Capstone	ETG 4951	3

Technical Electives - Select 18 credits from the list		
Any approved College of Engineering and Computer Science course 3000-level and above		
Or any course from the following list		
~~***GIS Technology Core Option - 12 credits 9 credits***~~		
~~Introduction to Mapping and GIS (5)~~	~~GIS 3015C~~	~~3~~
Remote Sensing of the Environment (5) **(6)**	GIS 4035C	3
Principles of Geographic Information Systems (5) **(6)**	GIS 4043C	3
~~***Digital Image Processing Elective***~~		
Digital Image Analysis (5) **(6)**	GIS 4037C ~~or~~	3
~~Digital Photogrammetry Principles and Applications~~	~~SUR 4331~~	~~2~~
~~Digital Photogrammetry Principles and Applications Lab~~	~~SUR 4331L~~	~~1~~
Any course from the following list		
Engineering Professional Internship	EGN 3971	0-4
New Venture Launch	ENT 4015	3
Advanced Business Planning	ENT 4114	3
Entrepreneurship Internship	ENT 4940	1-4
Environmental Issues in Atmospheric and Earth Science	ESC 3704	3
Principles of Financial Management	FIN 3403	3
Sea-Level Rise: Impacts and Responses	GEO 3342	3
Quantitative Methods	GEO 4022	3
Spatial Data Analysis	GEO 4167C	3
Water Resources	GEO 4280C	3
Biogeography	GEO 4300	3
Urban Geography	GEO 4602	3
Transportation and Spatial Organization	GEO 4760	3
Introduction to Mapping and GIS	GIS 3015C	3
Digital Image Analysis (5)	GIS 4037C	3
Applications of GIS (5)	GIS 4048C	3
Programming in GIS (5)	GIS 4102C	3
Geovisualization and GIS (5)	GIS 4138C	3
Coastal and Marine Science	GLY 3730	3
Field Methods	GLY 4750C	3
Hydrogeology	GLY 4822	3
Engineering Geology	GLY 4830	3

Introduction to Hydrogeology Modeling and Aquifer Test (5)	GLY 4832C	3
Professional Internship	IDS 3949	0-4
Leadership, Supervisory Skills and Team Development	MAN 4046	3
Marketing Management	MAR 3023	3
Planning Methods	URP 4011	3
City Structure and Change	URP 4055	3
Planning Implementation Strategies	URP 4120	3
Introduction to Visual Planning Technology	URP 4254	3
Plan Making and Design	URP 4343	3
Sustainable Cities	URP 4403	3
Environmental Planning Methods	URP 4420	3
Urban Development Planning Methods	URP 4546	3
Capital Facilities Planning	URP 4730	3
Site Planning	URP 4870	3

Notes:
(1) Contributes to University Core Curriculum requirements.

(2) Contributes to Writing Across Curriculum (Gordon Rule) writing requirement.

(3) Intellectual Foundations Program courses, totaling 6 credits, must be selected to satisfy Writing Across Curriculum (Gordon Rule) writing requirements.

(4) Contributes to Gordon Rule mathematics requirement.

(5) Includes a 1-credit laboratory.

(6) Students pursuing the GIS certificate should consider taking these courses

Commented [DM1]: Insert hyperlink to GIS certificate https://www.fau.edu/academic/registrar/PREcatalog/science.php#geogminors