

# BIOMEDICAL ENGINEERING CURRICULUM

## Bachelor of Science - Bioinstrumentation Track

NAME: \_\_\_\_\_ ID: \_\_\_\_\_ DATE: \_\_\_\_\_ Student Type: \_\_\_\_\_ Admit Term: \_\_\_\_\_

| 1st Year (Fall)   | Prerequisite                               | Cr | Semester | 1st Year (Spring)               | Prerequisite                    | Cr                   | Semester |
|---|--|----|----------|---------------------------------|---------------------------------|----------------------|----------|
| Chem 125 Chem I   | None                                       | 3  |          | Chem 126 Chem II                | Chem 125                        | 3                    |          |
| BME 111 - Intro to Phys   | None                                       | 3  |          | Chem 124 Chem Lab               | Chem 126                        | 1                    |          |
| Writ, Speak, Think I: HUM 101   | None                                       | 3  |          | FED 101                         | None                            | 2                    |          |
| Math 111 Calc I   | None                                       | 4  |          | Wri, Speak, Think II: HUM 102   | Hum 101                         | 3                    |          |
| Phys 111 Physics I  | Phys 111A, Math 111/*                      | 3  |          | Math 112 Calc II                | Math 111                        | 4                    |          |
| Phys 111A Phys I Lab  | Phys 111A*                                 | 1  |          | Phys 121 Physics II             | Phys 111, Phys 121A*, Math 112* | 3                    |          |
| BME 101- Freshman Seminar <b>F</b>  |  | 0  |          | Phys 121A Phys. II Lab          | Phys 111A                       | 1                    |          |
|   |  | 17 |          |                                 |                                 | 17                   |          |
| 2nd Year (Fall)   | Prerequisite                               | Cr | Semester | 2nd Year (Spring)               | Prerequisite                    | Cr                   | Semester |
| Math 211(13) Calc IIIA  | Math 112                                   | 3  |          | Math 222 Diff Equations         | Math 112                        | 4                    |          |
| Engr Prob & Stat: Math 279 (333)  | Math 112                                   | 2  |          | CHEM 243 Org Chem               | CHEM 126                        | 3                    |          |
| BME 301 - Electrical Fund <b>U</b>  | C in MATH 112, PHYS 121*                   | 3  |          | BME 302 - Mech Fund <b>U</b>    | C in MATH 112, PHYS 121         | 3                    |          |
| BME 303 - Biological Fund <b>F</b>  | C in BME 111, CHEM 126                     | 3  |          | BME 304 - Material Fund         | C in BME 111, CHEM 126          | 3                    |          |
| CS101 or BIOINF 135   | None                                       | 3  |          | 2xx GUR:ECON/EPS/ST             | None or HUM 102                 | 3                    |          |
| HUM/His 2XX   | Hum 102                                    | 3  |          | PE 1xx/2xx                      | None                            | 1                    |          |
|   |  | 17 |          |                                 |                                 | 17                   |          |
| 3rd Year (Fall)   | Prerequisite                               | Cr | Semester | 3rd Year (Spring)               | Prerequisite                    | Cr                   | Semester |
| MATH 337 Linear Algebra   | MATH 112                                   | 3  |          | HUM 3XX - Open Hum Elect        | HUM 102 & HUM/HIST 2x           | 3                    |          |
| ECE251 Digital Design   | PHYS121                                    | 3  |          | Engineering Track Elective      |                                 | 3                    |          |
| BME372 Biomed Electronics <b>F</b>  | BME301                                     | 3  |          | Non-engineering Track Elective  | VARIOUS                         | 3                    |          |
| BME 310 Biomed Computing  | C in BME 111&BME 301 , CS101               | 3  |          | BME333 Biomed Signals&Sys       | BME 310 & MATH 222              | 3                    |          |
| BME382 Eng Mod Phys Sys   | BME301,BME302, MATH222, C in BME           | 3  |          | BME373 BiomedElectr II <b>S</b> | BME 372                         | 3                    |          |
| 2xx GUR:ECON/EPS/ST   | None or HUM102                             | 3  |          | BME383 MeasLabPhysSys <b>U</b>  | BME 302, BME 310, & MATH 279    | 3                    |          |
|   |  | 18 |          |                                 |                                 | 18                   |          |
| 4th Year (Fall)   | Prerequisite                               | Cr | Semester | 4th Year (Spring)               | Prerequisite                    | Cr                   | Semester |
| 3XX HUM:LIT/HIST/PHIL/STS   | HUM 102 & HUM/HIST 2xx                     | 3  |          | Nonengineering Track Elective   | VARIOUS                         | 3                    |          |
| PE 1xx/2xx  | None                                       | 1  |          | Nonengineering Track Elective   | VARIOUS                         | 3                    |          |
| BME386 Bioinstrum Lab <b>F</b>  | BME 372, ECE 251, & MATH 279               | 3  |          | MGMT390 - Pric of Manageme      | Junior Standing                 | 3                    |          |
| BME489 Medical Instrument <b>F</b>  | BME 310, BME 372, & ECE 251                | 3  |          | BME 496 Capstone Design II      | BME 495                         | 3                    |          |
| BME 471 Princ of Med Imaging <b>F</b>   | C in BME310                                | 3  |          | Capstone HSS 4XX                | Senior Standing                 | 3                    |          |
| BME 495 Capstone Design I   | BME 372 OR MTSE 301 OR (MECH 236 & BME321) | 3  |          |                                 |                                 |                      |          |
|   |  | 16 |          |                                 |                                 | 15                   |          |
| Additional Coursework   | Prerequisite                               | Cr | Semester | Additional Coursework           | Prerequisite                    | Cr                   | Semester |
|   |  |    |          |                                 |                                 |                      |          |
|   |  |    |          |                                 |                                 |                      |          |
| All courses are offered Fall and Spring semester unless otherwise labeld: <b>(F-Fall only; S-Spring only; U-also offered Summer)</b>  |  |    |          |                                 |                                 | <b>TOTAL CREDITS</b> | 135      |
| Elective courses: BME 321, OPSE 301, OPSE 310, OPSE 410, ECE 431, BME 383, BME 420, BME 384, MTSE 301, BME or non-BME Graduate Engineering Courses with Advisors Approval, BME 420, Chem 244, Math 3xx or 4xx Except Math 371 or Math 346, Phys 350, Phys 451, BIOL 344 BME 493 and 494, UG honors research, BME 491, BME 492 |  |    |          |                                 |                                 |                      |          |