**Biomedical Engineering Interdisciplinary Minor**

All students pursuing the Biomedical Engineering undergraduate minor are required to take introductory courses in Biomedical Engineering, a physiology course, and an upper division biomedical engineering course. Further, students will also complete elective courses in biosciences and engineering applications.

* Minimum of 21 credits total with a minimum of 12 upper division credits.

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|  | | BIOM 100 | Overview of Biomedical Engineering | 1 |  |
| **Pick 1** |  | BIOM 200 | Fundamentals of Biomedical Engineering | 2 | LIFE 102; MATH 160 |
| CBE 205 | Introduction to Biological Engineering | 3 | CBE 101; CBE 160; LIFE 102 |
| \*\*Note: students who have completed BIOM 101 will have BIOM 100 and either BIOM 200 or CBE 205 waived | | | | | |
| **Pick 1** |  | BMS 300 | Principles of Human Physiology | 4 | BZ 101 or BZ 110 or LIFE 102; CHEM 103 or CHEM 107 or CHEM 111 |
| BMS 301 | Human Gross Anatomy | 5 | BZ 110 or LIFE 102 |
| BMS 360 | Fundamentals of Physiology | 4 | BZ 110 or LIFE 102; CHEM 245 or CHEM 341 or concurrent registration |
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| **Pick 1** |  | BIOM 300 | Problem-Based Learning Biomedical Engineering Lab | 4 | BIOM 101 or BIOM 200 or (BIOM 100; CBE 205; MECH 262); MATH 340 or MATH 345 |
| BIOM 421 | Transport Phenomena in Biomedical Engineering | 3 | BMS 300; CBE 332 or MECH 344 |
| BIOM 422 | Quantitative Systems and Synthetic Biology | 3 | BIOM 421 or CBE 320 |
| BIOM/ECE 431 | Biomedical Signal and Image Processing | 3 | ECE 303; ECE311; PH142 (all with minimum grade of C) |
| BIOM 441 | Biomechanics and Biomaterials | 3 | CIVE 360; MECH 342; BMS 300 or conc.;  MECH 324 or conc.; MECH 331 or conc. |

* **NO** courses may double count in two categories.

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**6 Credits (minimum) Bioscience Electives**:

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| BC 351 | BIOM 476 A or B1 | BMS300 | BMS 420 | CHEM 341 or 345 | HES 476 | MIP 300 |
| BIOM 300 | BIOM 4951 | BMS 301 | BMS 430 | CHEM 344 | LIFE 102 | OT 215 |
| BIOM 421 | BIOM/MECH 525 | BMS 325 | BUS 2052 | HES 207 | LIFE 103 | PHIL 2052 |
| BIOM 422 | BIOM/CIVE 533 | BMS 345 | BZ 310 | HES 307 | LIFE 210 | PHIL 305E2 |
| BIOM/ECE 431 | BIOM/MECH 573 | BMS 360 | CHEM 113 | HES 403 | MGT 4202 | PSY 4562 |
| BIOM 441 | BIOM/MECH 574 | BMS 405 | CHEM 245 | HES 420 | MGT 4402 | PSY 4572 |

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| BIOM 300 | BIOM 441 | BIOM/MECH 573 | CBE 331 | CIVE 261 | ECE 341 | MECH 331 |
| BIOM 350A | BIOM 476A/B1 | BIOM/MECH 574 | CBE 332 | ECE 202 | MATH 340 | MECH 342 |
| BIOM 421 | BIOM 4951 | CBE 201 | CBE 406 | ECE 204 | MECH 237 | MECH 324 |
| BIOM 422 | BIOM/MECH 525 | CBE 210 | CBE 430 | ECE/STAT 3031 | MECH 262 | PH 2451 |
| BIOM/ECE 431 | BIOM/CIVE 533 | CBE 320 | CIVE 260 | ECE 331 | MECH 307 | STAT 3151 |

**5 Credits (minimum) Engineering Applications Electives:**

1 A maximum of 1 course may be selected from non-engineering and independent study/practicum courses; a maximum of 3 credits of BIOM 495 may be counted toward the minor.

2 A maximum of 1 course may be selected from non-technical courses.