FLORIDA ATLANTIC UNIVERSITY

NEW/CHANGE PROGRAM REQUEST
Graduate Programs

UGPC Approval _____
UFS Approval _____
Banner _____
Catalog _____

Department Comp. and Electrical Eng and Comp. Science

College Engineering and Computer Science

Program Name

Current name: Bioengineering Certificate
Change to: Biomedical Engineering Certificate

☐ **New Program***

☑ **Change Program***

Effective Date
(TERM & YEAR)

Spring 2021

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

This proposal requests to change the name of the program from Bioengineering Certificate to Biomedical Engineering Certificate.This change is driven by the research expertise and activity of our faculty in areas of biomaterials, tissue engineering, neuroengineering, medical image analysis, and smart health. The catalog change is attached.

CIP code: 14.0501
"Bioengineering and Biomedical Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of biomedical and health systems and products such as integrated biomedical systems, instrumentation, medical information systems, artificial organs and prostheses, and health management and care delivery systems. Examples: [Cell and Tissue Engineering], [Neural Engineering], [Biomaterials Engineering]."

*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

Hanqi Zhuang/zhuang@fau.edu/561-297-3413

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

Department of Biomedical Science

Approved by / ***Date***

Department Chair	Hanqi Zhuang — Digitally signed by Hanqi Zhuang Date: 2020.10.06 19:12:13 -04'00'	
College Curriculum Chair	Francisco Presuel-Moreno — Digitally signed by Francisco Presuel-Moreno DN: cn=Francisco Presuel-Moreno, o=Florida Atlantic University, ou=Ocean and Mechanical Engineering, email=fpresuel@fau.edu, c=US Date: 2020.10.07 08:44:04 -04'00'	
College Dean	Digitally signed by Mihaela Cardei DN: cn=Mihaela Cardei, o=Florida Atlantic University, ou, email=mcardei@fau.edu, c=US Date: 2020.10.11 19:57:14 -04'00'	10/11/2020
UGPC Chair		
UGC Chair		
Graduate College Dean		
UFS President		
Provost		

Email this form and attachments to UGPC@fau.edu 10 days before the UGPC meeting.

Biomedical Engineering ~~Bioengineering~~ Certificate

The College offers a graduate non-degree-seeking certificate in Biomedical Engineering ~~Bioengineering~~. This certificate program is a practice-oriented, part-time graduate program designed to assist engineers, scientists, technical professionals and qualified senior undergraduates in the launch and/or development of their careers and to provide the technical expertise needed in the rapidly changing business, government and industrial environments.

Program Highlights

This is a 15-credit graduate non-degree-seeking certificate program focused on the application of engineering and computer science principles to biotechnology, bioinformatics and biosystems. It is designed for engineers and scientists working in the biotechnology, pharmaceutical, health care, drug discovery, biomedical, medical instrumentation and allied sectors.

Admission Requirements

The applicant must satisfy the following criteria:

1. A bachelor's degree in biology, chemistry, physics or engineering with a mathematics background through Calculus 2 or calculus with basic differential equations. Qualified senior undergraduates may be accepted into the graduate certificate program with appropriate committee recommendation;

2. GPA of 3.0 in science, mathematics and engineering courses;

3. No GRE scores are necessary. Student transcripts should demonstrate competency in science, mathematics and engineering coursework.

Certificate Requirements

1. PCB 3063, Genetics, (or an equivalent course) as a deficiency requirement with a minimum grade of “C”;

2. 9 credits of Biomedical Engineering ~~Bioengineering~~ courses such as Introduction to ~~Bioengineering~~ Biomedical Engineering, Biosystems Modeling and Control, Bioinformatics: ~~Bioengineering~~ Biomedical Perspectives, Tissue Engineering, Stem Cell Engineering, Biomaterials, Introduction to Microfluidics and BioMEMS, Introduction to Robotics, NanoBiotechnology, Robotic Applications and Orthopedic Biomechanics, Medical Imaging and Bio-Signal Processing;

3. 6 credits of Science courses relevant to Biomedical Engineering ~~Bioengineering~~ such as Special Topics (Advanced Biotechnology Lab), Bioinformatics and Neuroscience 1 and 2;

4. The grade point average of the above 15 credits must be 3.0 or better.

5. All courses must be at the 5000 and 6000 levels.