

Mechanical 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

Semester Total 17

Spring Semester

Course #	Course Name	Hrs
CSC 112	Intro to Comp – FORTRAN ²	3
MA 241	Calculus II	4
PY 205	Physics for Engr & Sc I	4
*** **	Human/Social Science Elect ¹	3
PE 10*	Fitness and Wellness Elective	1

Semester Total 15

Sophomore Year

Fall Semester

Course #	Course Name	Hrs
GC 120	Found of Graphics ³	3
MA 242	Calculus III	4
MAE 206	Engr Statics ⁴	3
PY 208	Physics for Engr & Sc II	4
*** **	Human/Social Science Elect ¹	3

Semester Total 17

Spring Semester

Course #	Course Name	Hrs
MA 341	Appl Differential Eq	3
MAE 208	Engr Dynamics ⁴	3
MAE 314	Solid Mechanics	3
MSE 200	Mech. Prop. Engr. Materials	3
*** **	Human/Social Science Elect ¹	3
PE **	Physical Education	1

Semester Total 16

Junior Year

Fall Semester

Course #	Course Name	Hrs
ENG 331	Comm for Engr & Tech	3
MAE 301	Engr Thermodynamics I	3
MAE 305	ME Lab I	1
MAE 308	Fluid Mechanics	3
MAE 315	Dynamics of Machines	3
ST 370	Prob & Stat for Engineers	3

Semester Total 16

Spring Semester

Course #	Course Name	Hrs
ECE 331	Principles of Elec. Engr. I	3
MAE 302	Engr Thermodynamics II	3
MAE 306	ME Lab II	1
MAE 310	Heat Transfer Fundamentals	3
MAE 316	Strength of Mech Comp	3
*** **	Human/Social Science Elect ¹	3

Semester Total 16

Senior Year

Fall Semester

Course #	Course Name	Hrs
MAE 469	Controls Lab	1
MAE 415	Mech Engr Analysis	3
MAE 435	Prin of Auto Control	3
MAE **	Tech Elective ⁵	3
MAE **	Tech Elective ⁵	3
*** **	Human/Social Science Elect ¹	3

Semester Total 16

Spring Semester

Course #	Course Name	Hrs
MAE 412	Energy Systems	3
MAE 416	ME Design	4
MAE **	Tech Elective ⁵	3
*** **	Human/Social Science Elect ¹	3

Semester Total 13

Total Hours Required for Graduation = 126

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 CSC 114 may be substituted for CSC 112.

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

⁴ GC 210 may be substituted for GC 120.

⁵ Technical electives must be selected from the following list (when offered): MAE 403, MAE 406, MAE 408, MAE 421, MAE 442, MAE 495M 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).