FLORIDA ATLANTIC UNIVERSITY

NEW/CHANGE PROGRAM REQUEST
Undergraduate Programs

UUPC Approval _____
UFS Approval _____
Banner _____
Catalog _____

Department Civil Environmental and Geomatics Engineering

College College of Engineering and Computer Science

Program Name
Construction and Geomatics Engineering Technology

☑ **New Program***

☐ **Change Program***

Effective Date
(TERM & YEAR)
Fall 2026

Please explain the requested change(s) and offer rationale below or on an attachment.

Graduates of the Bachelor of Science in Construction and Geomatics Engineering Technology (B.S.C.G.E.T) will have the technical and managerial skills necessary to enter careers in planning, design, construction, operation or maintenance of the built environment and global infrastructure in support of engineering projects.

*All new programs and changes to existing programs must be accompanied by a catalog entry showing the new or proposed changes.

Faculty Contact/Email/Phone
Dr.Fred Bloetscher/fbloetsc@fau.edu/5612970744

Consult and list departments that may be affected by the change(s) and attach documentation

Approved by	***Date***
Department Chair Evangelos Kaisar	
College Curriculum Chair Galan Liu	1/14/26
College Dean	1/19/26
UUPC Chair	
Undergraduate Studies Dean	
UFS President	
Provost	

Email this form and attachments to mjenning@fau.edu seven business days before the UUPC meeting.

Construction and Geomatics Engineering Technology (BSCGET)

BACHELOR'S PROGRAM

Graduates of the Bachelor of Science in Construction and Geomatics Engineering Technology (B.S.C.G.E.T) will have the technical and managerial skills necessary to enter careers in planning, design, construction, operation or maintenance of the built environment and global infrastructure in support of engineering projects.

Vision and Mission

The program strives to deliver a top class educational experience in engineering technologies throughout the FAU service area and beyond, and makes a significant contribution to the needs of a growing southeast Florida community. Program faculty focus on student-centered learning methodologies that require students to be active, responsible participants in their own learning. This program values ethical behavior, use of state-of-the-art tools and equipment, problem solving, innovation, individual responsibility, thoughtful risk taking, teamwork and leadership.

Program Educational Objectives

Program educational objectives are broad statements that describe what graduates are expected to attain within a few years after graduation. Program educational objectives are based on the needs of the program's constituencies.

The Bachelor of Science in Construction and Geomatics Engineering Technology (B.S.C.G.E.T) program at Florida Atlantic University is dedicated to graduating majors who, within a few years after graduation will:

(A) Practice within engineering technical fields such as planning and preparing documents appropriate for analysis, design, and other engineering related activities in organizations that employ them

(B) Advance their knowledge of engineering practice, both formally and informally, by engaging in lifelong learning experiences, including graduate studies

(C) Serve as effective professionals, based on strong interpersonal and teamwork skills, capable of performing economic analyses and cost estimates to select appropriate engineering materials and practices related to design of engineering systems

(D) Participate as leaders in activities that support the performance of standard analysis and design in engineering fields.

Student Outcomes

Student outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the knowledge, skills, and behaviors that students acquire as they progress through the program.

The educational objectives of the Bachelor of Science in Construction and Geomatics Engineering Technology program are achieved by ensuring that graduates have the following characteristics or student outcomes:

1. an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
2. an ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
3. an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
4. an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and
5. an ability to function effectively as a member as well as a leader on technical teams.

Link to Surveying and Mapping Certificate

Link to Combined Program

Bachelor of Science in Construction and Geomatics Engineering Technology (B.S.C.G.E.T)

(Requires 120 credits.)

Admission Requirements

All students must meet the minimum admission requirements of the University. Please refer to the Admissions section of this catalog.

All students must meet the preprofessional requirements listed above in order to be accepted into the Geomatics Engineering program.

Prerequisite Coursework for Transfer Students

Students transferring to Florida Atlantic University must complete both lower-division requirements (including the requirements of the Intellectual Foundations Program) and requirements for the college and major. Lower-division requirements may be completed through the A.A. degree of SAAT degree from any Florida public college, university or community college or through equivalent coursework at another regionally accredited institution. Before transferring and to ensure timely progress toward the baccalaureate degree, students must also complete the prerequisite courses for their major as outlined in the *Transfer Student Manual*.

All courses not approved by the Florida Statewide Course Numbering System that will be used to satisfy requirements will be evaluated individually on the basis of content and will require a catalog course description and a copy of the syllabus for assessment.

Degree Requirements

The Bachelor of Science in Construction and Geomatics Engineering Technology degree will be awarded to students who:

1. Meet all general degree requirements of the University;

2. Complete the curriculum for the B.S.C.G.E.T. degree (see below);

Gen Ed		36
Math & Science*		**24**
Differential equations not required		
Engineering Fundamentals - 15 credits		
Fundamentals of Engineering	EGN 1002	3
Computer-Aided Design	CGN 2327	3
Geomatics	SUR 3103 **and**	2
Geomatics Lab	SUR 3103L	1
GIS elective	GIS 3015C **or** CGN 4321	3
Computer Programming Elective		*3*
	TOTAL	15

Business elective		3
Construction Engineering Core - 12 credits		
Engineering and Construction Surveying	SUR 3205	2
Engineering and Construction Surveying Lab	SUR 3205L	1
RI: Construction Project Management	CCE 4031	3
Introduction to Transportation Engineering	TTE 3004C or	3
Digital Image Processing Elective** replaced in newest revision		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
Electives ***Select any 3000-4000 class electives - 15 credits.***		
Reality Capture Core - 6 credits ***Select any combination to total 6 credits.***		
Introduction to Laser Mapping Technology	CCE 4514C or	3
Digital Photogrammetry Principles and Applications	SUR 4331C or	3
Thermal Infrared Remote Sensing and Applications	SUR 4384	3
Capstone Design - 6 credits		
Subdivision Design	SUR 4463 **and**	3
Capstone Elective - Select one		
RI: Civil, Environmental and Geomatics Engineering Design 1	CGN 4803C **or**	3
RI: Engineering Technology Capstone	ETG 4951	3

Curriculum

The Bachelor of Science in Construction and Geomatics Engineering Technology 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.

Sample Four-Year Program of Study
For the sample four-year program of study for the Bachelor of Science in Construction and Geomatics Engineering Technology, refer to the Curriculum Sheets and Flight Plans by major.

Minors and Certificate Programs Appropriate for Engineering Technology Programs
Various departments offer minors and certificate programs that augment a student's engineering education. The faculty encourages students to pursue a minor or certificate, such as:

Surveying and Mapping certificate program, highly recommended (Department of Civil, Environmental & Geomatics Engineering)

Geographic Information Systems certificate program, highly recommended (Department of Geosciences)

Computer Science Minor (Department of Computer Engineering, Electrical Engineering, and Computer Science)

Entrepreneurial Management Minor (College of Business)

Obtaining a minor or certificate will require completing credits beyond the 120 required for the Bachelor of Science in Construction and Geomatics Engineering Technology. Contact the department offering the minor or certificate for more details.

Internships ~~Cooperative Education~~
Engineering Technology students are strongly encouraged to gain practical experience through participation in internship opportunities. However, internships may only substitute for one technical elective with prior approval from the department chair and only if taken for a grade (IDS 3949, Professional Internship or EGN 3941, Engineering Professional Internship).

Surveying and Mapping Certificate
The Department of Civil, Environmental & Geomatics Engineering ~~program~~ offers undergraduates a certificate in Surveying and Mapping. Students are entitled to the certificate by completing a minimum of 12 credits of coursework with a grade of "C" or better. Selected courses must be checked for the proper prerequisites. The certificate is open to both degree-seeking and non-degree-seeking students.

Required Courses (3 ~~6~~ credits)		
Geomatics (1)	SUR3103C	3

Select additional courses from below for a minimum of 9 ~~6~~ credits		
Digital Photogrammetry Principles and Applications (2)	SUR 4331	3
Automated Surveying and Mapping (2)	SUR 3141C	3
Geodesy and Geodetic Positioning	SUR 4530C	3

Measurement Theory and Data Adjustments	SUR 3643C	3
Engineering and Construction Surveying (2)	SUR 3205C	2
Cadastral Principles and Legal Aspects (2)	SUR 4403	3
Thermal Infrared Remote Sensing and Applications	SUR 4384	3
Principles of Geographic Information System	GIS 4043C	3
Introduction to Laser Mapping Technology	CCE 4516	3

Notes:
(1) Requires knowledge of geometry and trigonometry.

(2) Requires SUR3103C – Geomatics, as prerequisites.