



BIOSYSTEMS ENGINEERING

BIOPROCESSING & FOOD PROCESSING OPTION

Course Plan
2022-2023
124 Hours

Year 1

16 Credit Hours

BAE 1012

Intro Biosystems
2 Hours

BAE 1022

Exper Methods
2 Hours

MATH 2144

Calculus 1
4 Hours
Note 1

MATH 2153
PHYS 2014
BAE 2013
ENSC 2113
ENSC 2213

BIOL 1113/1111

Intro Biology
4 Hours

BAE 2013
BAE 3033

HIST 1103

American Hist
3 Hours
Note 2

ENGL 1113

Engl Comp 1
3 Hours
Note 3, 4

ENGL 1213

16 Credit Hours

BAE 1022

Exper Methods
2 Hours

BAE 1012

MATH 2153

Calculus II
3 Hours

MATH 2144

MATH 2163
IEM 3503

PHYS 2014

Gen. Physics I
4 Hours

MATH 2144

BAE 3033
PHYS 2114
ENSC 2213
ENSC 2113

CHEM 1414

Gen Chemistry
4 Hours

ENSC 2213

ENGL 1213

Engl Comp II
3 Hours
Note 5

ENGL 1113

Year 2

16 Credit Hours

BIOL 1113/1111
MATH 2144

BAE 2013
Modeling
3 Hours

MATH 2163

Calculus III
3 Hours

MATH 2153

STAT 4033
or **4073**

PHYS 2114

Gen. Physics II
4 Hours

PHYS 2014

ENSC 2613

ENSC 2213

Thermodynamics
3 Hours

MATH 2144
PHYS 2014
CHEM 1414

BAE 3213
BAE 4413

ENSC 2113

Statics
3 Hours

MATH 2144
PHYS 2014

ENSC 2143
ENSC 3233

17 Credit Hours

MATH 2144
BIOL 1113/1111
PHYS 2014

BAE 3033
Biomaterials
3 Hours

MATH 2233

Diff Equations
3 Hours

MATH 2153

ENGR 1332

Engr Design
2 Hours

ENSC 3233

Fluid Mech
3 Hours

MATH 2153
ENSC 2113

ENSC 2613

Elec. Science
3 Hours

MATH 2153
PHYS 2114

POLS 1113

American Gov't
3 Hours

BAE 3013
BAE 3213
BAE 4283
BAE 4413

BAE 3023
BAE 3213

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

BIOPROCESSING & FOOD PROCESSING OPTION

Course Plan
2022-2023
124 Hours

Year 3

Year 4

15 Credit Hours

16 Credit Hours

14 Credit Hours

14 Credit Hours

"S", "I", "D"

3 Hours
Note 6

BAE 2143

Strength of Mat'l

3 Hours

BAE 4012

**STAT 4033 or
STAT 4073**

Engr Statistics

3 Hours

BAE 4012

"H", "I", "D"

3 Hours
Note 6

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

3 Hours
Note 6

BAE 3023

Inst. & Ctrls

3 Hours

BAE 4012

BAE 3013

Heat/Mass Trans

3 Hours

BAE 4012
BAE 4413

BAE 3213

Energy & Power

3 Hours

BAE 4012

BIOC 2344

Ap. Biomolecules

4 Hours

BAE 4012

IEM 3503

Engr Econ

3 Hours

BAE 4012

Patterned = General Education Course

Shaded = Course requires a grade of C or above

Course No.

Course Name

of Hours

See Note #

Subsequent Courses

Prerequisites

Completion or Concurrent Enrollment

Completion or Concurrent Enrollment

BAE 4001

Prof. Practice

1 Hour

BAE 4023

BAE 4012

Engr. Design I

2 Hours

BAE 4023

MICR 2123

Microbiology

3 Hours

BAE 4023

MICR 2132

Microbiology Lab

2 Hours

BAE 4023

ENGR or SCI ELECTIVE

3 Hours

"H", "I", "D"

3 Hours
Note 6

**BAE 3013
ENSC 3233
ENSC 2213**

**BAE 4001
BAE 4012**

**BAE 3013
ENSC 3233**

BAE 4413

Food Engineering

3 Hours

BAE 4023

Engr. Design II

3 Hours

BAE 4283

Bioprocessing

3 Hours

ENGR or SCI ELECTIVE

3 Hours

ENGR or SCI ELECTIVE

2 Hours

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 2027.