

# MECHANICAL ENGINEERING

Courses highlighted below are available at Furman University  
Curriculum Example\*

## FRESHMAN YEAR

_____ 4 CH 1010 General Chemistry	_____ 3 ENGR 1410 Programming and Problem Solving <sup>3</sup>
_____ 3 ENGL 1030 Accelerated Composition	_____ 2 ENGR 2080 Engr. Graphics and Machine Design
_____ 2 ENGR 1020 Engineering Discipline and Skills <sup>1</sup>	_____ 4 MATH 1080 Calculus of One Variable II
_____ 4 MATH 1060 Calculus of One Variable I	_____ 3 PHYS 1220 Physics with Calculus I
_____ 3 Gen Ed <sup>2</sup>	_____ 1 PHYS 1240 Physics Lab. I
16	_____ 3 Gen Ed <sup>2</sup>
	16

## SOPHOMORE YEAR

_____ 1 ME 2000 Sophomore Seminar	_____ 2 ECE 2070 Basic Electrical Engineering
_____ 5 ME 2010 Statics and Dynamics for Mech. Engr.	_____ 1 ECE 2080 Basic Electrical Engineering Lab.
_____ 2 ME 2220 Mechanical Engineering Lab. I <sup>4</sup> OR	_____ 3 ME 2030 Found. Of Thermal and Fluid Systems
_____ 3 MSE 2100 Intro. to Materials Science <sup>4</sup>	_____ 3 ME 2040 Mechanics of Materials
_____ 4 MATH 2060 Calculus of Several Variables	_____ 2 ME 2220 Mechanical Engineering Lab. I <sup>4</sup> OR
_____ 3 PHYS 2210 Physics with Calculus II	_____ 3 MSE 2100 Intro. to Materials Science <sup>4</sup>
15-16	_____ 4 MATH 2080 Int. to Ordinary Differential Eqtns
	15-16

## JUNIOR YEAR

_____ 3 ENGL 3140 Technical Writing <sup>5</sup>	_____ 3 ME 3040 Heat Transfer
_____ 3 ME 3030 Thermodynamics	_____ 3 ME 3050 Model. and Analysis of Dynamic Syst.
_____ 3 ME 3070 Foundations of Mechanical Systems	_____ 3 ME 3060 Fundamentals of Machine Design
_____ 3 ME 3080 Fluid Mechanics	_____ 3 ME 3120 Manufacturing Processes and Their Application
_____ 2 ME 3330 Mechanical Engineering Lab. II <sup>4</sup> OR	_____ 2 ME 3330 Mechanical Engineering Lab. II <sup>4</sup> OR
_____ 3 Statistics Requirement <sup>4,6</sup>	_____ 3 Statistics Requirement <sup>4,6</sup>
_____ 3 MATH 3650 Numerical Methods for Engineers	14-15
17-18	

## SENIOR YEAR

_____ 3 ME 4010 Mechanical Engineering Design	_____ 1 ME 4000 Senior Seminar
_____ 3 ME 4030 Control & Integration of Multi-Domain Dynamic Systems	_____ 3 ME 4020 Internship in Engineering Design
_____ 2 ME 4440 Mechanical Engineering Lab. III <sup>4</sup> OR	_____ 2 ME 4440 Mechanical Engineering Lab. III <sup>4</sup> OR
_____ 3 Technical Requirement <sup>4,7</sup>	_____ 3 Technical Requirement <sup>4,7</sup>
_____ 3 Mech. Engr. Professional Requirement <sup>8</sup>	_____ 6 Gen Ed <sup>2</sup>
_____ 3 Mech. Engr. Technical Requirement <sup>9</sup>	_____ 3 Mech. Engr. Technical Requirement <sup>9</sup>
14-15	15-16

**125 Total Semester Hours**

### Footnotes:

All Clemson engineering students begin in our General Engineering program and move into their specified major once the departmental standards are completed. Clemson courses ENGL 1030, MATH 1060 and 1080, PHYS 1220, CH 1010, ENGR 1020 and ENGR 1410/or CHE 1300 must all be completed with a "C" or higher before declaring and starting courses in your engineering major.

<sup>1</sup> ENGR 1050 and ENGR 1060 may be substituted for ENGR 1020

<sup>2</sup> See Policy on Humanities and Social Sciences for Engineering Curricula. Six of these credit hours must also satisfy General Education Cross-Cultural Awareness and Science and Technology in Society Requirements. These requirements may be filled in any order.

<sup>3</sup> ENGR 1070, ENGR 1080 and ENGR 1090 may be substituted for ENGR 1410

<sup>4</sup> Both are required but may be taken in either semester.

<sup>5</sup> ROTC students only may substitute AS 4100 or ML 4020.

<sup>6</sup> Select MATH 3020 or STAT 4110

<sup>7</sup> Select from BE 4240, BE 4400, BIOE 4350, CH 3310, CH 3600, CH 4040, CH 4250, ECE 4700, ECE 4710, EES 4010, EES 4100, EES 4300, IE 4400, IE 4570, IE 4620, IE 4880, MATH 4000, MATH 4100, MATH 4120, MATH 4190, MATH 4340, MATH 4350, MATH 4400, MATH 4530, MATH 4600, MATH 4630, PHYS 3110, PHYS 3210, PHYS 3550, PHYS 4170, PHYS 4200, PHYS 4320, PHYS 4410, PHYS 4520

<sup>8</sup> Select any course that meets the technical requirement (any course listed in footnote 7 or 9); or any 3000- or 4000-level modern language course; or a minor requirement.

<sup>9</sup> Select from ME 4150\*, ME 4170, ME 4180, ME 4200, ME 4210, ME 4220, ME 4230, ME 4250, ME 4260, ME 4280, ME 4290, ME 4300, ME 4310, ME 4320, ME 4400, ME 4530, ME 4540, ME 4550, ME 4570, ME 4710 or ME 4930. \*ME 4150 may only be taken once for technical elective credit.

Once a student begins coursework at Clemson, the following courses may NOT be transferred to Clemson for the ME degree:  
ME 2010, ME 2030, ME 2040

\*See catalog for current curriculum at [catalog.clemson.edu](http://catalog.clemson.edu)

General Education Requirements						
LIT	Non-Lit	SS1	SS2		CCA	STS
Other						
LIFE	Palmetto Fellows	Honors	Athlete	RiSE	ROTC	Med School

Comments: