

Suggested Curriculum

This should be used as a **guide** only. Semester offerings and pre-requisites are subject to change.

Autumn	Spring
ENGR 1100.01 (Engineering Survey) 1 hr	MATH 1172 (Engineering Math A)..... 5 hr
MATH 1151 (Calculus I) 5 hr	Prereq: A grade of C- or above in 1114, 1151, 1156, 1161.xx, 152.xx, 161.xx, or 161.01H
Prereq: Math Placement Level L, or C- or above in 1148 and 1149, or in 1144, 1150	PHYSICS 1251 (E&M, Optics, Modern Phys)..... 5 hr
PHYSICS 1250 (Mechanics, Thermal, Waves)..... 5 hr	Prereq: 1250, 1250H, or 1260; and Math 1141 or 1151 or above; or permission of instructor. Concur: Math 1152, 1161, 1172, 1181H, or 4181H
Prereq or concur: Math 1141, 1151, 1156, 1161, 1181H, or 4181H	ENGR 1182 (Fundamentals of Engr 2)..... 2 hr
ENGR 1181 (Fundamentals of Engr 1)..... 2 hr	Prereq: 1181.01 or 1181.02 or 1281.01H or 1281.02H or 1281.03H. Prereq or Concur: Math 1141; or Math 1151 or above
Prereq or concur: Math 1140 or 1141; or Math 1150 or above	ENGR 1221 (Intro to MATLAB)†..... 2 hr
General Education 3 hr	Prereq: Engr 1181.01 or 1181.02 or 1187 or 1281.01H or 1281.02H or 1281.03H
	Launch Seminar (GenEd 1201)..... 1 hr
MATH 2173 (Engineering Math B)..... 3 hr	MATH 2174 (Lin Alg & Diff Eq)..... 3 hr
Prereq: 1172 or 1544	Prereq: 2173
CHEM 1250 (Gen Chem for Engineers) ^..... 4 hr	AEROENG 3520* (Flight Vehicle Dynamics)..... 3 hr
Prereq: One unit of high school chemistry, and Math Placement Level L or M; or a grade of C- or above in Math 1130, 1131, 1148, or 1150, or above	Prereq: 2200. Pre-req or concur: MECHENG 2030
AEROENG 2200 (Intro to AAE 1)..... 4 hr	AEROENG 2405* (Thermodynamics)..... 3 hr
Prereq: Physics 1250 or 1260; and Math 1152, 1161, 1172, or 1181H, or a grade of C- or above in Math 1544. Prereq or concur: Math 2173, 2153, or 2162	Prereq: 2200
MECHENG 2040 (Statics & Mechanics)..... 4 hr	MECHENG 2030 (Dynamics)..... 3 hr
Prereq: Engr 1181 or 1187 or 1281H, and Physics 1250 or 1260, and Math 1152 or 1161 or 1172 or 1181H	Prereq: 2010 or 2010H or 2040
General Education 3 hr	ECE 2300 (Circuits)..... 3 hr
	Prereq: Physics 1251 or 1261, and Math 1172 or 1544 or 2153 or 2162.01 or 2162.02 or 2182H or 4182H, and CPHR 2.0 or above
AEROENG 3521* (Flight Vehicle Control)..... 3 hr	AEROENG 3522* (Fundamental Astronautics)..... 3 hr
Prereq: 3520	Prereq: 3520 and 2405
AEROENG 3560* (Fluids I)..... 3 hr	AEROENG 3543* (Flight Vehicle Structure 2)..... 3 hr
Prereq: 3520 and 2405; and Math 2174, or 2568 and 2415	Prereq: 3542
AEROENG 3542* (Flight Vehicle Structure 1)..... 3 hr	AEROENG 3570* (Gasdynamics)..... 3 hr
Prereq: 3520 and MechEng 2030 and 2040, or 3520 and MechEng 2010 and 2020 and 2030	Prereq: 3560
AEROENG 3581* (Numerical Methods)..... 3 hr	AEROENG 3580* (Heat Transfer)..... 3 hr
Prereq: Math 2174, or 2568 and 2415	Prereq: 3560
General Education 3 hr	General Education (Theme: Citizenship etc.)..... 4 hr
AEROENG 4510* (Experimental Projects 1)..... 2 hr	AEROENG 4511* (Experimental Projects 2)..... 3 hr
Prereq: 3543 and 3570, and Sr standing	Prereq: 4510
AEROENG 4515* (Pre-Dsgn of Atmos Flt Veh)..... 3 hr	AEROENG 4516* (Dsgn of Atmos Flt Veh)..... 3 hr
Prereq: 3543 and 3570 and 3521 and 3580 and Sr standing. Prereq or concur: 4550	Prereq: 4515
or	or
AEROENG 4517* (Space Veh and Systems 1) 3 hr	AEROENG 4518* (Dsgn Space Veh and Sys 2)..... 3 hr
Prereq: 3521 and 3543 and 3570 and 3580, and Sr standing. Prereq or concur: 4550.	Prereq: 4517
AEROENG 4550* (Flight Veh Propulsion)..... 3 hr	Technical Elective 3 hr
Prereq: 3570	Technical Elective 3 hr
Technical Elective 3 hr	General Education (Theme: Student Choice)..... 4 hr
General Education 3 hr	
General Education 3 hr	

Total Hours to complete the degree program = 128

*These required courses can only be taken after admission to the Aerospace Engineering major program.

^ CHEM 1210 (5 hours) can substitute for CHEM 1250.

† CSE 1222 (3 credit hours) can substitute for ENGR/CSE 1221.

Courses in **bold face** are only offered during the listed term.

All students must satisfy a 32 credit hour minimum for math and basic sciences. Students with high math or science placements and transfer students without credit for lower courses should consult with the MAE Undergraduate Academic Advisors to ensure this minimum is met. Such students may be required to take extra coursework to meet graduation requirements.

Passing Criteria

A passing grade in a course is defined as a D or better. By earning a D or better, you are earning credit for the course. Some courses may require a C- or better in a pre-requisite course. Some majors/minors require that you earn a C- or better in courses to remain in good standing in the program. Aerospace Engineering requires that students earn a C- or better in MECHENG 2040 and AEROENG 2200 to be in good standing in the major, but all other major courses would be complete with an earned D grade. Please note that must have a 2.0 or better Major GPA (MPHR) to graduate with a B.S. Aerospace Engineering.

Acceptance Criteria

Please review admission/acceptance criteria on the College of Engineering website: <https://advising.engineering.osu.edu/current-students/applying-your-major>

Technical and Other Electives

Please contact an MAE Undergraduate Academic Advisor for information about Technical Elective options.

General Education Requirement

General Education Launch Seminar

1 hr

Foundations: Writing and Information Literacy

3 hr

Foundations: Mathematical & Quantitative

Reasoning/Data Analysis

Fulfilled by MATH 1151 Degree Requirement

0-5 hr

Foundations: Literary, Visual and Performing Arts

3 hr

Foundations: Historical & Cultural Studies

3 hr

Foundations: Natural Science

Fulfilled by PHYSICS 1250 Degree Requirement

0-5 hr

Foundations: Social & Behavioral Sciences

3 hr

Foundations: Race, Ethnic and Gender Diversity

3 hr

Theme: Citizenship for a Diverse & Just World ^^

4-6 hr

Theme: Student Choice ^^ *

4-6 hr

General Education Reflection

Embedded into Major Capstone Degree Requirement

0 hr

^^ Theme Credit Hours

Themes may completed by (one) 4 credit hour course or (two) 3 credit hour courses. We recommend one 4 credit hour course for degree planning purposes.

* Theme: Student Choice

Student Choice options will be updated on an ongoing basis. For the most up-to-date listing of Theme options, please see the Undergraduate Education website on the New General Education requirements: <https://ugeducation.osu.edu/general-education-information-students>.

Approved general education courses for each category can be found in the following places:

- classes.osu.edu
- [Schedule Planner](#)
- [Search for Classes](#)

(filter by Term, Campus, Class Attribute "General Education – New", and Class Attribute Value "GEN Foundation" or "GEN Theme")