| Semester I / Fall | Total Credits: 18 | Semester II / Spring | Total Credits: 17 | Semester III / Fall | Total Credits: 17 | Semester IV / Spring | Total Credits: 15 | Semester V / Fall | Total Credits: 17 | Semester VI / Spring | Total Credits: 17 | Semester VII / Fall | Total Credits: 14 | Semester VIII / Spring | Total Credits: 13 |
|------------------|------------------|---------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|
| MAC 2281/2311¹   | Calculus I for Eng. (4) | MAC 2282/2312¹ | Calculus II for Eng. (4) | MAC 2283/2313¹ | Calculus III for Eng (4) | MAP 2302² | Diff. Equations (3) | Science Elective Rec. CHM 2211 (3) | Science Elective Rec. BCH 3033 (3) | BME 4332 | Cell & Tissue Eng. (3) | BME 4230 | Biomech. of Cardio Syst. (3) |
| CHM 1045³        | Gen. Chem. I (3) | PHY 2048⁴        | Physics 1 w/ Calc. (4) | PHY 2049⁴        | Phys. w/ Calc. II (4) | ESI 3215 | Eval of Engg Data (3) or (STA 3033) (3) | BME 3632 | BME Transport (3) | BME 4311 | Molecular Eng. (3) | Science Elective Rec. PCB 3063 (3) |
| BME 1008C        | Intro. To BME (2) | BSC 2010⁵        | Gen. Bio I (3) | BSC 2010L¹       | Gen. Bio I Lab (1) | Humanities | Group One (3) | Humanities | Group Two (3) | BME 4800C | Undergrad Sem. (0) |
| SLS 1501         | First Year Exper. (1) | ENC 1102        | Writing & Rhet I (3) | BME 1054L        | BME Computing (1) | Social Science | Group One (3) | Social Science | Group Two (3) | |
| ENC 1101         | Writing & Rhet II (3) | MAC 2283/2313¹   | Calculus III for Eng (4) | BME 1054L        | BME Computing (1) | |
|                  |                   | MAC 2283/2313¹   | Calculus III for Eng (4) | CHM 2210L¹       | Org. Chem. I Lab (1) | |
|                  |                   | CHM 1046⁴        | Gen. Chem. II (3) | CHM 2210¹        | Org. Chem. I (4) | |
|                  |                   | PHY 2048⁴        | Physics 1 w/ Calc. (4) | CHM 1046L¹       | Gen. Chem. II Lab (1) | |
|                  |                   | PHY 2049⁴        | Phys. w/ Calc. II (4) | CHM 2210L¹       | Org. Chem. I Lab (1) | |
|                  |                   | BME 1008C        | Intro. To BME (2) | ENC 1102        | Writing & Rhet I (3) | |
|                  |                   | BME 1054L        | BME Computing (1) | MAC 2282/2312¹   | Calculus II for Eng. (4) | |
|                  |                   | MAC 2283/2313¹   | Calculus III for Eng (4) | BME 1054L        | BME Computing (1) | |
|                  |                   | MAP 2302²        | Diff. Equations (3) | BME 1008C        | Intro. To BME (2) | |
|                  |                   | Science Elective Rec. CHM 2211 (3) | BME 4332 | Cell & Tissue Eng. (3) | BME 4230 | Biomech. of Cardio Syst. (3) |
|                  |                   | Science Elective Rec. BCH 3033 (3) | BME 4311 | Molecular Eng. (3) | Science Elective Rec. PCB 3063 (3) |
|                  |                   | BME 3632 | BME Transport (3) | BME 4311 | Molecular Eng. (3) | Science Elective Rec. PCB 3063 (3) |
|                  |                   | BME 4503C | Des. Bio. Sys. & Dev. (4) | BME 4800C | Undergrad Sem. (0) | |
|                  |                   | EEL 3110 | Circuits Analysis and lab (4) | BME 4930² | Undergrad Sem. (0) | |
|                  |                   | BME 4011 | Clinical Rotation (1) | BME 4908 | Sr. Des. Project (3) | |
|                  |                   | BME 4500L | BME Lab I (1) | BME 4909 | BME 4909 | Sr. Des. Project (3) | |
|                  |                   | BME 4930² | Undergrad Sem. (0) | BME 4909 | BME 4909 | Sr. Des. Project (3) | |
|                  |                   | BME 4051L | BME Lab II (1) | BME 4909 | BME 4909 | Sr. Des. Project (3) | |

³ Minimum “C” or better in all Common Pre-requisites AND a combined GPA of a 2.5 in all Common Pre-requisites are required for graduation

² Student’s must confirm attendance to ten BME approved seminars throughout the program in order to graduate

¹ NOTE 1: Any student found to be taking any BME course without its prerequisite or co-requisite will be dropped from the course without a refund.

2 NOTE 2: Transfer and Change of Major students must have a “C” or better in the following courses: MAC 2311, CHM 1045/L, BSC 2010/L, and PHY 2048/L. Students must also have at least a 2.0 overall GPA to transfer or change majors to BME.

For Reference Only
Check Catalog for complete details
Total Credits for Major: 128
Please see next page for co-reqs & pre-reqs for each course
Courses must be completed with combined GPA of 2.5. Only "C" or better will be accepted for these courses.

MAC 2311 Calculus I (4)
Preps: MAC 1147 OR MAC 1140 & MAC 1114
MAC 2312 Calculus II (4)
Preps: MAC 2311
MAC 2313 Multivariable Calculus (4)
Preps: MAC 2312
MAP 2302 Differential Equations (3)
Preps: MAC 2312
BSC 2010 General Biology I (3)
BSC 2010L General Biology I (1)
PHY 2048 Physics with Calculus I (4)
Preps: MAC 2311 Coreq: PHY 2048L
PHY 2048L Physics with Calculus I Lab (1) Coreq: PHY 2048
PHY 2049 Physics with Calculus II (4)
Preps: PHY 2048 & MAC 2312
PHY 2049L Physics with Calculus II Lab (1) Coreq: PHY 2049
CHM 1045L General Chemistry I Lab (1) Coreq: CHM 1045
CHM 1045L General Chemistry I Lab (1) Coreq: CHM 1045
CHM 1046L General Chemistry II Lab (1) Coreq: CHM 1046
CHM 2010 Organic Chemistry I (4)
Preps: CHM 1046 & CHM 1046L Coreq: CHM 2210L
CHM 2210L Organic Chemistry I Lab (1) Coreq: CHM 2210
CHM 2210 Organic Chemistry I (4)
Preps: CHM 1046 & CHM 1046L Coreq: CHM 2210L
CHM 2211L Organic Chemistry I Lab (1) Coreq: CHM 2211

Grade of "D" or better will be accepted for below courses.

BME 100BC Introduction to BME (2)
Preps: PHY 2049 & BME 3403
BME 1054L BME Computing I (1)
Preps: BME 1054L & BME 1054 Coreq: BME 3403
BME 2740 BME Modeling and Simulation (3)
Preps: BSC 2100 & BME 1054 Coreq: MAC 2312 & BME 100BC
ESI 3215 Evaluation of Engineering Data I (3) Preps: MAC 2312
STA 3033 Probability and Statistics (3) Preps: MAC 2312
BME 3721 BME Data Evaluation Principles (3) Preps: STA 3033 OR ESI 3215
BME 3403 Engineering Analysis of Bio Sys I (3) Preps: PHY 2049 & CHM 2210, BME 2740
BME 3404 Engineering Analysis of Bio Sys II (3) Preps: BME 3403
EGM 3503 Applied Mechanics (4) Preps: MAC 2312 & PHY 2048
EEL 3110C Circuit Analysis & Lab (4) Preps: MAC 2312, PHY 2049, PHY 2049L & BME 100BC

PhD 3632 BME Transport (3) Preps: BME 2740, EGM 3503, CHM 1046, MAP 2302, PHY 2049 & MAC 2312
BME 4503C Medical Instrumentation (4) Preps: EEL 3110C
BME 4011 Clinical Rotations for BME (1) Preps: BME 3403
BME 4100 Biomaterials (3) Preps: EGM 3503 Coreq: BME 3403
BME 4100B Biomedical Engineering (3) Preps: BME 2740, MAC 2312, CHM 1046, EEL 3110C
BME 4050L BME Lab I (1) (Fall Only) Preps: BME 3721 & EEL 3110C Coreq: BME 4000, BME 3632
BME 4050L BME Lab II (1) (Spring Only) Preps: BME 3721 & EEL 3110C Coreq: BME 4000, BME 3632
BME 4800C Design of BME Systems and Devices (3) Preps: BME 3404, BME 4050C, BME 3721 & BME 4011 Coreq: BME 3632
BME 4908B Senior Design Project I (3) Preps: BME 4080C
BME 4930 Undergraduate Seminar I (0) **Only the course is considered PASS or FAIL

*Students must enroll for the course

BME 4562 Biomedical Optics (3) (Fall Only) Preps: PHY 2049 & BME 3403
BME 4531 Medical Imaging (3) (Spring Only) Preps: PHY 2049 & BME 2740
BME 4422 Biophysics of Neural Comp. (3) (Fall Only) Preps: EEL 3110 & EEL 3110B
BME 4510 Intro to Digital Syst. (3) (Varies by Dept.) Preps: EEL 3110 & EEL 3110B
BME 4567 Cell and Tissue Eng. (3) (Spring Only) Preps: BME 3632 & BME 3404

Bachelor of Science in Biomedical Engineering

MCE 3365 Materials in Eng. (3) (Varies by Dept.) Preps: CHEM 1045, MAC 2311 & PHY 2048
EGM 3311 Analysis of Eng. Sys. (3) (Varies by Dept.) *Must email advisor to be enrolled
EMI 4804 Introduction to Mechatronics (3) (Varies by Dept.) Preps: EEL 3110 or EEL 3110B
BME 4311 Molecular Engineering I (3) (Fall Only) Preps: BME 3403
BME 4322 Cell and Tissue Eng. I (3) (Fall Only) Preps: MAC 2313, BME 3632 & BME 4100
BME 4230 Biomechanics of Cardio. Syst (3) (Spring Only) Preps: BME 3632, BME 3404, BME 4100

SCIENCE ELECTIVES (ALLOWED THREE MAX)

CHEM 2111 Organic Chemistry I (3) (Varies by Dept.) Preps: CHEM 2111
CHEM 3120 Analytic Chemistry I (3) (Varies by Dept.) Preps: CHEM 1046 & CHM 1046L Coreq: CHEM 3120
BCH 3033 General Biochemistry (3) (Varies by Dept.) Preps: CHEM 2111 & BSC 2010L
CHEM 4304 Biological Chemistry I (3) (Varies by Dept) Preps: CHEM 2111 & CHEM 2111L
CHEM 4307 Biological Chemistry II (3) (Varies by Dept) Preps: CHEM 3404

EE 3036 Theory of Signals and Systems (3) Preps: CHEM 2111 & CHEM 2111L

PCB 3063 Genetics (3) (Varies by Dept.) Preps: CHEM 1046 & PCB 3063
PCB 3063E Cell Biology (3) (Spring Only) Preps: PCB 3063 & CHEM 1046
PCB 4233 Immunology (3) (Varies by Dept.) Preps: PCB 3063

MCB 3020 General Microbiology (3) (Varies by Dept.) Preps: CHEM 2111, CHEM 2111, BSC 2100 & BSC 2111

ZOO 3517 Histology (3) (Varies by Dept.) Preps: BSC 2100, CHEM 2110 & CHEM 2111