

Aerospace Engineering (036)

Freshman Year

Fall Semester

Course #	Course Name	Hrs
CH 101	Chemistry, A Molecular Science	3
CH 102	General Chemistry Lab	1
E 101	Introduction to Engr & Prob Solv	1
E 115	Intro to Computing Environ	1
ENG 101	Academic Writing and Research	4
MA 141	Calculus I	4
*** **	Human/Social Science Elect ¹	3
PE 10*	Fitness & Wellness Elective	1
Semester Total		18

Spring Semester

Course #	Course Name	Hrs
CH 201	Chemistry, A Quant. Science ²	3
MA 241	Calculus II	4
PY 205	Physics for Engr & Sc I	4
PE ***	Physical Education	1
*** **	Human/Social Science Elect ¹	3
Semester Total		15

Sophomore Year

Fall Semester

Course #	Course Name	Hrs
CSC 112	Intro to Comp - FORTRAN	3
MA 242	Calculus III	4
MAE 206	Engineering Statics ³	3
PY 208	Physics for Engr & Sc II	4
Semester Total		14

Spring Semester

Course #	Course Name	Hrs
GC 120	Found of Graphics ⁴	3
MA 341	Applied Differential Eq	3
MAE 208	Engineering Dynamics ³	3
MAE 261	Aero Vehicle Perf	3
MAE 314	Solid Mechanics	3
MSE 201	Struc Prop of Engr Mat	3
Semester Total		18

Junior Year

Fall Semester

Course #	Course Name	Hrs
ENG 331	Comm. Engr. & Tech.	3
MAE 301	Engr Thermodynamics I	3
MAE 355	Aerodynamics I	3
MAE 357	Expt Aero I	1
MAE 371	Aero Struc I	3
MAE 461	Dynamics & Controls	3
MAE 469	Controls Lab	1
Semester Total		17

Spring Semester

Course #	Course Name	Hrs
MAE 356	Aerodynamics II	3
MAE 358	Expt Aero II	1
MAE 453	Intro to Space Flight	3
MAE 462	Fli Veh Sta & Control	3
MAE 472	Aero Vehicle Struc II	3
MAE 473	Aero Vehicle Struc II Lab	1
*** **	Human/Social Science Elect ¹	3
Semester Total		17

Senior Year

Fall Semester

Course #	Course Name	Hrs
MAE 455	Boundary Layer Theory	3
MAE 475	Propulsion I ⁵	3
MAE 466	Expt Aero III	1
MAE 478	Aero Vehicle Design I	3
MAE ***	Departmental Elective ⁶	3
*** **	Human/Social Science Elect ¹	3
Semester Total		16

Spring Semester

Course #	Course Name	Hrs
MAE 479	Aero Vehicle Design II	4
*** **	Human/ Social Science Elect ¹	3
*** **	Human/ Social Science Elect ¹	3
*** **	Human/ Social Science Elect ¹	3
Semester Total		13

Total Hours Required for Graduation = 128

¹ Select from the approved College of Engineering Humanities & Social Sciences list, which can be found at <http://www.engr.ncsu.edu/students/firstyear.html>. One of the Humanities & Social Sciences courses must be an ethics elective chosen from the following: STS 302, STS 304, STS 320, PHI 214 or PHI 375.

² Aerospace engineering majors are not required to take CH 202 (CH 201 lab).

³ Students must have a 2.3 GPA to enroll in this course.

⁴ GC 210 may be substituted for GC 120.

⁵ Students may take MAE 476 Rocket Propulsion instead of MAE 475.

⁶ One technical elective must be selected from the following list (when offered): MAE 452, MAE 456, MAE 476, and the following with permission from the instructor: MAE 496 (limited to 3 credit hours), MAE 5**.

All students who graduate from this curriculum must demonstrate competency in a foreign language at the 102 level (second semester).