

AEROSPACE ENGINEERING, BSAE

Requirements for Students Matriculating in or before Academic Year 2021-2022. Learn more about University Academic Regulation 3.1 (<http://catalog.okstate.edu/university-academic-regulations/#matriculation>).

Minimum Overall Grade Point Average: 2.00

Total Hours: 123

Code	Title	Hours
General Education Requirements		
All General Education coursework requirements are satisfied upon completion of this degree plan		
<i>English Composition</i>		
See Academic Regulation 3.5 (http://catalog.okstate.edu/university-academic-regulations/#english-composition)		
ENGL 1113	Composition I ¹	3
or ENGL 1313	Critical Analysis and Writing I	
Select one of the following:		3
ENGL 1213	Composition II ¹	
ENGL 1413	Critical Analysis and Writing II ¹	
ENGL 3323	Technical Writing ¹	
<i>American History & Government</i>		
Select one of the following:		3
HIST 1103	Survey of American History	
HIST 1483	American History to 1865 (H)	
HIST 1493	American History Since 1865 (DH)	
POLS 1113	American Government	3
<i>Analytical & Quantitative Thought (A)</i>		
MATH 2144	Calculus I (A) ¹	4
MATH 2153	Calculus II (A) ¹	3
MATH 2163	Calculus III ¹	3
MATH 2233	Differential Equations ¹	3
<i>Humanities (H)</i>		
Courses designated (H)		6
<i>Natural Sciences (N)</i>		
Must include one Laboratory Science (L) course		
CHEM 1414	General Chemistry for Engineers (LN) ¹	4
or CHEM 1515	Chemistry II (LN)	
PHYS 2014	University Physics I (LN) ¹	4
<i>Social & Behavioral Sciences (S)</i>		
Course designated (S)		3
Hours Subtotal		42
Diversity (D) & International Dimension (I)		
May be completed in any part of the degree plan		
Select at least one Diversity (D) course		
Select at least one International Dimension (I) course		
College/Departmental Requirements		
<i>Basic Science</i>		
PHYS 2114	University Physics II (LN) ¹	4
Select one of the following:		3

ASTR 1013	The Solar System (N)	
ASTR 1023	Stars, Galaxies, Universe (N)	
BIOL 1114	Introductory Biology (LN)	
CHEM 3053	Organic Chemistry I	
GEOL 1114	Physical Geology (LN)	
GEOL 3413	Petroleum Geology for Engineers	
PHYS 3213	Optics	
PHYS 3313	Introduction to Semiconductor Device Physics	
PHYS 3713	Modern Physics	
<i>Engineering and Engineering Science</i>		
ENGR 1111	Introduction to Engineering ¹	1
ENGR 1332	Engineering Design with CAD for MAE ¹	2
ENGR 1412	Introductory Engineering Computer Programming ¹	2
ENGR 2421	Engineering Data Acquisition Controls Lab ¹	1
ENSC 2113	Statics ¹	3
ENSC 2123	Elementary Dynamics ¹	3
ENSC 2141	Strength of Materials Lab ¹	1
ENSC 2143	Strength of Materials ¹	3
ENSC 2213	Thermodynamics ¹	3
ENSC 2613	Introduction to Electrical Science ¹	3
Hours Subtotal		29
Upper Division Major Requirements ²		
ENSC 3231	Fluids and Hydraulics Lab	1
ENSC 3313	Materials Science	3
MAE 3013	Engineering Analysis and Methods I	3
MAE 3153	Introduction to MAE Design	3
MAE 3253	Applied Aerodynamics and Performance	3
MAE 3293	Fundamentals of Aerodynamics	3
MAE 3333	Fundamental Fluid Dynamics	3
MAE 3324	Mechanical Design I	4
MAE 3403	Computer Methods in Analysis and Design	3
MAE 3724	Dynamic Systems Analysis and Introduction to Control	4
MAE 4223	Aerospace Engineering Laboratory	3
MAE 4243	Aerospace Propulsion and Power	3
MAE 4283	Aerospace Vehicle Stability and Control	3
MAE 4374	Aerospace System Design	4
MAE 4513	Aerospace Structures	3
IEM 3503	Engineering Economic Analysis	3
<i>Upper Division Elective Requirements</i>		
3 hours of technical elective to be selected from the following list:		3
3000-level or above from:		
BAE, CHE, CIVE, ECEN, IEM, MAE, PETE engineering		
BCOM 3223	Oral Communication	
MATH 3303	Advanced Perspectives on Functions and Modeling for Secondary Teachers	
MGMT 3133	Developing Leadership Skills	
PHIL 3803	Business Ethics (H)	
PHIL 3833	Biomedical Ethics (H)	
4000-level or above courses from:		

ECON 4113	Energy Economics: Traditional and Renewable Energy Markets
MGMT 4073	Management and Ethical Leadership
MGMT 4533	Leadership Dynamics
Or from MATH, MET, or STAT	
Hours Subtotal	52
Total Hours	123

- ¹ MAE requires grades of "C" or better in all prerequisite courses, and their prerequisites.
- ² Grades of "C" or higher in all Upper Division Major Requirements courses

Graduation Requirements

1. A minimum Technical GPA of 2.00. The Technical GPA is calculated from all courses in the curriculum with a prefix belonging to the degree program, or substitutions for these courses.
2. A "C" or better is required in each course that is designated with footnote 1 and footnote 2. In cases where there is a choice on a course that has footnote 1, the footnote applies to both courses.
3. The major engineering design experience, capstone course, is satisfied by MAE 4374 Aerospace System Design.

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.