

# ME Undergraduate Curriculum (Catalog: 2008 - 2009)

<b>Freshman</b>	<b>Fall</b>	<b>CHEM 1310</b> General Chemistry 3-3-4	<b>MATH 1501</b> Calculus 1 (Minimum Grade C) 4-0-4	<b>HISTORY</b> HIST 2111, HIST 2112, POL 1101, INTA 1200, or PUBP 3000 (Social Scien, See Note 4) 3-0-3	<b>HPS 1040</b> Wellness 2-0-2	<b>ENGL 1101</b> English Composition 1 [ Humanities ] 3-0-3	<b>= 16 hours</b>
	<b>Spring</b>	<b>PHYS 2211</b> Physics 1 3-3-4 MATH 1501	<b>MATH 1502</b> Calculus 2 (Minimum Grade C) 4-0-4 MATH 1501	<b>CS 1371</b> Introduction to Computing 3-0-3	<b>ME/CEE 1770</b> Engineering Graphics (See Note 6, No W's) 2-3-3	<b>ENGL 1102</b> English Composition 2 [ Humanities ] 3-0-3 ENGL 1101	
<b>Sophomore</b>	<b>Fall</b>	<b>PHYS 2212</b> Physics 2 3-3-4 PHYS 2211	<b>MATH 2401</b> Calculus 3 (Minimum Grade C) 4-0-4 MATH 1502	<b>ME 2110</b> Creative Decisions and Design (See Note 6, No W's) 2-3-3 ME/CEE 1770, COE 2001*	<b>MSE 2001</b> Engineering Materials 3-0-3 CHEM 1310	<b>COE 2001</b> Statics 2-0-2 MATH 1502, PHYS 2211	<b>= 16 hours</b>
	<b>Spring</b>	<b>ECE 3710</b> Circuits & Electronics 2-0-2 PHYS 2212	<b>MATH 2403</b> Differential Equations (Minimum Grade C) 4-0-4 MATH 1502	<b>ME 2202</b> Dynamics of Rigid Bodies 3-0-3 COE 2001	<b>ME 2016</b> Computing Techniques 3-0-3 CS 1371, MATH 1502, MATH 2403*	<b>Science Elect.</b> CHEM 1311 & 1312, BIOL 1510, BIOL 1520, EAS 1600, EAS 1601 or PHYS 2213 X-X-3	<b>= 15 hours</b> <b>= 16 hours</b>
<b>Junior</b>	<b>Fall</b>	<b>ECE 3741</b> Instrument & Electronics Lab 0-3-1 ECE 3710	<b>COE 3001</b> Mechanics of Deformable Bodies 3-0-3 COE 2001, MSE 2001*, MATH 2403*	<b>ME 3322</b> Thermodynamics 3-0-3 PHYS 2211, MATH 2403	<b>ME 3340</b> Fluid Mechanics 3-0-3 ME 2202, ME 3322*, MATH 2403	<b>Economics</b> ECON 2100, 2101, 2105, or 2106 [ Social Science ] (See Note 5) 3-0-3	<b>Social Science Elective</b> 3-0-3
	<b>Spring</b>	<b>ME 3015</b> System Dynamics & Control 4-0-4 ME 2202, ME 2016, MATH 2403, ECE 3710	<b>ME 3345</b> Heat Transfer 3-0-3 ME 3322, ME 3340, MATH 2403	<b>MATH/ISYE 3770</b> Statistics 3-0-3 MATH 2401	<b>ISYE 3025</b> Engineering Economics 1-0-1 (ECON 2100, 2101, 2105 or 2106)	<b>Ethics</b> HTS 2084, INTA 2030, PST 3105, PST 3109, PST 3127 or PST 4176 (See Notes 1 & 3) 3-0-3	<b>Humanities Elective</b> 3-0-3
<b>Senior</b>	<b>Fall</b>	<b>Design Elective</b> ME 3180 (Machine Design) or ME 4315 (Energy Sys Design) 3-0-3 ME 2110, ME 3345 (for ME 4315 only), COE 3001 (for ME 3180 only)	<b>ME 4210</b> Manufacturing Processes & Engineering 3-0-3 COE 3001, ME 3345, MATH/ISYE 3770	<b>ME 3057</b> Experimental Methods Lab (See Note 6, No W's) 2-3-3 COE 3001, ME 3015, ME 3340, ME 3345*, MATH/ISYE 3770*	<b>ME Elective</b> 4000 Level or Above ME Class (See Notes 2 & 7) 3-0-3	<b>Free Elective</b> 2000 Level or Above (See Note 7) 3-0-3	<b>= 17 hours</b> <b>= 15 hours</b>
	<b>Spring</b>	<b>ME 4053</b> ME Systems Lab (See Note 6, No W's) 1-2-2 ME 3057, ME 3345, MATH/ISYE 3770	<b>ME 4182</b> Capstone Design (See Note 6, No W's) 1-6-3 ME 2110, ME 4210*, (ME 3180 or ME 4315)	<b>ME Elective</b> 4000 Level or Above ME Class (See Notes 2 & 7) 3-0-3	<b>Social Science or Humanities Elective</b> (See Note 3) 3-0-3	<b>Free Elective</b> 2000 Level or Above (See Note 7) 3-0-3	<b>= 14 hours</b>

**NOTES:**

- Ethics** - PST 3105, 3109, 3127 & 4176 are humanities (HUM). HTS 2084 & INTA 2030 are social sciences (SS).
- ME Electives** are any 4000 level ME class or above, excluding ME 4741 & ME 4742. Students may take both design electives (ME 3180 & ME 4315). One class will be the design elective and the other an ME Elective.
- If **Ethics** is humanities, social science elective is required for the **Social Science or Humanities Elective**. If **Ethics** is social science, humanities elective is required for the **Social Science or Humanities Elective**.
- Credit is only awarded for INTA 1200 or POL 1101, not both. Classes are exactly the same.
- Credit is awarded for only ECON 2100 or ECON 2101 or (ECON 2105 and/or ECON 2106).
- ME 1770, 2110, 3057, 4053 & 4182 cannot be dropped after registration without documented medical reasons.
- Free Electives & ME Electives may not duplicate any other material used for your BSME.

\* Class co-requisites have an asterick (\*) after the class. These classes can be taken at the same time.

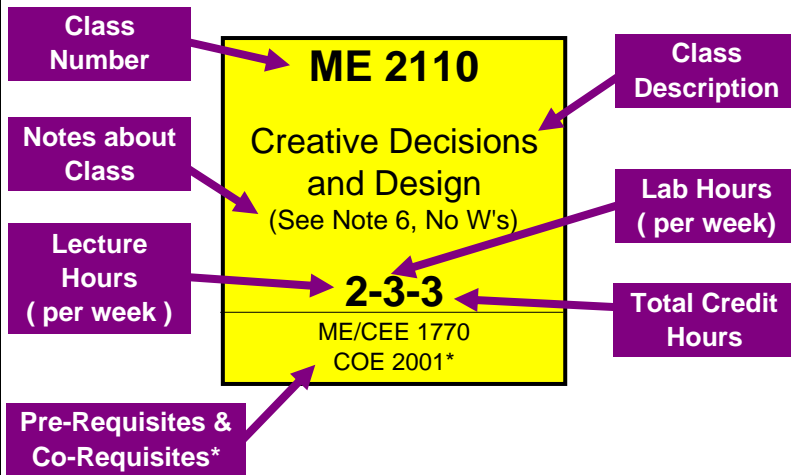
**126 Total Hours**

**General Requirements**

- All classes must be taken LETTER GRADE.
- Minimum grade of D required for each class, except as noted.
- Overall GPA must be greater than 2.00 at graduation.
- ME GPA (includes all ME and COE classes) must be greater than 2.00 at graduation.

# Undergraduate Curriculum Sheet Explained

## Understanding the Curriculum Guide



**Pre-requisites:** These classes must be completed before you are eligible to take the class.

**\*Co-requisites:** These classes can be taken at the same time. You must register for the co-req first to avoid registration errors.

## Core Classes

### Humanities Electives (12 hours total)

ENGL 1101 (3 hrs)  
 ENGL 1102 (3 hrs)  
 Humanities Elective (3 hrs)  
 \* Humanities Elective (3 hrs)

### Social Science Electives (12 hours total)

Economics (3 hrs) - ECON 2100, 2101, 2105 or 2106  
 History (3 hrs) - HIST 2111, HIST 2112, POL 1101,  
 INTA 1200 or PUBP 3000  
 Social Science Elective (3 hrs)  
 \* Social Science Elective (3 hrs)

**\* Note:** One humanities or social science elective must be ethics. Ethics must be selected from:

PST 3105 (Humanities)    PST 4176 (Humanities)  
 PST 3109 (Humanities)    INTA 2030 (Social Science)  
 PST 3127 (Humanities)    HTS 2084 (Social Science)

**Core Electives:** Classes that satisfy social science electives and humanities electives can be found at:

<http://www.catalog.gatech.edu/students/ugrad/core/core.php>

## ME Electives

- ME Electives:** A list of ME Electives (including their pre-reqs) offered each semester can be found listed at: <http://www.me.gatech.edu/undergraduate/registration.shtml>
- Design Elective (ME 3180 / ME 4315):** Students may take both design electives, ME 3180 & ME 4315. One class will satisfy the design elective and the other class satisfies an ME Elective.
- Research:** Students may use up to 4 hours of ME 4699/4903 for ME elective credit. In addition, up to 6 hours of 2699/4699/4903 from any department may be used as free elective credit.
- Minors:** Students who successfully complete a Ga. Tech minor **approved by the ME department** are allowed to substitute courses required for the minor for up to six hours of ME elective credit. If a student does not complete the minor, then this substitution is disallowed and the student must complete six hours of ME elective credit.

**ME Approved Minors:**

Aerospace Engineering	Biomedical Engineering	Materials Science and Engineering
Biology	Computing Science	Mathematics
	Earth and Atmospheric Sciences	Nuclear and Radiological Engineering

## Pre-Requisites

- The ME curriculum has a 7 or 8 semester pre-requisite chain, depending on the design class selected.**
- Students can select either ME 3180 or ME 4315 for the design elective. Most students select ME 3180.

**Upon completion of these classes, you will have a minimum of (...) semesters remaining until graduation.**

Machine Design (ME 3180) for the Design Elective	Minimum # of Semesters	Energy Systems Design (ME 4315) for the Design Elective
	7	MATH 1501
MATH 1501	6	MATH 1502, PHYS 2211
MATH 1502, PHYS 2211	5	COE 2001
COE 2001, PHYS 2212, CS 1371	4	ME 2202, MATH 2403, CS 1371, PHYS 2212
CHEM 1310, MATH 2403, ME 1770, ME 2016, ME 2202, ECE 3710	3	CHEM 1310, ECE 3710, ME 1770, ME 2016, ME 3322, ME 3340
ME 2110, ME 3015, ME 3322, ME 3340, COE 3001, MSE 2001, MATH 2401	2	COE 3001, MSE 2001, MATH 2401, ME 2110, ME 3015, ME 3345,
ME 3180 **, ME 3057, ME 3345, MATH/ISYE 3770	1	ME 4315 **, ME 3057, MATH/ISYE 3770
ME Electives, ECE 3741, ME 4182, ME 4053, ME 4210, ISYE 3025	0	ME Electives, ECE 3741, ME 4182, ME 4053, ME 4210, ISYE 3025