

ME Undergraduate Curriculum (Catalog: 2021 - 2022)

1st Year	Fall	CHEM 1310 General Chemistry (See Note 2) 3-3-4	MATH 1551 Differential Calculus (Minimum Grade C) 2-0-2	MATH 1553 Linear Algebra (Minimum Grade C) 2-0-2	Legislative HIST 2111, HIST 2112, POL 1101, INTA 1200, or PUBP 3000 [Social Science] 3-0-3	ENGL 1101 English Composition 1 3-0-3	Wellness APPH 1040, 1050 or 1060 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 1670 Engineering Graphics & Design (See Note 3, No W's) 2-3-3	ENGL 1102 English Composition 2 3-0-3 ENGL 1101	= 16 hours = 17 hours	
2nd Year	Fall	PHYS 2212 Physics 2 3-3-4 PHYS 2211	MATH 2551 Multivariable Calculus (Minimum Grade C) 4-0-4 MATH 1552, MATH 1553 4	ME 2110 Creative Decisions and Design (See Note 3, No W's) 2-3-3 ME 1670, 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 4	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 Page 2) 3-0-3 3	= 15 hours = 16 hours	
3rd Year	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 Thermodynamics 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 1) 3-0-3	Humanities Elective (See Page 2) 3-0-3 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 Page 2) 3-0-3 3	
4th Year	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, COE 3001	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 Page 2) 3-0-3 3	Free Elective 1000 Level or Above (See Page 2) 3-0-3 3	= 16 hours = 15 hours = 18 hours	
	Spring	Capstone Design ME 4182: ME Design or ME 4723: Interdisciplinary Design (See Note 3, No W's) 2-3-3 ME 3210, (ME 3180 or ME 4315) ME 3345, ME 3017, MATH 3670 COE 3001, ME 2110	ME Elective 3000 Level or Above ME Class (See Page 2) 3-0-3	Humanities Elective (See Page 2) 3-0-3 3	Free Elective 2000 Level or Above (See Page 2) 3-0-3 3	Free Elective 2000 Level or Above (See Page 2) 3-0-3 3	Free Elective 2000 Level or Above (See Page 2) 3-0-3 3	

Overlay Area

Ethics

(See Page 2)

3-0-3

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

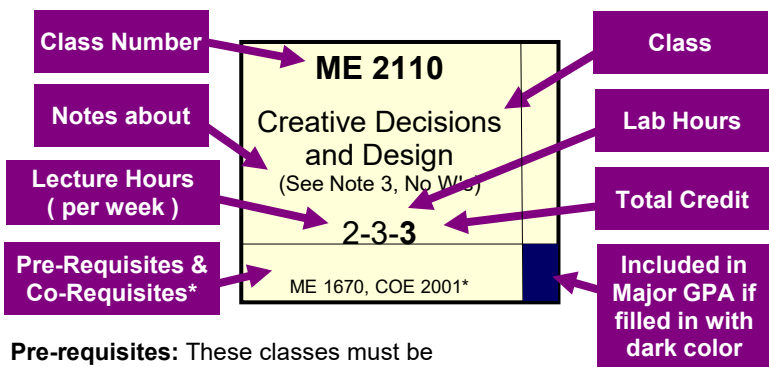
- Economics:** Students can receive credit for only one of ECON 2100, ECON 2101, ECON 2105 & ECON 2106. The only exception is that students can receive 6 hours credit for both ECON 2105 and ECON 2106.
- CHEM 1310:** CHEM 1211K can substitute for CHEM 1310. CHEM 1211K & 1212K are recommended for pre-health students.
- ME 1670, 2110, 3057, 4056, 4182 & 4723 cannot be dropped after phase 2 registration closes without documented medical rea

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

129 Total Hours

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 Sciences 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/>
4. Ethics overlay is taken as a free, humanities or social science elective. It is not intended to be an extra class.

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 & ME 4803 (patent class). Other excluded classes may be added to the list throughout the year as new courses are created.
3. ME electives cannot duplicate any material taken in other classes used for your BSME degree.
4. Research and VIP cannot be used to satisfy the ME Elective. They can only be used as free electives (see section below for rules).
5. **Design Electives:** Students may take both design electives. One will satisfy the design elective & the other will satisfy the ME

Free Electives

1. Students can use either a max of 6 credits of VIP (Vertically Integrated Project) courses 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 the following: BIOS 1107/1107L, BIOS 1108/1108L, BIOS 1207/1207L, BIOS 1208/1208L, 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)

Concentrations: Automation & Robotics, Automotive Engineering, Design, Manufacturing, Mechanics of Materials, Micro- & Nano-Engineering, Nuclear Energy, Thermal Fluid & Energy System [See: www.me.gatech.edu/undergraduate/ug-curr/concentrations](http://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.
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 1670, CHEM 1310	3	ME 1670, 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 or 4723, ME 4056, ECE 3741, ISYE 3025	0	ME Elect, ME 4182 or 4723, ME 4056, ISYE 3025, ECE 3741