R3
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ME Undergraduate Curriculum (Catalog: 2016 - 2017)

Freshman	**Fall**	**CHEM 1310** General Chemistry (See Note 2) 3-3-**4**	**MATH 1551** Differential Calculus (Minimum Grade C) 2-0-**2**	**Legislative** HIST 2111, HIST 2112, POL 1101, INTA 1200, or PUBP 3000 [Social Science] 3-0-**3**	**Wellness** APPH 1040 or APPH 1050 2-0-**2**	**ENGL 1101** English Composition 1 3-0-**3**	**MATH 1553** Linear Algebra (Minimum Grade C) 2-0-**2**
	Spring	**PHYS 2211** Physics 1 (Minimum Grade C) 3-3-**4** MATH 1551, MATH 1552*	**MATH 1552** Integral Calculus (Minimum Grade C) 4-0-**4** MATH 1551	**CS 1371** Computing for Engineers 3-0-**3**	**ME 1770** Intro to Engineering Graphics (See Note 3, No W's) 2-3-**3**	**ENGL 1102** English Composition 2 3-0-**3** ENGL 1101	**= 16 hours** **= 17 hours**
Sophomore	**Fall**	**PHYS 2212** Physics 2 3-3-**4** PHYS 2211	**MATH 2551** Multivariable Calculus (Minimum Grade C) 4-0-**4** MATH 1552, MATH 1553	**ME 2110** Creative Decisions and Design (See Note 3, No W's) 2-3-**3** ME 1770, COE 2001*	**MSE 2001** Engineering Materials 3-0-**3** CHEM 1310	**COE 2001** Statics (Minimum Grade C) 2-0-**2** MATH 1552, PHYS 2211	**= 16 hours**
	Spring	**ECE 3710** Circuits & Electronics 2-0-**2** PHYS 2212	**MATH 2552** Differential Equations (Minimum Grade C) 4-0-**4** MATH 1552, MATH 1553	**ME 2016** Computing Techniques 3-0-**3** MATH 1552, MATH 1553, MATH 2552*, CS 1371	**ME 2202** Dynamics of Rigid Bodies 3-0-**3** COE 2001, MATH 1553*	**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 2552*	**ME 3322** Thermo-dynamics 3-0-**3** PHYS 2211, MATH 2552	**ME 3340** Fluid Mechanics 3-0-**3** ME 2202, MATH 2551 MATH 2552, ME 3322*	**Economics** ECON 2100, 2101, 2105, or 2106 (See Note 5) 3-0-**3**	**Humanities Elective** (See Note 6) 3-0-**3**
	Spring	**ME 3017** System Dynamics 3-0-**3** ME 2202, ME 2016, MATH 2552, ECE 3710	**ME 3345** Heat Transfer 3-0-**3** ME 3322, ME 3340, MATH 2552	**ME 3057** Experimental Methods Lab (See Note 3, No W's) 2-3-**3** COE 3001, ME 3340, ME 3017*, ME 3345*, MATH 3670*	**ISYE 3025** Engineering Economics 1-0-**1** ECON 2100, 2101, 2105 or 2106	**MATH 3670** Statistics & Applications 3-0-**3** MATH 2551	**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 3210** Design, Materials & Manufacture 3-0-**3** MSE 2001, ME 2110	**ME 4056** ME Systems Lab (See Note 3, No W's) 2-3-**3** ME 3057, ME 3345, ME 3017, MATH 3670	**Free Elective** 1000 Level or Above (See Note 1) 3-0-**3**	**Free Elective** 1000 Level or Above (See Note 1) 3-0-**3**	**= 16 hours** **= 15 hours** **= 18 hours**
	Spring	**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 Elective	**ME Elective** 3000 Level or Above ME Class (See Note 4) 3-0-**3**	**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**	**Free Elective** 2000 Level or Above (See Note 1) 3-0-**3**

129 Total Hours

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

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 backside for ME Elective requirements and a link to class options.
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 backside for a link to the list of classes.
7. **Ethics Overlay** is taken as part of the curriculum as a free elective, humanities or social science elective. See backside for details.

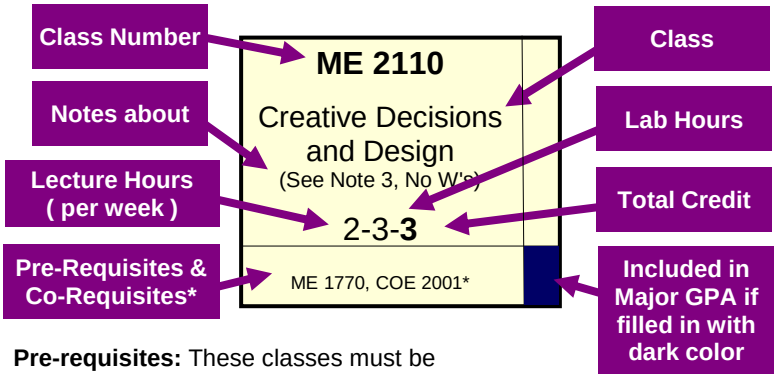
Overlay Area

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

http://www.me.gatech.edu/undergraduate/ug-curr

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.

Humanities, Social Science and Overlay Requirement (Ethics)

1. **Humanities Electives:** See http://catalog.gatech.edu/academics/undergraduate/core-curriculum/core-area-c/
2. **Social Science Electives:** See http://catalog.gatech.edu/academics/undergraduate/core-curriculum/core-area-e/
3. **Ethics Overlay**: A 3 hour class selected from http://catalog.gatech.edu/academics/undergraduate/core-curriculum/ethics/

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.

Concentrations (Optional - Not Required)

1. Concentrations include: 1. Automation & Robotics 2. Thermal, Fluid & Energy Systems 3. Manufacturing 4. Mechanics of Materials 5. Micro- & Nano- Engineering 6. Nuclear Energy. See: www.me.gatech.edu/undergraduate/ug-curr/concentrations

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 1551
MATH 1551	6	MATH 1552, PHYS 2211
MATH 1552, PHYS 2211	5	COE 2001, MATH 1553
COE 2001, MATH 1553	4	ME 2202, MATH 2551, MATH 2552
MATH 2551, MATH 2552, 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