## MECHANICAL ENGINEERING

**2016 – 2017 Curriculum** *(updated 16 March 2017)*

Students must officially be in ME to register for any ME course except ME 2010

### Change of Major Checklist

**Required**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CH 1010</td>
</tr>
<tr>
<td>ENGL 1030</td>
</tr>
<tr>
<td>ENGR 1410</td>
</tr>
<tr>
<td>ENGR 1020</td>
</tr>
<tr>
<td>MATH 1060</td>
</tr>
<tr>
<td>MATH 1080</td>
</tr>
<tr>
<td>PHYS 1220</td>
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</tbody>
</table>

**Completed**

GPA = 2.60; C or Better Required in Each Class

### General Education Requirements

<table>
<thead>
<tr>
<th>LIT</th>
<th>Non-Lit</th>
<th>SS1</th>
<th>SS2</th>
<th>ENGR 5th</th>
<th>STS</th>
<th>CCA</th>
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<tbody>
<tr>
<td>LIFE</td>
<td>Palmetto Fellows</td>
<td>Honors</td>
<td>Athlete</td>
<td>RISE</td>
<td>ROTC</td>
<td>Med School</td>
</tr>
</tbody>
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### Notes

1. Enrollment Policy (see website for Complete Statement of Department Policy): A student is allowed to enroll in any ME course only when all prerequisites, as defined by current official listings for that course, have been passed with a grade of C or higher.
2. No student may exceed three attempts to complete successfully ME 2010, 2030, or 2040. Registration for a third attempt to complete one of these ME courses requires the approval of the undergraduate coordinator in the Department of Mechanical Engineering. A grade of W counts as an unsuccessful attempt at completing the course.
3. For students repeating an ME course, registration preference will be given to students in a degree-granting engineering major whose curriculum requires the course in question.
4. To change majors into the Mechanical Engineering degree program, students must have a minimum cumulative grade-point average of 2.60 or higher at Clemson and earned a C or better in each course in the General Engineering freshman curriculum, EXCLUDING the Arts and Humanities/Social Science requirements.

### Change of Major Checklist

Student:  
Date:  
CUID:  
Advisor:  

~ = In Progress  
SP = Spring  
SS = Summer School  
F = Fall

### FRESHMAN YEAR

| 16 | 4 CH 1010 General Chemistry  
3 ENGL 1030 Accelerated Composition  
2 ENGR 1020 Engineering Discipline and Skills  
4 MATH 1060 Calculus of One Variable I  
3 Gen Ed1  
| 15-16 | 3 ME 2000 Sophomore Seminar  
5 ME 2010 Statics and Dynamics for Mech. Engr.  
2 ME 2220 Mechanical Engineering Lab. I2  
3 MSE 2100 Intro. to Materials Science2  
4 MATH 2080 Int. to Ordinary Differential Eqtns  
3 MATH 3020 or STAT 4110  
2 Both are required but may be taken in either semester.  
Cross-Cultural Awareness and Science and Technology in Society Requirements. These requirements may be filled in any order.  
| 17-18 | 3 ENGL 3140 Technical Writing  
3 ME 3030 Thermodynamics  
3 ME 3070 Foundations of Mechanical Systems  
3 ME 3080 Fluid Mechanics  
2 ME 3330 Mechanical Engineering Lab. II2  
3 Statistics Requirement3,2  
3 MATH 3650 Numerical Methods for Engineers  
| 14-15 | 3 ME 4010 Mechanical Engineering Design  
3 ME 4030 Control & Integration of Multi-Domain Dynamic Systems  
2 ME 4440 Mechanical Engineering Lab. III2  
3 Technical Requirement4  
3 Gen Ed1  

### SOPHOMORE YEAR

| 16 | 3 ENGL 1030 Accelerated Composition  
2 ENGR 1020 Engineering Discipline and Skills  
4 MATH 1060 Calculus of One Variable I  
3 Gen Ed1  
15-16 | 2 ECE 2070 Basic Electrical Engineering  
1 ECE 2080 Basic Electrical Engineering Lab.  
3 ME 2030 Found. Of Thermal and Fluid Systems  
3 ME 2040 Mechanics of Materials  
2 ME 2220 Mechanical Engineering Lab. I2  
3 MSE 2100 Intro. to Materials Science2  
4 MATH 2080 Int. to Ordinary Differential Eqtns  
| 17-18 | 3 ENGL 3140 Technical Writing  
3 ME 3030 Thermodynamics  
3 ME 3070 Foundations of Mechanical Systems  
3 ME 3080 Fluid Mechanics  
2 ME 3330 Mechanical Engineering Lab. II2  
3 Statistics Requirement3,2  
3 MATH 3650 Numerical Methods for Engineers  
| 14-15 | 3 ME 4010 Mechanical Engineering Design  
3 ME 4030 Control & Integration of Multi-Domain Dynamic Systems  
2 ME 4440 Mechanical Engineering Lab. III2  
3 Technical Requirement4  
3 Gen Ed1  

### JUNIOR YEAR

| 16 | 3 ENGL 1030 Accelerated Composition  
2 ENGR 1020 Engineering Discipline and Skills  
4 MATH 1060 Calculus of One Variable I  
3 Gen Ed1  
15-16 | 2 ECE 2070 Basic Electrical Engineering  
1 ECE 2080 Basic Electrical Engineering Lab.  
3 ME 2030 Found. Of Thermal and Fluid Systems  
3 ME 2040 Mechanics of Materials  
2 ME 2220 Mechanical Engineering Lab. I2  
3 MSE 2100 Intro. to Materials Science2  
4 MATH 2080 Int. to Ordinary Differential Eqtns  
| 17-18 | 3 ENGL 3140 Technical Writing  
3 ME 3030 Thermodynamics  
3 ME 3070 Foundations of Mechanical Systems  
3 ME 3080 Fluid Mechanics  
2 ME 3330 Mechanical Engineering Lab. II2  
3 Statistics Requirement3,2  
3 MATH 3650 Numerical Methods for Engineers  
| 14-15 | 3 ME 4010 Mechanical Engineering Design  
3 ME 4030 Control & Integration of Multi-Domain Dynamic Systems  
2 ME 4440 Mechanical Engineering Lab. III2  
3 Technical Requirement4  
3 Gen Ed1  

### SENIOR YEAR

| 16 | 3 ENGL 1030 Accelerated Composition  
2 ENGR 1020 Engineering Discipline and Skills  
4 MATH 1060 Calculus of One Variable I  
3 Gen Ed1  
15-16 | 2 ECE 2070 Basic Electrical Engineering  
1 ECE 2080 Basic Electrical Engineering Lab.  
3 ME 2030 Found. Of Thermal and Fluid Systems  
3 ME 2040 Mechanics of Materials  
2 ME 2220 Mechanical Engineering Lab. I2  
3 MSE 2100 Intro. to Materials Science2  
4 MATH 2080 Int. to Ordinary Differential Eqtns  
| 17-18 | 3 ENGL 3140 Technical Writing  
3 ME 3030 Thermodynamics  
3 ME 3070 Foundations of Mechanical Systems  
3 ME 3080 Fluid Mechanics  
2 ME 3330 Mechanical Engineering Lab. II2  
3 Statistics Requirement3,2  
3 MATH 3650 Numerical Methods for Engineers  
| 14-15 | 3 ME 4010 Mechanical Engineering Design  
3 ME 4030 Control & Integration of Multi-Domain Dynamic Systems  
2 ME 4440 Mechanical Engineering Lab. III2  
3 Technical Requirement4  
3 Gen Ed1  
3 Mech. Engr. Technical Requirement4 | 125 Total Semester Hours
Complete

C. **Arts and Humanities: Literature [Lit]** .................................................................3 credits

   ENGL 2020, 2120, 2130, 2140, 2150, **CHIN 4010, GER 2600, HON 1900, 2210, JAPN 4010, RUSS 3600, 3610**

   Literature taught in a foreign language: FR 3000, 3040, GER 3060, 3600, 3610, ITAL 3010, 3020, JAPN 4060, SPAN 3040, 3110, 3130

D. **Social Sciences [SS]** ..................................................................................6 credits

   AGRB 2020, ANTH 2010CA, ECON 2000, 2110, 2120, GEOG 1010, 1030CA, 1060, HIST 1010, 1020, 1220STS, 1240STS, 1210STS, 1720CA, 1730CA, 1930CA,

   HON 1920, 2020, 2200, PAS 3010CA, POSC 1010, 1020CA, 1030, 1040CA, PSYC 2010, 2500CA, 2750STS, RS 3010, SOC 2010, 2020

E. **Cross-Cultural Awareness [CCA]** ...............................................................3 credits

   AGRB 2020STS, ANTH 2010NL, ART 2100NL, ASL 3050NL, CAAH 2010CA, CHIN (PHIL) 3120, (PHIL) 3130, 4990, COMM 1800CA, 3030, 3080, 3090, 4020,

   ENG (GW) 3010, 3550, 3570, ENGL (LANG) 3010, 4050, GER 3400, HON 1910, 2010STS, 2030, 2100, 2220, HUM 3010, 3020, HUM 3060, 3090CA, JAPN 3070, 3080, LANG 3400, 3420, 3560, (ENGL) 4540, LARC 1160STS, MUSC 2100CA, 3080, 3090, 3110, 3120, 3130, 3140CA,

   MUSC 3170, 3610, 3620, 3630, 3640, 3690, 3700, 3710, 3720, PHI 1010, 1020, 1030, 1240STS, 2100STS, (CHIN) 3120, (CHIN) 3130, 3160, 3170, 3180,

   PHI 3230, 3240STS, 3250, 3260STS, 3270, 3440, 3450STS, REL 1010CA, 1020CA, 3010, 3020, 3030, 3060, 3070, 3090, 3120, 3130, 3150, RUSS 3400,

   SPAN 3070, 3080, STS 1010STS, 1020STS, 2150STS, 3010STS, 3030STS, THEA 2100, 2790, 3080, 3090, THEA 3150, 3160, 3170, WS 3010

F. **Science and Technology in Society [STS]** ....................................................3 credits

   AGED (EDF) 4800, AGRB 2050CA, (ECON) 4570, AVS 3150, 4150, BIOL 2000, 2010, 2030, 2040, 2100, 2110, 2200, 4730, CH 1050, 1060, COMM 1070,

   COMM 3070, CPSC 2920, CTE 1150, 2210, ECE 1010, ECON 3190, (AGRB) 4570, ENGL 3490, ENGR 2200, 2210. ENS 3120, (FOR) 4160, ENSP (GEOL) 1250, 2000, (PES) 3150, ENSP 4000, ENT 2000, FDSC 2140.

   FOR (ENR) 4160, GEOL 1120, 1200, (ENSP) 1250, 2700, 3000, HCG (NURS) 3330, HIST 1220SS, 1240SS, 3210, 3220, 3230, 3920, 4240, 4910, HLTH 4310, HON 1940, 2010NL, 2060, IE 4880, LARC 1160NL, MKT 4450,

   MUSC 3180, NURS 1400, (HCG) 3330, NUTR 2030, 2100, PES (ENSP) 3150, PHI 1240NL, 2100NL, 3240NL, 3260NL, 3280, 3400, 3450NL, PHYS 2450,

   PKSC 3680, PLPA 2130, PRMT 2110, PSYC 2750SS, RS (SOC) 4010, SOC (RS) 4010, 4030, STAT 2220, STS 1010NL, 1020NL, 1200, 1710, 2150NL, 2160,

   STS 3010NL, 3030NL, 4980, 4990

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**Additional A&H/SS Requirement [**5th and **6th]**] .................................................................................................................. as required by engineering major

Any 1000 – 4999 course in the following rubrics: AAH, ANTH, ARAB, ART, ASL, CHIN, DANC, ECON, FR, GEOG, GER, GW, HIST, HUM, ITAL, JAPN, LANG, LAW, MUSC, PA, PAS, PHIL, PORT, POSC, PSYC, REL, RS, RUSS, SOC, SPAN, THEA, WS

Rubrics with exceptions for additional requirement: AGRB 1000-2999, CAAH 2010, COMM [except 1500, 2500], EAS 1230, ENGL 2000-4999 [except 2170, 3040, 3100, 3120, except ENGL 3140, 3150, 3160, 3330], HON 1900, 1910, 1920, 2010, 2020, 2030, 2100, 2200, 2210, 2220, IS 2100, STS 1010, 1020, 3030

**5th Additional course (5th) only required by CHE, ENVE, ME and MSE. CPE and EE require the additional 5th or a technical elective.

BioE, BE, CE and IE do not require 5th.

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**BOLD** indicates no pre-reqs required

**Underline** indicates MUSC courses require auditions, are 1 hour, may be repeated or grouped to achieve credit required.

This is an unofficial document: Responsibility for satisfying these requirements rests with the student. Evaluation based on catalog year 2016 – 2017

Updated – June 9, 2016