



BIOSYSTEMS ENGINEERING

PRE-MED OPTION

Course Plan
2023-2024
125 Hours

Year 1

16 Credit Hours

BAE 1012 **BAE 1022**
Intro Biosystems
2 Hours

MATH 2144 **MATH 2153**
Calculus 1
4 Hours
Note 1

PHYS 2014
BAE 2013
ENSC 2113
ENSC 2213

BIOL 1113 & BIOL 1111 **BAE 2013**
4 Hours

BAE 3033
MICR 2123

HIST 1103
American Hist
3 Hours
Note 2

ENGL 1113 **ENGL 1213**
Engl Comp 1
3 Hours
Note 3, 4

17 Credit Hours

BAE 1012 **BAE 1022**
Exper Methods
2 Hours

MATH 2144 **MATH 2153** **MATH 2163**
Calculus II
3 Hours

IEM 3503

MATH 2144 **PHYS 2014** **BAE 3033**
Gen. Physics I
4 Hours

PHYS 2114
ENSC 2213
ENSC 2113

Chem 1314 **CHEM 1515** **ENSC 2213**
Chemistry II
5 Hours

CHEM 3053
MICR 2123

ENGL 1113 **ENGL 1213**
Engl Comp II
3 Hours
Note 5

Year 2

16 Credit Hours

BIOL 1113 & BIOL 1111 **BAE 2013**
MATH 2144 Modeling
3 Hours

MATH 2153 **MATH 2163** **STAT 4033 or STAT 4073**
Calculus III
3 Hours

PHYS 2014 **PHYS 2114** **ENSC 2613**
Gen. Physics II
4 Hours

MATH 2144 **ENSC 2213** **BAE 3213**
PHYS 2014 Thermodynamics
CHEM 1414 3 Hours

MATH 2144 **ENSC 2113** **ENSC 2143**
PHYS 2014 Statics
ENSC 3233 3 Hours

17 Credit Hours

MATH 2144 **BAE 3033**
BIOL 1113 & BIOL 1111 Biomaterials
PHYS 2014 3 Hours

MATH 2153 **MATH 2233**
Diff Equations
3 Hours

ENGR 1332
Engr Design
3 Hours

MATH 2153 **ENSC 3233** **BAE 3013**
ENSC 2113 Fluid Mech
3 Hours

BAE 3213

MATH 2153 **ENSC 2613** **BAE 3023**
PHYS 2114 Elec. Science
3 Hours

BAE 3213

CHEM 1515 **CHEM 3053** **CHEM 3153**
Organic Chem
3 Hours

BIOC 3653

Other Requirements:

- A minimum 2.0 Technical GPA. The Technical GPA is calculated from all BAE prefixes or substitutions to BAE courses.
- Students are required to complete the Fundamentals of Engineering (FE) exam prior to graduation.
- A minimum of 40 semester credit hours and 100 grade points must be earned in courses numbered 3000 or above.
- A 2.00 GPA or higher in upper-division hours.

Patterned = General Education Course

Shaded = Course requires a grade of C or above

Course No.
Course Name
of Hours
See Note #

Subsequent Courses

Prerequisites

NOTES:

- 1) MATH 2144 needs to be preceded with a minimum score of 75 on the Math Placement Test or with MATH 1513 and MATH 1813, respectively.
- 2) HIST 1103 can be replaced with HIST 1483 (H) or HIST 1493 (DH)
- 3) See Academic Regulation 3.5 (<http://catalog.okstate.edu/university-academic-regulations/#english-composition>)
- 4) ENGL 1113 can be replaced with ENGL 1313 Critical Analysis and Writing I.
- 5) ENGL 1213 can be replaced with ENGL 1413 or ENGL 3323.
- 6) At least 6 hours designated "H", 3 hours designated "S", and 3 hours designated "H", "S", "A" or "N" (A total of 12 hours). Of these, 3 hours need to meet the International Dimension "I" and 3 hours need to meet the Diversity Component "D".
- 7) BAE 4001 and BAE 4012 are to be taken concurrently



BIOSYSTEMS ENGINEERING PRE-MED OPTION

Course Plan
2023-2024
125 Hours

Year 3

Year 4

15 Credit Hours

14 Credit Hours

15 Credit Hours

15 Credit Hours

"H", "I", "D"
Course

3 Hours
Note 6

BAE 3023
Inst. & Ctrls

3 Hours

BAE 4012

*Completion
or
Concurrent
Enrollment*

BAE 4001
Prof. Practice

1 Hour

BAE 4023

BAE 4000
Course

3 Hours

ENSC 2143
Strength of Mat'l

3 Hours

BAE 4012

BAE 3013
Heat/Mass Trans

3 Hours

BAE 4012

BAE 4012
Engr. Design I

2 Hours

BAE 4023

BAE 4023
Engr. Design II

3 Hours

BAE 4001
BAE 4012

ENSC 2113

**BIOL 1113 &
BIOL 1111
CHEM 1414**

MICR 2123
Microbiology

3 Hours

**MATH 2233
ENSC 3233**

**ENSC 2213
ENSC 2613
ENSC 3233**

BAE 3213
Energy & Power

3 Hours

BAE 4012

BAE 4000
Course

2 Hours

MATH 2163

**STAT 4033 or
STAT 4073**
Engr Statistics

CHEM 3153
Organic Chem II

3 Hours

CHEM 3112

CHEM 3053

BIOC 3653
Survey of Bio
Chemistry

3 Hours

**BIOL 1113
BIOL 1111**

BIOL 1604
Animal Biology

4 Hours

MATH 2153

IEM 3503
Engr Econ

3 Hours

POLS 1113
American Gov't

3 Hours

**Completion
or
Concurrent
Enrollment**
CHEM 3153

CHEM 3112
Organic Chem
Lab

2 Hours

"S", "I", "D"
Course

3 Hours
Note 6

"A", "H", "N"
or "S"

3 Hours
Note 6

"H", "I", "D"
Course

3 Hours
Note 6

Patterned = General Education Course

Shaded = Course requires a grade of C or above

Course No.
Course Name
of Hours
See Note #

**Subsequent
Courses**

Prerequisites

Master's Programs:

Criteria for admission to the Graduate College to pursue the Master of Science include:

1. Receive a B.S. degree from an accredited institution
 2. Academic performance in undergraduate work at a level that indicates a high probability of success in a graduate program requiring a 3.0/4.0 minimum grade point average
- Or further information, contact the School or the Office of the Dean of Engineering.

A flexible study plan is designed to meet each student's individual goals.

Additional State/OSU Requirements:

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one fourth of hours earned by correspondence; 8 transfer correspondence hours.
- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.
- Degrees that follow this plan must be completed by the end of Summer 2029.