

Minimum Hours: 133

Engineering (B.S.E.)

Bioengineering option

2019-2020 Catalog

| FRESHMAN – Fall Semester | | Hours | FRESHMAN – Spring Semester | | Hours |
|--|-----------|-------|--|-----------|-------|
| ENG 109 College Writing I <u>OR</u> ENG 111 Freshman English* | 3 | | MATH 221 Calculus II | 4 | |
| CT 209 CLF: Missional Engineering | 1 | | EGR 124 Intro to Engineering Design-Art of Engineering | 3 | |
| COLL 100 Bryan Gateway Seminar | 1 | | EGR 122 Engineering Service | 1 | |
| MATH elective** | 3 | | CT 113 Critical Survey of Worldviews | 3 | |
| CHEM 131 General Chemistry I | 4 | | PHYS 245 College Physics I | 4 | |
| EGR 121 Introduction to Engineering the Great Commission | 3 | | CSCI 116 Programming I | 3 | |
| | | | | | |
| | | | (ENG 110 College Writing II)* | | |
| TOTAL HOURS | 15 | | TOTAL HOURS | 18 | |
| SOPHOMORE – Fall Semester | | | SOPHOMORE – Spring Semester | | |
| PHYS 246 College Physics II | 4 | | MATH 326 Differential Equations | 4 | |
| MATH 222 Calculus III | 4 | | EGR 222 Circuits and Instrumentation | 3 | |
| EGR 223 Engineering Mechanics - Statics | 3 | | EGR 224 Engineering Mechanics - Dynamics | 3 | |
| EGR 221 Computational Methods | 3 | | EGR 226 Mechanics of Materials | 3 | |
| BIO 112 General Biology I | 4 | | CT 210 CLF: Biblical Environmentalism | 1 | |
| | | | BIO 113 General Biology II | 4 | |
| | | | | | |
| TOTAL HOURS | 18 | | TOTAL HOURS | 18 | |
| JUNIOR – Fall Semester | | | JUNIOR – Spring Semester | | |
| EGR 321 Design of Experiments | 3 | | EGR 322 Fluid Mechanics | 4 | |
| EGR 323 Engineering Thermodynamics | 3 | | MATH 242 Statistics for Scientists & Engineers | 3 | |
| BIB 222 Old Testament Literature & Interpretation | 3 | | BIB 224 New Testament Literature & Interpretation | 3 | |
| BIO 323 Advanced Anatomy & Physiology I | 4 | | EGR 422 Heat Transfer | 3 | |
| CT CLF elective | 1 | | BIO 324 Advanced Anatomy & Physiology II | 4 | |
| EGR 347 Engineering Professional Development I | 1 | | | | |
| | | | | | |
| TOTAL HOURS | 15 | | TOTAL HOURS | 17 | |
| SENIOR – Fall Semester | | | SENIOR – Spring Semester | | |
| EGR 225 Engineering Economics | 3 | | EGR 424 Engineering Ethics | 3 | |
| EGR 491 Capstone Senior Design I | 3 | | EGR 492 Capstone Senior Design II | 3 | |
| HIS general survey course (100/200 level) | 3 | | BIO 224 Microbiology | 4 | |
| COMM 111 Intro to Communication | 3 | | Choose ONE of the following: SS 211, PSGS 315, PSY 111, 228, 334 | 3 | |
| Choose ONE of the following: ENG 211, FA 211, MUS 210, THT 111, or FLM 210 | 3 | | EGR upper level elective | 3 | |
| EGR 349 Engineering Professional Development II | 1 | | | | |
| | | | | | |
| TOTAL HOURS | 16 | | TOTAL HOURS | 16 | |

*Depending on standardized test scores, students are required to take either ENG 109-110 College Writing I and II (6 credits) OR ENG 111 Freshman English (3 credits). Students who are placed in the ENG 109-110 sequence will need to take ENG 110 in the spring semester of the freshman year.

** Choice of MATH elective should prepare student to enroll in MATH 221 Calculus II which is required in the major.

This document is to be used for planning purposes only. Please refer to the academic catalog for complete information. Course planning should be completed in consultation with your academic adviser. Not all courses are offered every semester or every year.