Biosystems engineers are trained in biological, environmental and engineering sciences and challenged to improve the sustainability of production systems, decrease or eliminate environmental hazards and preserve natural resources. Biosystems engineers devise practical, efficient solutions for producing, storing, transporting, processing and packaging biological and agricultural products. They solve problems related to systems, processes and machines that interact with humans, plants, animals, microorganisms and biological materials. They also develop solutions for responsible, alternative uses of biological products, byproducts and wastes and of our natural resources—soil, water, air and energy.

Freshman Year

**FALL SEMESTER**

- EGR 101 - ENGINEERING EXPLORATION I - 1
- EGR 102 - FUNDAMENTALS OF ENGINEERING COMPUTING - 2
- CHE 105 - GENERAL COLLEGE CHEMISTRY I - 4
- UK Core - Comp. & Comm. I - 3
- MA 113 - CALCULUS I - 4

**SPRING SEMESTER**

- EGR 103 - ENGINEERING EXPLORATION II - 2
- MA 114 - CALCULUS II - 4
- UK Core - Comp. & Comm. II - 3
- PHY 231 - GENERAL UNIVERSITY PHYSICS - 4
- PHY 241 - GENERAL UNIVERSITY PHYSICS LABORATORY - 1
- UK Core (3 hours) - 3

**TOTAL HOURS: 14**

Total Freshman Hours: 31

Sophomore Year

**FALL SEMESTER**

- BAE 200 - PRINCIPLES OF BIOSYSTEMS ENGINEERING - 3
- BIO 148 - INTRODUCTORY BIOLOGY I - 3
- MA 213 - CALCULUS III - 4
- PHY 232 - GENERAL UNIVERSITY PHYSICS - 4
- PHY 242 - GENERAL UNIVERSITY PHYSICS LABORATORY - 1
- CE 106 - COMPUTER GRAPHICS AND COMMUNICATION - 3

**SPRING SEMESTER**

- BAE 202 - PROBABILITY AND STATISTICS FOR BIOSYSTEMS - 3
- MA 214 - CALCULUS IV - 3
- ME 220 - ENGINEERING THERMODYNAMICS I - 3
- CHE 107 - GENERAL COLLEGE CHEMISTRY II - 3
- EM 221 - STATICS - 3

**TOTAL HOURS: 15**

Total Sophomore Hours: 33

Junior Year

**FALL SEMESTER**

- BAE 301 - ECONOMIC ANALYSIS OF BIOSYSTEMS - 2
- EE 305 - ELECTRICAL CIRCUITS AND ELECTRONICS - 3
- CE 341 - INTRODUCTION TO FLUID MECHANICS - 4
- EM 313 - DYNAMICS - 3

**SPRING SEMESTER**

- BAE 305 - DC CIRCUITS AND MICROELECTRONICS - 3
- EM 302 - MECHANICS OF DEFORMABLE SOLIDS - 3
- Biosystems Core Elective - 3
- ME 325 - ELEMENTS OF HEAT TRANSFER - 3
### Senior Year

#### FALL SEMESTER
- BAE 400 - SENIOR SEMINAR - **1**
- BAE 402 - BIOSYSTEMS ENGINEERING DESIGN I - **2**
- Biosyst Core Elective --OR-- Technical Elective - **3**
- Biosyst Core Elective --OR-- Technical Elective - **3**
- Biological Science Elective - **3**

**TOTAL HOURS: 15**

#### SPRING SEMESTER
- BAE 403 - BIOSYSTEMS ENGINEERING DESIGN II - **2**
- ME 340 - INTRODUCTION TO MECHANICAL SYSTEMS - **3**
- Biosyst Core Elective --OR-- Technical Elective - **3**
- Biosyst Core Elective --OR-- Technical Elective - **3**
- Supporting Elective - **3**
- UK Core (3 hours) - **3**

**TOTAL HOURS: 17**

**Total Senior Hours: 32**

**Total Minimum hours Required for Degree: 132 hours**

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