

ME Undergraduate Curriculum (Catalog: 2011 - 2012)

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 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	
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 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*	Science Elective BIOL 1510, BIOL 1520, EAS 1600, EAS 1601 or PHYS 2213 (See Note 7) X-X-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	Humanities Elective (See Note 6) 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	MATH 3670 Statistics (ISYE 3770 is also accepted) 3-0-3 MATH 2401	ISYE 3025 Engineering Economics 1-0-1 (ECON 2100, 2101, 2105 or 2106)	Social Science Elective (See Note 6) 3-0-3	Humanities 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 3057 Experimental Methods Lab (See Note 3, No W's) 2-3-3 COE 3001, ME 3340, ME 3017*, ME 3345*, MATH 3670*	ME Elective 3000 Level or Above ME Class (See Note 4) 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 4182 Capstone Design (See Note 3, No W's) 1-6-3 COE 3001, ME 3345, ME2110, ME3210, ME3017, MATH 3670, Design Elect.	ME Elective 3000 Level or Above ME Class (See Note 4) 3-0-3	Social Science Elective (See Note 6) 3-0-3	Free Elective 2000 Level or Above (See Note 1) 3-0-3	= 15 hours

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

- Free Electives:** Free electives may not duplicate course content in any other courses used for the BSME.
- CHEM 1310:** CHEM 1211K can substitute for CHEM 1310. CHEM 1211K & 1212K are recommended for pre-health students.
- ME 1770, 2110, 3057, 4056 & 4182 cannot be dropped after phase 2 registration closes without documented medical reasons.
- ME Elective:** Any ME class that is 3000 level or above, excluding ME 3141, 3700, 3720, 3743, 3744, 4741, 4742 and 4753. See page 2 for ME Elective requirements and classes available.
- 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.
- Humanities Electives and Social Science Electives:** See page 2 for a link to the list of classes.
- Science Elective:** CHEM 1212K can satisfy the science elective.
- 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.

126 Total Hours

Required Overlay Areas

Ethics HTS 2084, INTA 2030, PHIL 3105, PHIL 3109, PHIL 3127, or PHIL 4176 (See Note 8) 3-0-3	Global Perspective (See Note 8) 3-0-3
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Undergraduate Curriculum Sheet Explanation - Page 2

Understanding the Curriculum Guide

Class Number → ME 2110

Notes about → Creative Decisions and Design (See Note 3, No W's)

Lecture Hours (per week) → 2-3-3

Pre-Requisites & Co-Requisites* → ME/CEE 1770
COE 2001*

Class → ME 2110

Lab Hours → (Empty box)

Total Credit → 2-3-3

Included in Major GPA if filled in with dark color → (Dark blue box)

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.

GPA & Grade Requirements

- All classes taken for the BSME degree must be taken LETTER GRADE. This includes all electives.
- Overall GPA:** Must be 2.00 or above (truncated) at graduation.
- 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 MATH 2403 before taking ME 3322.
- 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 the Design Elective and ME Electives.

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

- Humanities Electives:** A current list is at <http://www.catalog.gatech.edu/students/ugrad/core/corec.php>
- Social Science Electives:** A current list is at <http://www.catalog.gatech.edu/students/ugrad/core/coree.php>
- Overlay Areas:** The overlay areas (global perspective and ethics) should be taken as part of the curriculum. Depending on the class they can be used as a free elective, economics, humanities elective or social science elective.
- Ethics Overlay:** PHIL 3105, 3109, 3127 and 4176 are humanities electives. INTA 2030 and HTS 2084 are social science electives.
- Global Perspective Overlay:** A current list of classes is at <http://www.catalog.gatech.edu/students/ugrad/core/gp.php>

ME Electives

- A list of ME Electives offered each semester is at <http://www.me.gatech.edu/undergraduate/registration#sp>
- ME electives are 3000-level or above ME classes, excluding ME 3141, 3700, 3720, 3743, 3744, 4741, 4742 & 4753.
- 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. More information about research is at: <https://www.me.gatech.edu/undergraduate/research>
- 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:	Biomedical Engineering	Materials Science and Engineering
Aerospace Engineering	Computing Science	Mathematics
Biology	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. Plan carefully!
- Students can select either ME 3180 or ME 4315 for the design elective. More students select ME 3180.
- 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)	Minimum #	Energy Systems Design (ME 4315)
	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