Minor in Biomedical Engineering

About This Program

To receive a Minor in Biomedical Engineering a student must complete at least 18 hours in bioengineering courses listed below with a grade of C or better in each. Admission to the minor program in Biomedical Engineering (BE) requires 1) a minimum GPA of 2.25 derived from courses completed at UTA and 2) approvals from the undergraduate advisor of Bioengineering and the student's home department. Upon admission to the program, check with the BE undergraduate advisor for advising and for enrollment in courses.

Competencies

1. Upon completion, students will demonstrate skills in applying principles of engineering to solve problems in the areas of biology, human physiology and clinically relevant problems;
2. Upon completion, students will demonstrate skills in solving biomedical engineering problems, including those associated with the interaction between living and non-living systems;
3. Upon completion, students will demonstrate skills in analyzing, modeling, designing and realizing biomedical engineering devices, systems, components, or processes.

Admissions Criteria

Admission to the minor program in Biomedical Engineering requires 1) a minimum GPA of 2.25 derived from courses completed at UTA and 2) approvals from the undergraduate advisor of Bioengineering and the student's home department. Upon admission to the program, check with the BE undergraduate advisor for advising and for enrollment in courses.

Curriculum

Biomedical Engineering Foundations		
BE 3380	HUMAN PHYSIOLOGY IN BE	3
BE 4382	LABORATORY PRINCIPLES	3
BE 1325	INTRODUCTION TO BIOENGINEERING	3
Biomedical Engineering Electives		
Choose any three courses from the options below		9
Tissue Engineering, Biomaterials, or Biomechanics Areas		
BE 3367	CELL CULTURE AND BIOMATERIAL LABORATORY	
BE 4368	AN INTRODUCTION TO TISSUE ENGINEERING AND REGENERATIVE MEDICINE	
BE 4329	NEURAL ENGINEERING	
BE 4364	TISSUE ENGINEERING	
BE 4372	DRUG DELIVERY SYSTEM	
BE 4318	MEDICAL DEVICE PROTOTYPING	
BE 4373	FORMULATION AND CHARACTERIZATION OF DRUG DELIVERY SYSTEMS	
BE 4385	STEM CELL TISSUE ENGINEERING	
BE 4331	BIOPOLYMERS AND BIOCOMPATIBILITY	
BE 4333	NANO BIOMATERIALS AND LIVING-SYSTEMS INTERACTION	
BE 3310	BIOMECHANICS AND FLUID FLOW WITH COMPUTATIONAL LABORATORY	
BE 4337	TRANSPORT PHENOMENA IN BIOMEDICAL ENGINEERING	
BE 3415	FUNDAMENTALS OF BIOMOLECULAR ENGINEERING	
BE 4312	TISSUE BIOMECHANICS AND BIOENGINEERING	
BE 4314	BIOMEDICAL IMPLANTS	
Medical Imaging or Bioinstrumentation Areas		
BE 3317	LINEAR SYSTEMS IN BIOENGINEERING	
BE 3344	BIOINSTRUMENTATION	
BE 4345	BIOSENSORS	
BE 4324	BIOMEDICAL OPTICS LABORATORY	
BE 3346	MEDICAL IMAGING	
BE 3327	TISSUE OPTICS	
BE 3325	FLUORESCENCE MICROSCOPY	

BE 3352	DIGITAL PROCESSING OF BIOLOGICAL SIGNALS	
BE 4366	PROCESS CONTROL IN BIOTECHNOLOGY	
BE 4326	TISSUE ULTRASOUND-OPTICAL IMAGING	
EE 3407	ELECTROMAGNETICS	
EE 2440	CIRCUIT ANALYSIS WITH LAB	
Total Hours		**18**

Program Completion

Students must complete required courses with a grade of C or better in each.

Advising Resources

Biology department advising is available for transfer students, prospective students, and first time in college students after meeting transition criteria.

Location:

Life Science Building 3rd floor - 345, 347, 349, 351

Email:

Find advisor emails at link below.

Phone:

817-272-2408

Web:

Contact your advisor - schedule an appointment (https://www.uta.edu/academics/schools-colleges/science/departments/biology/advising/)