

Biosystems Engineering (BSEN)

Freshman

| Fall | Hours | Spring | Hours |
|------------------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------|-----------|
| CHEM 1030 Fundamentals Chemistry I | | 3 PHYS 1600 Engineering Physics I | 4 |
| CHEM 1031 Fundamental Chemistry I Laboratory | | 1 ENGL 1120 English Composition II | 3 |
| ENGR 1100 Engineering Orientation | | 0 ENGR 1110 Introduction to Engineering | 2 |
| MATH 1610 Calculus I | | 4 HIST 1220 Technology And Civilization II or 1020 World History II ¹ | 3 |
| HIST 1210 Technology and Civilization I or 1010 World History I ¹ | | 3 MATH 1620 Calculus II | 4 |
| ENGL 1100 English Composition I | | 3 | |
| COMP 1220 Introduction to Computing with Python or 1230 Introduction to Computing with MATLAB | | 2 | |
| | | 16 | 16 |

Sophomore

| Fall | Hours | Spring | Hours |
|-------------------------------------------------------------|-------|---------------------------------------------------------------------------|-----------|
| BIOL 1020 Principles of Biology | | 3 BIOL 1030 Organismal Biology | 3 |
| BIOL 1021 Principles of Biology Laboratory | | 1 BIOL 1031 Organismal Biology Laboratory | 1 |
| ENGR 2010 Thermodynamics | | 3 ENGR 2070 Mechanics of Materials | 3 |
| ENGR 2050 Statics | | 3 ENGR 2350 Dynamics | 3 |
| MATH 2630 Calculus III | | 4 MATH 2650 Linear Differential Equations | 3 |
| BSEN 2210 Engineering Methods for Biological Systems | | 2 BSEN 2240 Biological and Bioenvironmental Heat and Mass Transfer | 3 |
| | | 16 | 16 |

Junior

| Fall | Hours | Spring | Hours |
|------------------------------------------------------------|-------|------------------------------------------------------------------------------------------------------------------|-----------|
| CSES 2040 Basic Soil Science | | 4 Social Science Core ² | 3 |
| CHEM 1040 Fundamental Chemistry II | | 3 STAT 3010 Statistics for Engineers and Scientists or 2510 Statistics for Biological and Health Sciences | 3 |
| BSEN 3310 Hydraulic Transport in Biological Systems | | 4 BSEN 3230 Natural Resource Conservation Engineering | 3 |
| BIOL 3200 General Microbiology | | 3 BSEN 3240 Process Engineering in Biosystems | 3 |
| BIOL 3201 General Microbiology Laboratory | | 1 BSEN 3610 Instrumentation and Controls for Biological Systems | 3 |
| | | 15 | 15 |

Senior

| Fall | Hours | Spring | Hours |
|------------------------------------------------------------------|-------|------------------------------------------------------|----------|
| BSEN 3210 Mechanical Power for Biosystems | | 3 Literature Core ¹ | 3 |
| BSEN 4210 Irrigation System Design | | 3 Fine Arts Core | 3 |
| BSEN 4300 Professional Practice in Biosystems Engineering | | 2 BSEN 4310 Engineering Design for Biosystems | 3 |

2 Biosystems Engineering (BSEN)

| | | |
|-----------------------------------------------------------------|--------------------------------------------------------------------|-----------|
| PHIL 1040 Business Ethics <i>or</i> 1020 Introduction to Ethics | 3 BSEN 5230 Waste Management and Utilization for Biosystems | 3 |
| BSEN 5220 Geospatial Technologies in Biosystems | 3 Biosystems Engr Elective | 3 |
| Biosystems Engr Elective | 3 UNIV 4AA0 Achieve the Creed | 0 |
| <hr/> | | |
| | 17 | 15 |

Total Hours: 126

¹ The AU Bulletin lists the University Core Curriculum requirements for students in the College of Engineering. Students must complete a sequence in either Literature or History. Biosystems Engineering should complete the World History or Technology and Civilization Course sequence to ensure that all SLOs are met by students by the time of graduation.

² ECON 2020 preferred.
Biosystems Electives: See adviser for approved course listing.