DUAL BACHELOR OF SCIENCE WITH A MAJOR IN BIOMEDICAL ENGINEERING (STEM) AND MASTER OF SCIENCE IN THE FIELD OF ELECTRICAL ENGINEERING (STEM)

The School of Engineering and Applied Science offers a dual bachelor of science with a major in biomedical engineering (https://bulletin.gwu.edu/engineering-applied-science/biomedical-engineering/bs/) and master of science in the field of electrical engineering (https://bulletin.gwu.edu/engineering-applied-science/electrical-computer-engineering/electrical-engineering/) degree program. The program allows students to take up to 6 graduate credits as part of their undergraduate program, thereby decreasing the number of credits normally required for the master's degree. All requirements for both degrees must be fulfilled.

Prerequisite: Students in the dual program must take ECE 3130 Digital Electronics and Design as part of the BS in biomedical engineering program. The course counts only toward the undergraduate degree, it is not shared between the BS and MS.

Credit sharing:

Undergraduate students in the dual degree program should consider taking two of the MS courses (6 credits) from the list below during the BS program and counting them as technical electives. The selected courses are shared, i.e., counted toward both the BS and MS degrees. The optimal selection of MS courses taken during the BS program depends on the student's intended area of focus within the graduate degree. Prior to enrolling in shared courses, students must consult with their biomedical engineering academic advisor and with the chair of the department of electrical and computer engineering.

Code	Title	Credits
ECE 4140	VLSI Design and Simulation	
or ECE 6240	VLSI Design and Simulation	
ECE 4415	Introduction to Computer Networks	
or ECE 6035	Introduction to Computer Networks	
ECE 4535	Computer Architecture and Design	
or ECE 6005	Computer Architecture and Design	
ECE 6010	Linear Systems Theory	
ECE 6015	Stochastic Processes in Engineering	
ECE 6025	Signals and Transforms in Engineering	
ECE 6030	Device Electronics	
ECE 6210	Machine Intelligence	
ECE 6221	Introduction to Physical Electronics	
ECE 6800	Computational Techniques in Electrical Engineering	

Visit the program website (https://graduate.seas.gwu.edu/bs-ms-biomedical-engineering) for additional information