

NRE Undergraduate Curriculum (Catalog: 2011 - 2012)

Freshman	Fall	CHEM 1310 General Chemistry (See Note 5) 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 [Humanities] 3-0-3	= 16 hours
	Spring	PHYS 2211 Physics 1 3-3-4 <small>MATH 1501</small>	MATH 1502 Calculus 2 (Minimum Grade C) 4-0-4 <small>MATH 1501</small>	CS 1371 Introduction to Computing 3-0-3	NRE 2110 Introduction to Nuclear & Rad. Engineering 2-0-2	ENGL 1102 English Composition 2 [Humanities] 3-0-3 <small>ENGL 1101</small>	
Sophomore	Fall	PHYS 2212 Physics 2 3-3-4 <small>PHYS 2211</small>	MATH 2401 Calculus 3 (Minimum Grade C) 4-0-4 <small>MATH 1502</small>	COE 2001 Statics 2-0-2 <small>MATH 1502, PHYS 2211</small>	Economics ECON 2100, ECON 2105 or ECON 2106 [Social Science] (See Note 5) 3-0-3	Social Science or Humanities Elective 1 (See Note 2) 3-0-3	= 16 hours
	Spring	PHYS 2213 Introduction to Modern Physics 3-0-3 <small>PHYS 2212</small>	MATH 2403 Differential Equations (Minimum Grade C) 4-0-4 <small>MATH 1502</small>	NRE 3301 Radiation Physics 3-0-3 <small>MATH 1502, PHYS 2211</small>	MSE 2001 Engineering Materials 3-0-3 <small>CHEM 1310</small>	ECE 3710 Circuits & Electronics 2-0-2 <small>PHYS 2212</small>	
Junior	Fall	NRE 3112 Nuc. Radiation Detection (See Note 7, No W's) 2-3-3 <small>NRE 3301</small>	ME 3322 Thermo- dynamics 3-0-3 <small>PHYS 2211, MATH 2403</small>	ME 3340 Fluid Mechanics (See Note 8) 3-0-3 <small>COE 2001, ME 3322* MATH 2401, MATH 2403, ME 2202 (See Note 8)</small>	ECE 3025 Electro- magnetics 3-0-3 <small>ECE 3710, MATH 2401 MATH 2403, NRE 2110</small>	ECE 3741 Instrument & Electronics Lab 0-3-1 <small>ECE 3710</small>	Global Perspective [Hum or Soc Sci] (See Notes 2 & 9) 3-0-3
	Spring	NRE 3208 Nuclear Reactor Physics I 3-0-3 <small>NRE 3301, MATH 2403</small>	NRE 3316 Radiation Protection Engineering 3-0-3 <small>NRE 3301, MATH 2403</small>	COE 3001 Mechanics of Deformable Bodies 3-0-3 <small>COE 2001, MATH 2403*</small>	ME 3345 Heat Transfer 3-0-3 <small>ME 3322, ME 3340, MATH 2403</small>	ISYE 3025 Engineering Economics 1-0-1 <small>(ECON 2100, 2105 or 2106)</small>	MATH/ISYE 3770 Statistics (Minimum Grade C) 3-0-3 <small>MATH 2401</small>
Senior	Fall	NRE 4208 Nuclear Reactor Physics II 4-0-4 <small>NRE 3208, MATH 2403</small>	NRE 4214 Reactor Engineering 3-0-3 <small>ME 3322, ME 3340, ME 3345</small>	NRE 4328 Radiation Sources & Applications 3-0-3 <small>NRE 3301, NRE 3316</small>	Technical Elective (See Note 4) 3-0-3	Ethics HTS 2084, INTA 2030, PHIL 3105, PHIL 3109, PHIL 3127 or PHIL 4176 (See Notes 1 & 3) 3-0-3	= 16 hours
	Spring	NRE 4206 Radiation Physics Lab (See Note 7, No W's) 1-3-2 <small>NRE 3112, NRE 4208</small>	NRE 4232 NRE Design (See Note 7, No W's) 1-9-4 <small>NRE 4328, NRE 4208</small>	Technical Elective (See Note 4) 3-0-3	Technical Elective (See Note 4) 3-0-3	Social Science or Humanities Elective 2 (See Note 3) 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.

1. **Ethics** - PHIL 3105, 3109, 3127 & 4176 are humanities (HUM). HTS 2084 & INTA 2030 are social sciences (SS)
2. Between **Global Perspective** and **Social Science or Humanities Elective 1**, one must be a social science elective and one must be a humanities elective.
3. Between **Ethics** and **Social Science or Humanities Elective 2**, one must be a social science elective and one must be a humanities elective.
4. **Technical Electives** are any 3000 level courses or above from the Colleges of Engineering, Science or Computing that do not duplicate any other class used for the BSNRE degree. See back for more information.
5. CHEM 1211K can substitute for CHEM 1310. CHEM 1211K & 1212K are recommended for pre-health students.
6. Students can receive credit for only ONE of ECON 2100, ECON 2105 or ECON 2106. The only exception is that students can receive 6 hours credit for both ECON 2105 and ECON 2106.
7. NRE 3112, 4206 & 4232 cannot be dropped after registration ends without documented medical reasons.
8. NRE students do not take ME 2202, so NRE 3301 or NRE 2110 will satisfy the pre-req for registration.
9. **Global Perspective**: This requirement is effective fall 2011 & later. See back for website with eligible classes.

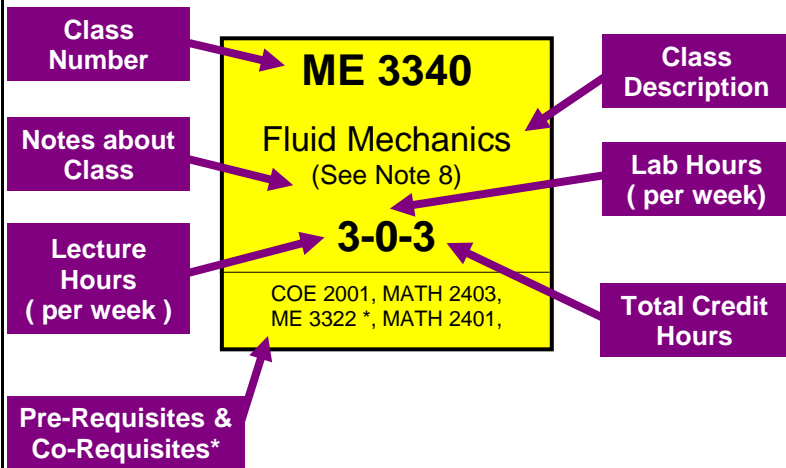
126 Total Hours

General Requirements

- A. All classes must be taken LETTER GRADE.
- B. Minimum grade of D required for each class, except as noted.
- C. Overall GPA must be greater than 2.00 at graduation.
- D. NRE GPA (including all NRE classes) must be greater than 2.00 at graduation.

Undergraduate Curriculum Sheet Explained

Understanding the Curriculum Guide



Pre-requisites: These classes must be completed before this class.

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

Core Classes

Humanities Electives (12 hours total)

ENGL 1101 (3 hrs) - Must be completed before earning 45 credits.
 ENGL 1102 (3 hrs) - Must be completed before earning 45 credits.
 * Humanities Elective (3 hrs)
 * Humanities Elective (3 hrs)

Social Science Electives (12 hours total)

Economics (3 hrs) - ECON 2100, 2101, 2105 or 2106
 US Perspective (3 hrs) - HIST 2111, HIST 2112, POL 1101, INTA 1200 or PUBP 3000
 * Social Science Elective (3 hrs)
 * Social Science Elective (3 hrs)

*** Note** - As part of the core classes, students must complete both an ethics class and a global perspective class.

Ethics must be selected from:

PHIL 3105 (Humanities) PHIL 4176 (Humanities)
 PHIL 3109 (Humanities) INTA 2030 (Social Science)
 PHIL 3127 (Humanities) HTS 2084 (Social Science)

Global Perspective is required effective fall 2011 and later. This course must be selected from:

<http://www.catalog.gatech.edu/students/ugrad/core/gp.php>

Core Electives: Classes that satisfy social science electives and humanities electives can be found at:

<http://www.catalog.gatech.edu/students/ugrad/core/core.php>

Technical Electives

1. Technical Electives may be selected from any course offered in the College of Engineering, Science or Computing at the 3000 level or above, excluding Psychology (PSYC) and Applied Physiology (APPH).
2. Technical electives cannot overlap any other course which you intend to use for your BSNRE.
3. Students with a 3.2 GPA or above may use graduate level NRE classes as Technical Electives.
4. **Research:** Students may use 4 hours maximum of 4699 or 4903 for technical elective credit. Research does not have to be NRE specific research; it can be from the colleges of engineering, science or computing.

Class Offerings

Class	Frequency of Offering
NRE 2110	Spring
NRE 3112	Fall
NRE 3208	Spring
NRE 3301	Spring
NRE 3316	Spring
NRE 4206	Spring
NRE 4208	Fall
NRE 4214	Fall
NRE 4232	Spring
NRE 4328	Fall
COE 2001	Every Semester *
COE 3001	Every Semester *
ECE 3025	Every Semester *
ISYE/MATH 3770	Every Semester *
ME 3322	Every Semester *
ME 3340	Every Semester *
ME 3345	Every Semester *

* Summer classes may be cancelled due to low enrollments.