

North Carolina State University

Biological Engineering Curriculum (Effective 07-01-2021)

1 + 3 Program with UNC Asheville

FALL SEMESTER

SPRING SEMESTER

Freshman Year (UNC Asheville)

| | | | | | | | |
|------|-----|---------------------------------|-----------|------|-----|-----------------------------------|----------|
| MATH | 191 | Calculus I | 4 | MATH | 192 | Calculus II | 4 |
| LANG | 120 | Academic Writing & Crit Inquiry | 4 | ECON | 104 | Microecon. Princip. for Engineer. | 3 |
| CHEM | 132 | General Chemistry | 3 | CHEM | 233 | Fndns Inorganic Chemistry | 3 |
| CHEM | 111 | General Chemistry Lab | 1 | CHEM | 145 | Quant Chemistry Lab | 1 |
| E | 101 | Intro to Engr & Prob Solv | 1 | PHYS | 221 | Physics I | 4 |
| JEM | 123 | Intro to CAD for Mechat. Eng. | 1 | *** | *** | GEP Course | <u>3</u> |
| FYS | 178 | First Year Seminar | <u>3</u> | | | | 18 |
| | | | <u>17</u> | | | | |

Sophomore Year (NC State)

| | | | | | | | |
|-----|-----|--------------------------------|-----------|-----|-----|-------------------------------|----------|
| MA | 242 | Calculus III | 4 | BAE | 202 | Intro to BAE Methods (c) | 4 |
| PY | 208 | Physics for Engrs & Sci II | 3 | MAE | 208 | Engineering Dynamics | 3 |
| PY | 209 | Physics for Engrs & Sci II Lab | 1 | MAE | 201 | Engr Thermodynamics I | 3 |
| MAE | 206 | Engineering Statics (a) | 3 | MA | 341 | Appl Differential Equations I | 3 |
| E | 115 | Intro to Computing Environ | 1 | *** | *** | Bio/Chem Elective | 3 |
| BAE | 200 | Comp Meth in Biol Engr | 2 | HES | *** | Health & Exercise Studies | <u>1</u> |
| BIO | 181 | Intro Biology (b) | <u>4</u> | | | | 17 |
| | | | <u>18</u> | | | | |

Junior Year (NC State)

| | | | | | | | |
|-----|-----|----------------------|-----------|-----|-----|-----------------------------|----------|
| BAE | 302 | Transport Phenomena | 3 | BAE | *** | BAE Elective | 3 |
| BAE | *** | BAE Elective | 3 | MAE | 214 | Solid Mechanics (f) | 3 |
| MAE | 308 | Fluid Mechanics (d) | 3 | ST | 370 | Prob & Stat for Engrs | 3 |
| ENG | 331 | Comm Engr & Tech (e) | 3 | BAE | 401 | Instrumentation for Bio Sys | 3 |
| BAE | 305 | Biol Engr Circuits | <u>4</u> | BIO | *** | Adv. Biology Elective | <u>3</u> |
| | | | <u>16</u> | | | | 15 |

Senior Year (NC State)

| | | | | | | | |
|-----|-----|-----------------|-----------|-----|-----|------------------------------|----------|
| BAE | 451 | Engr Design I | 2 | BAE | 452 | Engr Design II | 2 |
| *** | *** | Engr Elective | 3 | BAE | *** | Advanced BAE Elective | 3 |
| *** | *** | Engr Elective | 3 | *** | *** | GEP Course | 2 |
| BAE | *** | BAE Elective | 3 | *** | *** | GEP Course | 3 |
| *** | *** | Ethics Elective | 3 | *** | *** | GEP Course | 3 |
| *** | *** | GEP Course | <u>3</u> | HES | *** | Phys Ed/Healthy Living Elec. | <u>1</u> |
| | | | <u>17</u> | | | | 14 |

- (a) or CE 214 (3)
- (b) or BIO 183 (4)
- (c) or BAE 203 & 204 (2&2)
- (d) or CE 382 (3)
- (e) or ENG 333 (3)
- (f) or CE 313 (3)