

Biomedical Engineering

126 credits, 2018/2019 Catalog

First Year

Fall Semester

3	ENC 1101 Composition I
4	MAC 2281 or MAC 2311 Calculus I
3	CHM 2045 General Chemistry I
1	CHM 2045L General Chemistry I Lab
R	EGN 3000 Foundations of Engineering
<u>3</u>	EGN 3000L Foundations of Engineering Lab (TGEC)

14 *Total Credits*

Spring Semester

4	MAC 2282 or MAC 2312 Calculus II
3	CHM 2046 General Chemistry II
1	CHM 2046L General Chemistry II Lab
3	PHY 2048 General Physics I
1	PHY 2048L General Physics I Lab
<u>3</u>	ENC 1102 Composition II

15 *Total Credits*

Second Year

Fall Semester

4	MAC 2283 or MAC 2313 Calculus III
3	PHY 2049 General Physics II
1	PHY 2049L General Physics II Lab
3	EGN 3311 Statics
3	BME 4100 Biomedical Engineering
<u>3</u>	EGN 3443 Probability & Statistics for Engineers (TGEI)

17 *Total Credits*

Spring Semester

3	EGN 3433 Modeling & Analysis Eng Syst or MAP 2302 Differential Equations
3	EGN 3343 Thermodynamics
3	BME 3053 Computer Prog. BME
3	BSC 2010 Cellular Processes
1	BSC 2010L Cellular Processes Lab
<u>3</u>	Gen. Ed. Core Social Sciences Elective

16 *Total Credits*

Summer

3	CHM 2210 Org Chem I
2	CHM 2210 Org Chem I Lab
3	ENC 3246 Comm. for Engineers
<u>1</u>	Professional Elective

9 *Total Credits*

Third Year

Fall Semester

3	BME 4409 Engineering Physiology
3	BME 4508 Biomedical Signals and Systems Analysis
3	BME 4503 Biomedical Instrumentation
3	EGN 3373 Introduction to Electrical Systems I
<u>3</u>	General Education Core Humanities

15 *Total Credits*

Spring Semester

2	BME 4056C Biomedical Eng. Lab I
3	BME 3032 Biomedical Transport Process
3	EGN 3321 Dynamics
3	EGN 3365 or EMA 4003 Materials
<u>3</u>	General Ed. Human & Cultural Diversity

14 *Total Credits*

Internship/Co-op

	List Company/employer name and position
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Fourth Year

Fall Semester

3	BME 3312 Molecular and Cellular Engineering
2	BME 4057C Biomedical Engineering Lab II
3	BME 4882 Biomedical Engineering Design I
3	BME Upper-Level Elective
<u>3</u>	STEM Upper-Level Elective

14 *Total Credits*

Spring Semester

3	BME 4883 Biomedical Engineering Design II
3	BME Upper-Level Elective
3	STEM Upper-Level Elective
<u>3</u>	Gen. Ed. Ethical Reasoning & Civil Engagement

12 *Total Credits*

Note: Continuation requirements noted on overleaf.

TGE = Tampa General Education; C = Creative Thinking, I = Information & Data Literacy

Continuation Requirements:

- “C-” is the minimum acceptable grade in an engineering course that is a prerequisite for a subsequent course.
- In other engineering courses, any passing grade may be applied but a minimum 2.0 GPA in the following categories must be maintained at all times: Overall, USF, Math/Science, Engineering and Specialization.
- All math, science and engineering courses must be successfully completed in no more than **two** registered attempts. Grades of W, I, IF, U, R, and M are considered attempts. Registration that is canceled for non-payment is also considered an attempt.

Course Equivalencies

Courses at USF	Courses at a Florida State Institution
MAC 2281 Engineering Calculus I or MAC 2311 Calculus I	MAC X311 or MAC X281
MAC 2282 Engineering Calculus II or MAC 2312 Calculus II	MAC X312 or MAC X282
MAC 2283 Engineering Calculus III or MAC 2313 Calculus III	MAC X313 or MAC X283
MAP 2302 Differential Equations or EGN 3433 Modeling Analysis of Eng Systems	MAP X302 or MAP X305
CHM 2045/CHM 2045L General Chemistry I with Lab Or CHS 2440/2440L General Chemistry for Engineers with lab	CHM X045/X045L or CHM X045C or CHM X041/X045L or CHS X440/X440L
PHY 2048/2048L General Physics I with PHY 2048L	PHY X048/X048L or PHY X048C or PHY X043/X048L
PHY 2049/2049L General Physics II or PHY 2061 Enriched Physics II with PHY 2049L	PHY X049/X049L or PHY X049C or PHY X044/X049L