R4
3/18/15

ME Undergraduate Curriculum (Catalog: 2013 - 2014)

Freshman	**Fall**	**CHEM 1310** General Chemistry (See Note 2) 3-3-**4**	**MATH 1501** Calculus 1 (Minimum Grade C) 4-0-**4**	**US Perspective** HIST 2111, HIST 2112, POL 1101, INTA 1200, or PUBP 3000 [Social Science] 3-0-**3**	**Wellness** APPH 1040, APPH 1050 or HPS 1040 2-0-**2**	**ENGL 1101** English Composition 1 3-0-**3**	**= 16 hours**
	Spring	**PHYS 2211** Physics 1 (Minimum Grade C) 3-3-**4** MATH 1501	**MATH 1502** Calculus 2 (Minimum Grade C) 4-0-**4** MATH 1501	**CS 1371** Introduction to Computing 3-0-**3**	**ME/CEE 1770** Engineering Graphics (See Note 3, No W's) 2-3-**3**	**ENGL 1102** English Composition 2 3-0-**3** ENGL 1101	**= 17 hours**
Sophomore	**Fall**	**PHYS 2212** Physics 2 3-3-**4** PHYS 2211	**MATH 2401** Calculus 3 (Minimum Grade C) 4-0-**4** MATH 1502	**ME 2110** Creative Decisions and Design (See Note 3, No W's) 2-3-**3** ME/CEE 1770, COE 2001*	**MSE 2001** Engineering Materials 3-0-**3** CHEM 1310	**COE 2001** Statics (Minimum Grade C) 2-0-**2** MATH 1502, PHYS 2211	**= 16 hours**
	Spring	**ECE 3710** Circuits & Electronics 2-0-**2** PHYS 2212	**MATH 2403** Differential Equations (Minimum Grade C) 4-0-**4** MATH 1502	**ME 2202** Dynamics of Rigid Bodies 3-0-**3** COE 2001	**ME 2016** Computing Techniques 3-0-**3** CS 1371, MATH 1502, MATH 2403*	**Social Science Elective** (See Note 6) 3-0-**3**	**= 15 hours** **= 16 hours**
Junior	**Fall**	**ECE 3741** Instrument & Electronics Lab 0-3-**1** ECE 3710	**COE 3001** Mechanics of Deformable Bodies 3-0-**3** COE 2001, MATH 2403*	**ME 3322** Thermo-dynamics 3-0-**3** PHYS 2211, MATH 2403	**ME 3340** Fluid Mechanics 3-0-**3** ME 2202, MATH 2403 MATH 2401, ME 3322*	**Economics** ECON 2100, 2101, 2105, or 2106 (See Note 5) 3-0-**3**	**Free Elective** 1000 Level or Above (See Note 1) 3-0-**3**
	Spring	**ME 3017** System Dynamics 3-0-**3** ME 2202, ME 2016, MATH 2403, ECE 3710	**ME 3345** Heat Transfer 3-0-**3** ME 3322, ME 3340, MATH 2403	**ME 3210** Design, Materials & Manufacture 3-0-**3** MSE 2001, ME 2110	**ISYE 3025** Engineering Economics 1-0-**1** (ECON 2100, 2101, 2105 or 2106)	**MATH 3670** Statistics (ISYE 3770 is also accepted) 3-0-**3** MATH 2401	**Social Science Elective** (See Note 6) 3-0-**3**
Senior	**Fall**	**Design Elective** ME 3180 or ME 4315 3180: Machine Design 4315: Energy Sys Design 3-0-**3** ME 2110, ME 3345 (for ME 4315 only), COE 3001 (for ME 3180 only)	**ME 3057** Experimental Methods Lab (See Note 3, No W's) 2-3-**3** COE 3001, ME 3340, ME 3017*, ME 3345*, MATH 3670*	**Humanities Elective** (See Note 6) 3-0-**3**	**Free Elective** 1000 Level or Above (See Note 1) 3-0-**3**	**Free Elective** 2000 Level or Above (See Note 1) 3-0-**3**	**= 16 hours** **= 15 hours**
	Spring	**ME 4056** ME Systems Lab (See Note 3, No W's) 2-3-**3** ME 3057, ME 3345, ME 3017, MATH 3670	**ME Elective** 3000 Level or Above ME Class (See Note 4) 3-0-**3**	**ME 4182** Capstone Design (See Note 3, No W's) 1-6-**3** COE 3001, ME 3345, ME 2110, ME 3210, ME 3017, MATH 3670, Design Elect.	**Humanities Elective** (See Note 6) 3-0-**3**	**Free Elective** 2000 Level or Above (See Note 1) 3-0-**3**	**Free Elective** 2000 Level or Above (See Note 1) 3-0-**3** **= 18 hours**

NOTES: * Class co-requisites have an asterisk (*) after it. These classes can be taken prior to or at the same time.

129 Total Hours

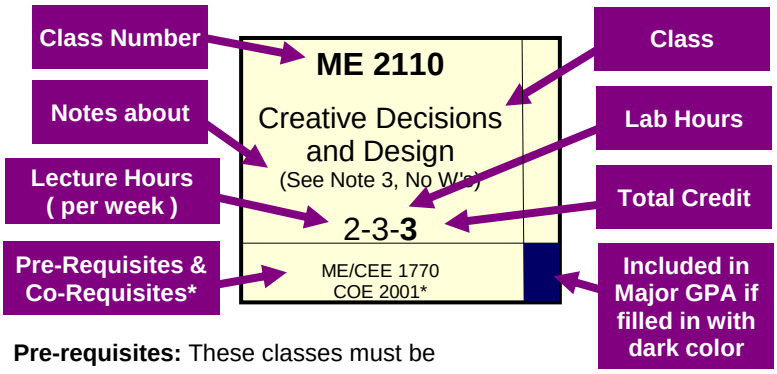
1. **Free Electives**: See page 2 for free elective requirements.
2. **CHEM 1310**: CHEM 1211K can substitute for CHEM 1310. CHEM 1211K & 1212K are recommended for pre-health students.
3. ME 1770, 2110, 3057, 4056 & 4182 cannot be dropped after phase 2 registration closes without documented medical reasons.
4. **ME Elective:** Any ME class that is 3000 level or above, excluding ME 3141, 3700, 3720, 3743, 3744, 4699, 4741, 4742, 4753 and 4903. See page 2 for ME Elective requirements and classes available.
5. **Economics**: Students can receive credit for only one of ECON 2100, ECON 2101, ECON 2105 & ECON 2106. The only exception is that students can receive 6 hours credit for both ECON 2105 and ECON 2106.
6. **Humanities Electives and Social Science Electives**: See page 2 for a link to the list of classes.
7. **Overlay Areas:** ***Global Perspective*** and ***Ethics*** must both be taken as parts of the curriculum. They can be free electives, economics, humanities or social science electives. See page 2 for details.

Required Overlay Areas

Global Perspective (See Note 7) 3-0-**3**	**Ethics** (See Note 7) 3-0-**3**

Undergraduate Curriculum Sheet Explanation - Page 2

Understanding the Curriculum Guide



Pre-requisites: These classes must be completed before you can take the class.

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

GPA & Grade Requirements

1. All classes taken for the BSME degree must be taken LETTER GRADE. This includes all electives.
2. **Overall GPA**: Must be 2.00 or above (truncated) at graduation.
3. **Required Grades:**
   - Minimum grade of a D or better is required except as noted.
   - If a pre-requisite for an ME class requires a C or better, the C is required before taking the next class. Ex: A grade of C or better is required in COE 2001 before taking ME 2202.
4. **Major GPA:**
   - Must be 2.00 or above (truncated) at graduation.
   - Classes used to calculate it are all ME and COE classes required by name and number plus MSE 2001, ECE 3710, ECE 3741, ISYE 3025, Design Elective and ME Elective.
   - Among the courses used to compute this, all courses must be completed with a C-or-better with the exception up to 9 credit hours, that can be satisfied with a grade of D.

Curriculum Conversion (for students electing to move from a prior year's curriculum)

Curriculum Conversion Information: http://www.me.gatech.edu/undergraduate/ug-curr-conv12

Humanities, Social Science and Overlay Requirements (Ethics & Global Perspective)

1. **Humanities Electives:** A current list is at http://www.catalog.gatech.edu/students/ugrad/core/corec.php
2. **Social Science Electives:** A current list is at http://www.catalog.gatech.edu/students/ugrad/core/coree.php
3. **Ethics Overlay:** Must be a 3 hour class and is selected from http://www.catalog.gatech.edu/students/ugrad/core/ethics.php
4. **Global Perspective Overlay:** A current list of classes is at http://www.catalog.gatech.edu/students/ugrad/core/gp.php

ME Electives

1. A list of ME Electives offered each semester is at http://www.me.gatech.edu/undergraduate/registration#sp
2. ME electives are 3000-level or above ME classes, excluding ME 3141, 3700, 3720, 3743, 3744, 4699, 4741, 4742, 4753 & 4903.
3. ME electives cannot duplicate any material taken in other classes used for your BSME degree.
4. **Design Electives:** Students may take both design electives. One class will satisfy the design elective and the other class can satisfy an ME Elective or Free Elective.

Free Electives

1. Students can use either a max of 6 credits of VIP courses (ECE 2811, 381X, 481X) or a max of 6 credits of research / special problems courses (2699, 4699 & 4903) as free electives. If doing both types of courses, a total of 9 credits is allowed.
2. At least 9 hours of free electives must be at the 2000 level or above with the exception of 4 hours that may be satisfied with one of the following: BIOL 1510, BIOL 1520, or CHEM 1212K.
3. Free electives may not duplicate any material taken in other classes used for your BSME degree.

Pre-Requisites

1. **The ME curriculum has a 7 or 8 semester pre-requisite chain, depending on the design class selected. Plan carefully!**
2. Students can select either ME 3180 or ME 4315 for the design elective. More students select ME 3180.
3. **Pre-reqs are strictly enforced in ME. Carefully plan your schedule in advance and have it checked by an advisor.**

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	4	ME 2202, MATH 2401, MATH 2403
MATH 2401, MATH 2403, PHYS 2212, ME 2202, CS 1371, ME 1770, CHEM 1310	3	ME 1770, ME 3322, ME 3340, CS 1371, PHYS 2212, CHEM 1310
ME 2110, ME 3322, ME 3340, ME 2016 ECE 3710, COE 3001, MSE 2001	2	COE 3001, ME 2110, ME 3345, ME 2016, ECE 3710, MSE 2001
ME 3180, ME 3057, ME 3345, ME 3017 ME 3210, MATH 3670	1	ME 4315, ME 3017, ME 3057, ME 3210, MATH 3670
ME Elect, ME 4182, ME 4056, ECE 3741, ISYE 3025	0	ME Elect, ME 4182, ME 4056, ISYE 3025, ECE 3741