



BIOSYSTEMS ENGINEERING

MACHINE SYSTEMS AND AGRICULTURAL ENGINEERING OPTION

Course Plan
2025-2026
124 Hours

Year 1

16 Credit Hours

BAE 1011
Intro to
Biosystems
1 Hour
Note 1

UNIV 1111
First Yr. Seminar
1 Hour

Prerequisites:
C or better in
one of the
following-
MATH 1613
MATH 1715
MATH 1813

MATH 2144
Calculus I
4 Hours
Note 2

MATH 2153
PHYS 2014
BAE 3033
ENSC 2113
ENSC 2213

CHEM 1414
Gen Chemistry
4 Hours

ENSC 2213
ENSC 3313
SOIL 2124

HIST 1103
American Hist
3 Hours
Note 3

ENGL 1113
Engl Comp 1
3 Hours
Note 4

ENGL 1213

14 Credit Hours

BAE 1022
Exper Methods
2 Hours
Note 1

MATH 2144
PHYS 2014
Univ. Physics I
4 Hours

BAE 3033
ENSC 2213
ENSC 2113

MATH 2144
MATH 2153
Calculus II
3 Hours

MATH 2163
MATH 2233
IEM 3503
ENSC 2613

ENGR 1332
Engr Design
2 Hours

ENGL 1113
ENGL 1213
Engl Comp II
3 Hours
Note 4

Year 2

16 Credit Hours

BAE 2013
Comp Methods
3 Hours
Note 1

MATH 2144
PHYS 2014
CHEM 1414

ENSC 2213
Thermodynamics
3 Hours

BAE 3213

MATH 2153
MATH 2163
Calculus III
3 Hours

STAT 4033 or
STAT 4073

MATH 2144
PHYS 2014

ENSC 2113
Statics
3 Hours

ENSC 2123
ENSC 2143
ENSC 3233

BIOL 1113 & BIOL
1111 or BIOL 1114
or PBIO 1404
4 Hours

BAE 3033

16 Credit Hours

BIOL 1113 & BIOL
1111 or
BIOL 1114 or
PBIO 1404
MATH 2144
PHYS 2014

BAE 3033
Biomaterials
3 Hours

MATH 2153
ENSC 2113

ENSC 3233
Fluid Mech
3 Hours

BAE 3013
BAE 3213
BAE 3223

MATH 2153
MATH 2233
Diff Equations
3 Hours

BAE 3013
BAE 3023

ENSC 2113
ENSC 2143
Strength of Mat'l
3 Hours

BAE 4012
BAE 4224

Concurrent
Enrollment in
ENSC 2143

ENSC 2141
Strength's Lab
1 Hour

Humanities
Course (H)
3 Hours
Note 5

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

Prerequisites

Course No.
Course Name
of Hours
See Note #

Subsequent
Courses

NOTES: (F)-offered in Fall, (SP)-offered in Spring

- 1) BAE 1011, BAE 1022 and BAE 2013 can often be substituted for students transferring into the department internally or externally from another institution. Please contact the department for more information.
- 2) The prerequisite for MATH 2144 is to score a minimum of 75 on the Math Placement Test or by earning a minimum grade of "C" in MATH 1813 or MATH 1715 or MATH 1613.
- 3) HIST 1103 can be replaced with HIST 1483 (H) or HIST 1493 (DH).
- 4) See Academic Regulation 3.5 (<http://catalog.okstate.edu/university-academic-regulations/#english-composition>).
- 5) Additional general education credit hours are required to meet the total 40-hour minimum of general education credit. Students must take 3 hours of credit in courses designated "G," 3 hours of credit in courses designated "S," 3 hours of credit in courses designated "D," and 6 hours of credit in courses designated "H." Additionally, students must take a course designated "Q," "H," "N," "S," "D," "G," or "F." There will be courses that can be paired, for example (DH) courses, that can be used to meet multiple general education designation hour requirements.
- 6) Select one of the following: PLNT 4443 or PLNT 4543 (F), HORT 4963 (F), ENVR 4033 (SP), MICR 2123 (F, SP), BIOL 3204 (F, SP). Some courses may require specific prerequisites.
- 7) Select one of the following labs: ENSC 2411 (F,SP), ENSC 2611 (F,SP), ENSC 3231 (F,SP), ENSC 3431 (F,SP), ENGR 2421 (F,SP).
- 8) BAE 4001 and BAE 4012 are to be taken concurrently.
- 9) Any upper division engineering, BAE, AST and/or science elective is to be selected from an approved list and approved by an advisor.

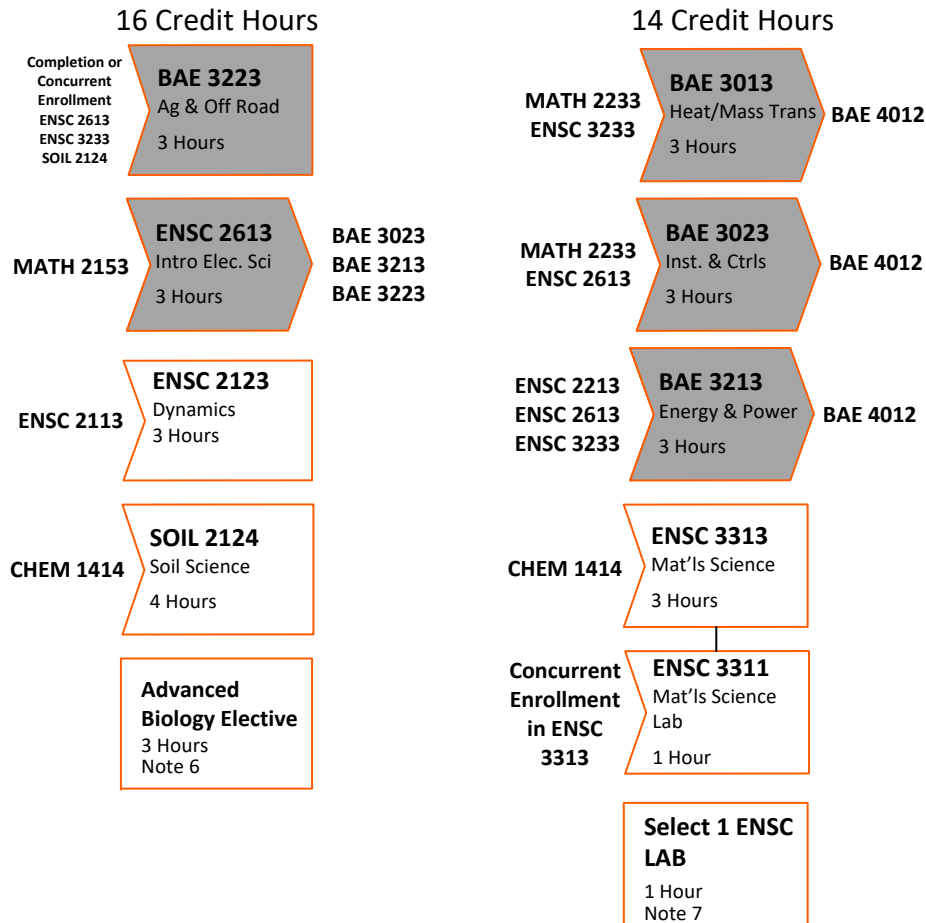


BIOSYSTEMS ENGINEERING

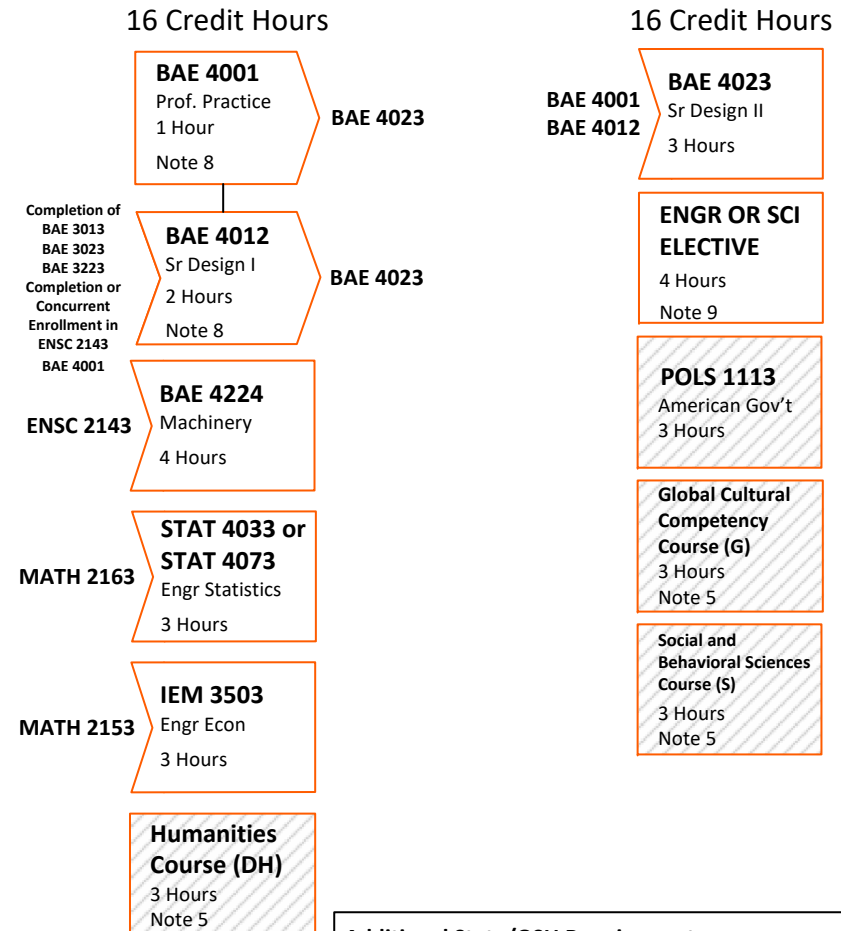
MACHINE SYSTEMS AND AGRICULTURAL ENGINEERING OPTION

Course Plan
2025-2026
124 Hours

Year 3



Year 4



Patterned = General Education Course

Shaded = Course requires a grade of C or above

Course No.
Course Name
of Hours
See Note #

Subsequent Courses

Prerequisites

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 2031.