

**U.A. WHITAKER COLLEGE OF ENGINEERING
BACHELOR OF SCIENCE IN BIOENGINEERING (B.S.)
129 Credits**

Freshman Year					
Semester 1			Semester 2		
Course Number	Course Title	CR	Course Number	Course Title	CR
EGN 1006L	Intro to Engineering Prof.	1	EGN 1041C	Computational Tools for Eng	2
ENC 1101	Composition I (W)	3	PHY 2048C	General Physics I	4
	Humanities*	3	MAC 2312	Calculus II	4
MAC 2311	Calculus I	4	ENC 1102	Composition II (W)	3
BSC 1010C	General Biology w/lab I	4	HUM 2510	Understanding Visual & Performing Arts	3
	Total	15		Total	16

Sophomore Year					
Semester 3			Semester 4		
Course Number	Course Title	CR	Course Number	Course Title	CR
EGM 3420C	Engineering Mechanics	4	EGN 3331C	Mechanics of Materials	3
MAC 2313	Calculus III	4	STA 2037	Statistics with Calculus	3
CHM 1045C	Gen Chemistry w/Lab I	4	MAP 2302	Diff Equations	3
PHY 2049C	General Physics II	4	CHM 1046C	Gen Chemistry w/Lab II	4
	Total	16		Total	13

Summer term		
	Social Science (recommend ECO 2023)	3
	Social Science*	3
	Humanities*	3
	Total	9

*One of these courses must be a writing course to satisfy the Gordon Rule (W).

NOTE: Students must earn at least 9 semester hours by attending one or more summer sessions at a State University System member institution.

Junior Year					
Semester 5			Semester 6		
Course Number	Course Title	CR	Course Number	Course Title	CR
EGN 3641C	Engineering Entrepreneurship	3	BME 3404C	Human Physiology Engineers II	3
EGN 3433C	Design for Manufacturing	2	EGN 3374C	Signals Syst Bioengineers	3
BME 3100C	Introduction to Biomaterials	3	BME 4800C	Bioengineering Product Design	3
BME 3403C	Human Physiology Engineers I	3	BME 3261C	Biofluid Mechanics	3
EGN 3373C	Circuits for Bioengineers	3	CHM 2210C	Organic Chem w/Lab I	4
	Total	14		Total	16

Senior Year					
Semester 7			Semester 8		
Course Number	Course Title	CR	Course Number	Course Title	CR
BME 4884	Bioengineering Senior Design I	2	BME 4885	Bioengineering Sr Design II	2
BME 4632C	Biotransport Phenomena	3	choose one	BME 4504C Bioelectricity, OR BME 4332C Cellular & Tissue Engineering	3
BME 4503C	Biomedical Instrumentation	3	BME 4211C	Biomechanics	3
BME 4722	Health Care Engineering	3	IDS 3920	University Colloquium (W)	3
	Technical Elective 1**	4		Technical Elective 2**	4
	Total	15		Total	15

Total Hours = 129

Engineering common core - engineering courses Engineering courses unique to B. S. in Bioengineering
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** The Technical Electives must be approved by the Bioengineering Department and together must total at least 8 credit hours.

A list of technical electives can be found at the link below:

[http://www.fgcu.edu/eng/BioDpt/biobs/studentresources.html#Bioengineering_Technical_Electives:](http://www.fgcu.edu/eng/BioDpt/biobs/studentresources.html#Bioengineering_Technical_Electives)

Prerequisites for Junior Coursework			
Course Number	Prerequisites	Course Number	Prerequisite
EGN 3641C	EGN 3331C	BME 3404C	BME 3403C
EGN 3433C	EGN 3331C	EGN 3374C	EGN 3373C and MAC2313
BME 3100C	EGN 3331C	BME 4800C	BME 3100C, BME 3403C, EGN 3433C & STA 2037
BME 3403C	EGN 1041C, BSC 1010C, CHM 1046C, PHY 2049C & MAP 2302	BME 3261C	EGN 3331C, BME 3403C and MAC 2313
EGN 3373C	EGN 1006L, PHY 2049C, & MAP 2302	CHM 2210C	CHM 1046C or CHM 1046 and CHM 1046L

*All prerequisites require a minimum grade of C

Prerequisites for Senior Coursework			
Course Number	Prerequisites	Course Number	Prerequisite
BME 4884	EGN 3641C, BME 4800C, EGN 3374C & BME 3261C	BME 4885	BME 4884
BME 4632C	BME 3261C and BME 3404C	BME 4504C	BME 3403C and EGN 3373C
BME 4503C	EGN 3374C	BME 4332C	BME 3100C and BME 3403C
BME 4722	BME 4800C	BME 4211C	BME 3100C and BME 3404C

*All prerequisites require a minimum grade of C

