

2012-2013 BSME Curriculum Rollout

Introduction

The Woodruff School of Mechanical Engineering is introducing a new [BSME Curriculum](#) starting summer 2012. The 2012-2013 BSME Curriculum contains 15 hours of free electives, increases the total required hours from 126 to 129, and allows students to pursue Concentration Areas. The increased flexibility is designed to give students more opportunities to do things such as study abroad, earn a minor or certificate, take classes outside of ME or pursue one of the newly formed concentrations.

Can I Move to the 2012-2013 Curriculum?

- Students who started here Spring 2012 and earlier have the option to move to the 2012-2013 Curriculum or stay on the current curriculum. To be eligible to move students must take classes at GT after spring '12 and graduate after spring '12.
- Any student who changes their major to ME effective summer 2012 and beyond is automatically required to move to the 2012-2013 Curriculum and must complete all of the 2012-2013 Curriculum requirements.
- All students who start at Georgia Tech summer 2012 and later are required to use the 2012-2013 Curriculum.

Should I Move to the 2012-2013 Curriculum?

Below is a very general evaluation of who should consider moving to the 2012-2013 Curriculum. Every student should take the time to evaluate the curriculum comparison charts and see whether it is better to move to the 2012-2013 Curriculum. Your [academic advisor](#) can verify your decision for you. In general, we recommend the following students consider moving:

- Transfer students who started fall 2011 and later who have extra transfer credits that are not being used.
- Students who are interested in adding a minor that is not on our [list of approved minors that allow substitutions for the ME electives](#).
- Students who are planning to attend a study abroad or exchange program and will take extra classes.
- Students who are interested in pursuing a Concentration.
- Students with a D in COE 2001, PHYS 2211 or more than 3 D's in ME classes, should not move to the 2012-2013 Curriculum unless they are willing to repeat these classes.
- Students who want to use 9 hours of research towards their degree should not move to the 2012-2013 Curriculum.

How do I Move to the 2012-2013 Curriculum?

Students who plan to move to the 2012-2013 Curriculum must fill out a [Change of Major Form](#) to change their Catalog Year to 2012-2013. The Catalog Year is the same as the curriculum year. We will not sign [Change of Major Forms](#) during registration times, only during non-registration times. Students cannot combine curricula; you must completely satisfy one curriculum.

Concentration Areas

Concentrations are a new feature of the 2012-2013 Curriculum and are only available in the 2012-2013 Curriculum. Concentrations are optional, not required. Concentrations are 15 hours of classes and the classes satisfy the Design Elective, the ME Elective and 9 hours of free electives. They are different than minors because they allow students to specialize in a particular area within ME. The three initial concentrations are listed below. We plan to add more concentrations next year.

- Automation and Robotic Systems
- Thermal, Fluid, and Energy Systems
- Micro- and Nanoengineering

New Classes in the 2012-2013 Curriculum

Two new classes will be introduced in the 2012-2013 Curriculum. ME 3015 (4 hours) will be replaced by ME 3017 (3 hours) and ME 4053 (2 hours) will be replaced by ME 4056 (3 hours). The transition plan is:

- **ME 3015/3017 Transition:** ME 3015 will be offered through fall 2012. ME 3017 will be offered starting spring 2013.
- **ME 4053/4056 Transition:** ME 4053 will be offered through summer 2013. ME 4056 will be offered starting fall 2013.
- **2011-2012 Curriculum Substitutions:** The following substitutions are allowed for the 2011-2012 and Earlier Curricula
 - ME 3015 (4 hours) = ME 3017 (3 hours) + Free Elective @ 3000 Level (1 hour)
 - ME 4053 (2 hours) + Free Elective @ 1000 Level (1 hour) = ME 4056 (3 hours)
- **2012-2013 Curriculum Substitutions:** The following substitutions are allowed for the 2012-2013 Curriculum
 - ME 3017 (3 hours) + Free Elective @ 1000 Level (1 hour) = ME 3015 (4 hours)
 - ME 4056 (3 hours) = ME 4053 (2 hours) + Free Elective @ 4000 Level (1 hour)

2011-2012 Curriculum Compared to the 2012-2013 Curriculum

The charts below compare the 2012-2013 Curriculum to the 2011-2012 Curriculum. Students cannot combine requirements for the different curricula; they must satisfy all of the requirements for one or the other. Students must meet all requirements for the curriculum they decide to follow. The only exceptions to this are the ME 3015 and ME 4053 class substitutions which are reviewed in the **New Classes in the 2012-2013 Curriculum** section of this document.

Comparison of GPA and Grade Requirements		
Requirement	2011-2012 Curriculum	2012-2013 Curriculum
Major GPA: Classes Included	All ME and COE classes	All ME and COE classes required by name and number plus ECE 3710, ECE 3741, ISYE 3025, MSE 2001, Design Elective and ME Elective. ME classes used for free electives are not included.
Major GPA: GPA Required	2.0 or higher (truncated GPA)	2.0 or higher (truncated GPA)
Major GPA: C or Better Rule	No additional requirements	All classes must be passed with a C or better with the exception of 9 hours which can be a D
Overall GPA Requirement	2.0 or higher (truncated GPA)	2.0 or higher (truncated GPA)
C or Better Rule	A grade of C or better is required in MATH 1501, MATH 1502, MATH 2401, MATH 2403	A grade of C-or-better is required in MATH 1501, MATH 1502, MATH 2401, MATH 2403, PHYS 2211, and COE 2001. The C or better is required before taking another ME course for which those courses are pre-requisites.
Pass/Fail Classes Allowed?	No pass/fail classes are allowed. All classes must be taken letter grade, including all electives.	No pass/fail classes are allowed. All classes must be taken letter grade, including all electives.

Comparison of Class Requirements		
Requirement	2011-2012 Curriculum	2012-2013 Curriculum
Total Credits	126	129
Science Elective	One of BIOL 1510, BIOL 1520, CHEM 1212K, PHYS 2213, CHEM 1311, EAS 1600 or EAS 1601	None required
System Dynamics: ME 3015	ME 3015 (4 hours) or the approved substitution: ME 3017(3) + Free Elective (1)	ME 3017 (3 hours) or the approved substitution: ME 3015 (4)
ME Systems Lab: ME 4053	ME 4053 (2 hours) or the approved substitution: ME 4056 (3)	ME 4056 (3 hours) or the approved substitution: ME 4053 (2) + Free Elective (1)
ME Electives: Hours Req'd	6 Hours Required	3 Hours Required
ME Electives: Class Requirements	Any ME course at the 3000-level or above, excluding ME 3141, 3720, 3743, 3744, 4741, 4742, & 4753	Any ME course at the 3000-level or above, excluding ME 3141, 3720, 3743, 3744, 4699, 4741, 4742, 4753 & 4903
ME Elective: Approved Substitutions	Students who complete an ME approved minor can substitute minor classes for ME electives	No substitutions are allowed for the ME elective
Research/Special Problems as ME Electives	3 hours maximum of ME 4699 or ME 4903 can be used as ME Electives	No research or special problems from any department can be used as an ME Elective
Free Electives: Hours Req'd	6 Hours Required	15 Hours Required
Free Electives: Level Requirements	6 hours at the 2000 level or above	6 hours at the 1000 level or above plus 9 hours at the 2000 level or above *
Research/Special Problems as Free Electives	6 hours maximum of 2699/4699/4903. The course can be from any department.	6 hours maximum of 2699/4699/4903. The course can be from any department.
Minor Classes as Free Electives	Minor classes can be used for free electives as long as they meet the free elective level requirements	Minor classes can be used for free electives as long as they meet the free elective level requirements
Global Perspective	Required for the 2011-2012 Curriculum. Not required for any prior curriculum.	Required regardless of when the student started at Georgia Tech
Ethics	One of PHIL 3105, PHIL 3109, PHIL 3127, PHIL 4176, HTS 2084 or INTA 2030	A three hour course selected from this list
Concentration Areas	No concentration areas exist	Optional concentration areas are available

* Four of the nine 2000 level free electives may be satisfied with one of: BIOL 1510, BIOL 1520, or CHEM 1212K.