

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

Freshman Year					
Semester 1 (Fall Term)			Semester 2 (Spring Term)		
Course	Course Title	CR	Course	Course Title	CR
EGS 1006L	Intro to Engineering Profession	1	EGN 1041C	Computational Tools for Engineering	2
ENC 1101	Composition I	3	PHY 2048C	General Physics I w/lab	4
XXX XXXX	State Core Humanities*	3	MAC 2312	Calculus II	4
MAC 2311	Calculus I	4	ENC 1102	Composition II	3
BSC 1010C	General Biology I w/lab	4	XXX XXXX	Humanities*	3
<b>Total</b>		<b>15</b>	<b>Total</b>		<b>16</b>
Summer Term			<b>*Special Notes:</b> Students must earn at least 9 semester hours by attending one or more summer sessions.  Students should be sure one of their social science or humanities include 1 course that is designated with an attribute for College Level Writing Skills (CLWS), 2 courses that are designated with an attribute for Intercultural Knowledge (INKN), and 1 course that satisfies the Civic Literacy requirement. Please be aware that 1 course may satisfy multiple attributes. Example: AML 2010 = Humanities, College Level Writing, and Intercultural Knowledge (GEHM, CLWS, INKN)		
Course	Course Title	CR			
XXX XXXX	Social Science* (recommend ECO 2013 or ECO 2023)	3			
XXX XXXX	State Core Social Science* (AMH 2020 or POS 2041)	3			
XXX XXXX	Humanities*	3			
<b>Total</b>		<b>9</b>			

Sophomore Year					
Semester 3 (Fall Term)			Semester 4 (Spring Term)		
Course	Course Title	CR	Course	Course Title	CR
EGM 3420C	Engineering Mechanics	4	EGN 3433C	Design For Manufacturing	3
MAC 2313	Calculus III	4	STA 2023/STA	Statistical Methods OR Applied Statistics for Eng.	3
CHM 1045C	Gen Chemistry I w/lab	4	MAP 2302	Diff Equations	3
PHY 2049C	General Physics II w/lab	4	CHM 1046C	Gen Chemistry II w/lab	4
<b>Total</b>		<b>16</b>	<b>Total</b>		<b>13</b>

Junior Year					
Semester 5 (Fall Term)			Semester 6 (Spring Term)		
Course	Course	CR	Course	Course	CR
EGN 3641C	Engineering Entrepreneurship	3	BME 3404C	Human Physiology Engineers II	3
CHM 2210C	Organic Chemistry I w/lab	4	BME 3507C	Signals Syst Bioengineers	3
BME 3100C	Introduction to Biomaterials	3	BME 4800C	Bioengineering Product Design	3
BME 3403C	Human Physiology Engineers I	3	BME 4722	Health Care Engineering	3
BME 3506C	Circuits for Bioengineers	3	BME 3101C	Biological Performance of Materials	3
<b>Total</b>		<b>16</b>	<b>Total</b>		<b>15</b>

Senior Year					
Semester 7 (Fall Term)			Semester 8 (Spring Term)		
Course	Course	CR	Course	Course	CR
BME 4884	Bioengineering Senior Design I	2	BME 4885	Bioengineering Sr Design II	3
BME 4211C	Biomechanics	3	BME 4513C	Data Acquisition and Control in Bioengineering	3
BME 4503C	Biomedical Instrumentation	3	BME 4632C	Biotransport Phenomena	3
BME 3261C	Biofluid Mechanics	3	IDS 3920	University Colloquium	3
XXX XXXX	Technical Elective 1**	3	XXX XXXX	Technical Elective 2**	3
<b>Total</b>		<b>14</b>	<b>Total</b>		<b>15</b>

Engineering Common Core - Engineering Courses	<b>10</b>
Engineering Courses unique to B. S. in Bioengineering	<b>47</b>

General Education & Other Required Courses	<b>72</b>
<b>Total Engineering Credits</b>	<b>57</b>
<b>Total Degree Credits</b>	<b>129</b>

\*\* The Technical Electives must be approved by the Bioengineering Department and together must total at least 6 credit hours.

<http://www.fqu.edu/Eng/BioDpt/biobs/student-resources.html>

Prerequisites for Coursework (all prerequisites require a minimum grade of C)			
Course	Prerequisites	Course	Prerequisites
BME 3100C	EGN 3420C & (STA 2023 or STA XXXX)	BME 4513C	BME 4503C
BME 3101C	BME 3100C	BME 4632C	BME 3261C
BME 3261C	BME 3404C & MAC 2313	BME 4722	EGN 3433C, BME 3403C, & (STA 2023 or STA XXXX)
BME 3403C	EGN 1041C, BSC 1010C, CHM 1046C, PHY 2049C & MAP 2302	BME 4800C	BME 3100C, BME 3403C & EGN 3433C
BME 3404C	BME 3403C	BME 4884	EGN 3641C, BME 3101C, BME 4800C, BME 3507C & BME 4722
BME 3506C	EGS 1006L, PHY 2049C & MAP 2302	BME 4885	BME 4884
BME 3507C	BME 3506C, BME 3403C & MAC 2313	CHM 2211C	CHM 2210C or (CHM 2210 & CHM 2210L)
BME 4211C	BME 3100C & BME 3404C	EGN 3433C	EGN 1041C, PHY 2048C & MAC 2312
BME 4503C	BME 3507C	EGN 3641C	EGN 3433C