

# FLORIDA ATLANTIC UNIVERSITY™

UGPC APPROVAL \_\_\_\_\_  
 UFS APPROVAL \_\_\_\_\_  
 CATALOG \_\_\_\_\_

## Graduate Programs—PROGRAM CHANGE REQUEST

DEPARTMENT: CIVIL, ENVIRONMENTAL AND GEOMATICS  
 ENGINEERING

COLLEGE: ENGINEERING AND COMPUTER SCIENCE

PROGRAM NAME:  
 TRANSPORTATION CERTIFICATE

**EFFECTIVE DATE**  
 (PROVIDE TERM/YEAR)  
 \_\_\_\_\_  
 SPRING 2016

PLEASE EXPLAIN THE REQUESTED CHANGE(S) AND OFFER RATIONALE BELOW AND/OR ATTACHED:

THIS PROPOSAL IS FOR A 4 CREDIT CERTIFICATE IN TRANSPORTATION ENGINEERING. SIX COURSES ARE OFFERED. APPLICANTS NEED TO COMPLETE 4 OF THE SIX COURSES TO RECEIVE THE CERTIFICATE. THE CERTIFICATE PROGRAM CLASSES MAY BE TRANSFERRED TO THE MS PROGRAM.

Faculty contact, email and complete phone number:  
 Frederick Bloetscher, Ph.D., P.E.  
 239-250-2423

Consult and list departments that might be affected by the change and attach comments.  
 None – the change is only to this department based on classes offered

<p><b>Approved by:</b></p> <p>Department Chair: _____</p> <p>College Curriculum Chair: _____</p> <p>College Dean: _____</p> <p>UGPC Chair: _____</p> <p>Graduate College Dean: _____</p> <p>UFS President: _____</p> <p>Provost: _____</p>	<p><b>Date:</b></p> <p>_____</p> <p>_____</p> <p>9-9-2015</p> <p>9-9-2015</p> <p>_____</p> <p>_____</p>
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Email this form and syllabus to [UGPC@fau.edu](mailto:UGPC@fau.edu) one week before the University Graduate Programs Committee meeting so that materials may be viewed on the UGPC website prior to the meeting.

**GRADUATE COLLEGE**

**Department of Civil, Environmental and Geomatics Engineering**  
**Graduate Certificate Program in Transportation Engineering**

**April 2015**

**Introduction**

Transportation engineering is an interdisciplinary field that integrates many aspects of engineering and computer science fundamentals, quantitative methods, and technology innovations associated with traffic operations, safety, intelligent transportation, supply chain and management. Significant portions of the world's economy will change as the borders between transportation, computer, electrical, and telecommunications industries further erode. A substantial number of principles and concepts, from a variety of disciplines, must be considered to bridge the gap between Transportation Operations and Management on one end and the advanced computing and telecommunications technologies on the other end. FAU's vision is to position itself and its graduate programs at the forefront of these emerging trends.

Florida entities that represent the distinct, yet related, segments of the overall engineering market are fully committed to the professional development of their employees. Such investment in staff's post-graduate education directly improves entities' performance and competency in the fields of Transportation Operations and Management. To support such demand from Floridian entities for excellence in Transportation Operations and Management, the Department of Civil, Environmental and Geomatics Engineering proposes a graduate Transportation Engineering Certificate Program that builds on FAU's institutional strengths in Transportation Engineering. These strengths include its dedicated faculty and their years of research and development of Transportation Systems Management and Operations, Intelligent Transportation Systems, Catastrophic Events Management, Logistics, and Transportation Safety and Security.

This is a practice-oriented program designed to assist engineers, planners, researchers, and technical professionals in the launch and/or development of their careers in transportation field. The ultimate goal of the program is to provide the technical expertise needed in the rapidly changing transportation-related consulting, government, and research environments. The program is intended for individuals who are, at this point, too busy for conventional master degree programs with heavy workloads and required research component. Instead, the proposed certificate program offers a 'light' version of post-graduate education where the program attendees are able to select courses which best fit their individual professional agendas. The classes are typically held on Boca campus in late afternoons and evenings in order to accommodate working professionals. They can easily be delivered to other FAU campuses and other remote sites (e.g. individual computer stations) through DEDECS (<http://www.dedecs.fau.edu/>), eLearning, and similar programs. The goal is to ultimately deliver fully Internet-based courses with national and international distribution, once pedagogical issues of program assessment and technical issues associated with laboratory Web-based Instrumentation and Control (WIC) are resolved.

## **Admission**

The graduate Transportation Engineering Certificate Program is open to all prospective students from FAU and industry professionals that hold a Bachelor's degree in Engineering or a related field. Prospective students must have a 3.0 GPA to ensure equivalency to graduate standing. Students enrolled in the graduate Transportation Engineering Certificate Program are classified as non-degree-seeking students. Credits earned by non-degree students in this program may be applied later to a Master of Science degree program if the students choose to pursue such a degree. In any case, only up to one-third of the non-degree credits with "B" or higher can be counted toward a graduate degree.

## **Curriculum\***

Students must complete four courses from the following list, or the equivalent, with minimum 3.0 GPA:

TTE 6256	Intelligent Transportation Systems	3 credits
TTE 6507	Transportation and Supply Chain Systems	3 credits
TTE 5501	Transportation System Analysis	3 credits
TTE 6506	Maritime freight Transportation	3 credits
TTE 6526	Airport Planning and Design	3 credits
TTE 6815	Highway Engineering	3 credits

\* All course listed here are offered regularly through MS Civil Engineering in the transportation track.