

Biomedical Engineering Course Plan

Catalog Year 2019-2020

Legend

*** Major Requirement**

Must be taken to fulfill major requirements.

† Major Elective

Must be taken to fulfill major requirements, or replaced with an equivalent course.

‡ Gen-Ed Requirement

Must be taken to fulfill general education requirements.

§ Elective

Can be chosen from a selection of courses.

See MyGFU for detailed academic requirements.

First Year

Fall Semester

| | |
|---------------------------------------|-------------------|
| Engineering Principles I (ENGR 151) * | 3 credits |
| General Chemistry (CHEM 211) * | 4 credits |
| Calculus I (MATH 201) * | 4 credits |
| I Believe I (THEO 101) ‡ | 3 credits |
| Knowing and Being Known (LIBA 100) ‡ | 3 credits |
| Semester Total | 17 credits |
| Cumulative Total | 17 credits |

Spring Semester

| | |
|--|-------------------|
| Engineering Principles II (ENGR 152) * | 3 credits |
| General Physics with Calculus (PHYS 211) * | 4 credits |
| Calculus II (MATH 202) * | 4 credits |
| I Believe II (THEO 102) ‡ | 3 credits |
| Introduction to Communication (COMM 100) ‡ | 3 credits |
| Semester Total | 17 credits |
| Cumulative Total | 34 credits |

Second Year

Fall Semester

| | |
|---|-------------------|
| Principles of Material Science (ENGM 250) * | 3 credits |
| Statics (ENGM 211) * | 3 credits |
| Human Anatomy & Physiology I (BIOL 221) * | 4 credits |
| General Physics with Calculus (PHYS 212) * | 4 credits |
| Calculus III (MATH 301) * | 3 credits |
| Semester Total | 17 credits |
| Cumulative Total | 51 credits |

Spring Semester

| | |
|--|-------------------|
| Circuits & Instrumentation (ENGR 260) * | 4 credits |
| Dynamics (ENGM 212) * | 3 credits |
| Human Anatomy & Physiology II (BIOL 222) * | 4 credits |
| Differential Equations and Linear Algebra (MATH 311) * | 4 credits |
| Lifelong Fitness (HHPA 120) ‡ | 2 credits |
| Semester Total | 17 credits |
| Cumulative Total | 68 credits |

Third Year

Fall Semester

| | |
|--|-------------------|
| Servant Engineering I (ENGR 381) * | 2 credits |
| General Biology I (BIOL 211) * | 4 credits |
| Biotransport (ENGB 330) * | 3 credits |
| Mechanics of Biomaterials (ENGB 340) * | 3 credits |
| Engineering Statistics (MATH 330) * | 3 credits |
| Semester Total | 15 credits |
| Cumulative Total | 83 credits |

Spring Semester

| | |
|---|-------------------|
| Servant Engineering II (ENGR 382) * | 2 credits |
| Finite Elements & Computer Model (ENGM 360) * | 3 credits |
| Biosignal Analysis (ENGB 350) * | 3 credits |
| Biosignal Analysis Lab (ENGB 351) * | 1 credits |
| Tissue Engineering (ENGB 370) * | 3 credits |
| Intercultural GE Requirement § | 3 credits |
| Semester Total | 15 credits |
| Cumulative Total | 98 credits |

Fourth Year

Fall Semester

| | |
|--|--------------------|
| Senior Design I (ENGR 481) * | 1 credits |
| Biomechanics (ENGB 420) * | 3 credits |
| Design of Medical Devices (ENGB 410) * | 3 credits |
| Bible Elective GE Requirement ‡ | 3 credits |
| Christianity and Culture (LIBA 400) ‡ | 3 credits |
| Art, Beauty & Truth (HUMA 290) ‡ | 3 credits |
| Semester Total | 16 credits |
| Cumulative Total | 114 credits |

Spring Semester

| | |
|---|--------------------|
| Senior Design II (ENGR 482) * | 3 credits |
| Rehabilitation Engineering (ENGB 430) * | 3 credits |
| Philosophy and Literature (HUMA 205) ‡ | 3 credits |
| History/Politics/International Affairs GE Requirement ‡ | 3 credits |
| Principles of Microeconomics or Macroeconomics (ECON 201/202) ‡ | 3 credits |
| Semester Total | 15 credits |
| Cumulative Total | 129 credits |