

## Undergraduate Curriculum in Biological Systems Engineering

### Food Engineering Option

2019-2020 Catalog

Total Credits 128

#### First Year (32 cr.)

| <b>Semester 1 (16 cr.)</b> |           | <b>Semester 2 (16 cr.)</b>   |   |           |                                       |
|----------------------------|-----------|------------------------------|---|-----------|---------------------------------------|
| R                          | Engr 101  | Orientation (FS)             | 1 | A B E 110 | Experiencing BSE (S)                  |
| 3                          | A B E 170 | Graphics and Design (FS)     | 3 | A B E 160 | Engineering Problems (FS)             |
| 4                          | Chem 167  | General Chemistry (FS)       | 4 | Math 166  | Calculus II (FSSS)                    |
| 1                          | Chem 167L | General Chemistry Lab (FS)   | 5 | Phys 221  | Classical Physics I (FSSS)            |
| 4                          | Math 165  | Calculus I (FSSS)            | 3 | Engl 250  | Writ/Oral/Vis/Elec Composition (FSSS) |
| 3                          | Engl 150  | Crit. Think. and Comm.(FSSS) |   |           |                                       |
| 1                          | Lib 160   | Information Literacy (FSSS)  |   |           |                                       |

#### Second Year (31 cr.)

| <b>Semester 3 (16 cr.)</b> |           | <b>Semester 4 (15 cr.)</b>          |   |           |                                       |
|----------------------------|-----------|-------------------------------------|---|-----------|---------------------------------------|
| 3                          | A B E 216 | Fund. Ag. and Biol. Engineering (F) | 2 | A B E 218 | Project Mgmt/Design Ag & Bio Engr (S) |
| 3                          | E M 274   | Statics of Engineering (FSSS)       | 1 | A B E 201 | Preparing for the Workplace (FS)      |
| 3                          | Biol 212  | Principles of Biology II (FSSS)     | 1 | A B E 273 | 2D Auto CAD (FS)                      |
| 4                          | →         | Chemistry Sequence I with Lab(FS)   | 3 | M E 231   | Thermodynamics (FSSS)                 |
| 3                          | →         | U. S. Diversity Elective(FSSS)      | 4 | Math 267  | Differential Equations (FSSS)         |
|                            |           |                                     | 4 | →         | Chemistry Sequence II with Lab(FS)    |

#### Third Year (32 cr.)

| <b>Semester 5 (16 cr.)</b> |            | <b>Semester 6 (16 cr.)</b>                 |   |           |                                      |
|----------------------------|------------|--|---|-----------|--------------------------------------|
| 3                          | A B E 316  | Applications and Systems Modeling (FS)     | 4 | A B E 363 | Electric Power and Electronics (FS)  |
| 3                          | E M 378    | Mechanics of Fluids (FS)                   | 3 | A B E 380 | Principles of BSE (S)                |
| 3                          | Micro 302  | Biology of Microorganisms (FSSS)           | 3 | A B E 469 | Grain Processing and Handling (S)    |
| 1                          | Micro 302L | Microbiology lab (FSSS)                    | 3 | E M 324   | Mechanics of Materials (FSSS)        |
| 3                          | STAT 305   | Engineering Statistics (FSSS)              | 3 | I E 305   | Engineering Economic Analysis (FSSS) |
| 3                          | →          | International Perspectives Elective (FSSS) |   |           |                                      |

#### Fourth Year (33 cr.)

| <b>Semester 7 (17 cr.)</b> |           | <b>Semester 8 (16 cr.)</b>              |   |           |                                      |
|----------------------------|-----------|---|---|-----------|--------------------------------------|
| 2                          | A B E 415 | Ag & Biosystems Engr. Design I (FS)     | 2 | A B E 416 | Ag & Biosystems Engr. Design II (FS) |
| 3                          | A B E 404 | Instrumentation for Ag and Bio Engr (F) | 3 | A B E 451 | Food and Bioprocess Engineering (S)  |
| 3                          | A B E 480 | Engineering Analysis of Bio Systems (F) | 1 | E M 327   | Mechanics of Materials Lab (FSSS)    |
| 3                          | FSHN 420  | Food Microbiology (F)                   | 4 | M E 436   | Heat Transfer (FSSS)                 |
| 3                          | →         | Food Elective                           | 3 | →         | SS/H Elective (FSSS)                 |
| 3                          | →         | Communication Elective (FSSS)           | 3 | →         | SS/H Elective (FSSS)                 |

*\*Please check the current catalog and Schedule of Classes for most recent offerings*