# NRE 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
- **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

## Freshman Spring
- **PHYS 2211** Physics 1 3-3-4
- **MATH 1552** Integral Calculus (Minimum Grade C) 4-0-4
- **CS 1371** Computing for Engineers 3-0-3
- **NRE 2110** Intro to NRE 2-0-2
- **ENGL 1102** English Composition 2 3-0-3

## Sophomore Fall
- **PHYS 2212** Physics 2 3-3-4
- **MATH 2551** Multivariable Calculus (Minimum Grade C) 4-0-4
- **COE 2001** Statics 2-0-2
- **Economics** ECON 2100, 2101, 2105 or 2106 (See Note 4) 3-0-3
- **Social Science Elective** (See Note 5) 3-0-3

## Sophomore Spring
- **NRE 3112** Radiation Detection (See Note 1, No W’s) 2-3-3
- **ME 3322** Thermodynamics 3-0-3
- **ECE 3710** Circuits & Electronics 2-0-2
- **Humanities Elective** (See Note 5) 3-0-3

## Junior Fall
- **NRE 3208** Nuclear Reactor Physics I 3-0-3
- **ME 3340** Fluid Mechanics (See Note 7) 3-0-3
- **ECE 3025** Electromagnetics 3-0-3
- **MATH 3670** Statistics & Applications (Minimum Grade C) 3-0-3

## Junior Spring
- **NRE 3216** Radiation Protection Engineering 3-0-3
- **COE 3001** Mechanics of Deformable Bodies 3-0-3
- **ME 3345** Heat Transfer 3-0-3
- **ISYE 3025** Engineering Economics 1-0-1
- **Overlay Area**
  - **Ethics** PHIL 3105, PHIL 3109, PHIL 3127, and PHIL 4176
  - **Social Science Ethics** HTS 2084, INTA 2030 (See Note 6) 3-0-3

## Senior Fall
- **NRE 4206** Radiation Physics Lab (See Note 1, No W’s) 1-3-2
- **NRE 4232** NRE Design (See Note 1, No W’s) 1-9-4
- **Technical Elective** (See Note 3) 3-0-3
- **Humanities Elective** (See Note 5) 3-0-3

## Senior Spring
- **NRE 4208** Nuclear Reactor Physics II 4-0-4
- **NRE 4214** Reactor Engineering 3-0-3
- **Technical Elective** (See Note 3) 3-0-3
- **Technical Elective** (See Note 3) 3-0-3
- **Technical Elective** (See Note 3) 3-0-3

## Notes:
1. NRE 3112, 4206 & 4232 cannot be dropped after registration ends without documented medical reasons.
2. CHEM 1310: CHEM 1211K can substitute for CHEM 1310. CHEM 1211K & 1212K are recommended for pre-health students.
3. 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.
4. Economics: Students can receive credit for only one of ECON 2100, ECON 2101, ECON 2105 or ECON 2106. The only exception is that students can receive 6 hours credit for both ECON 2105 and ECON 2106.
5. Humanities Electives and Social Science Electives: See page 2 for a link to the list of classes.
6. Ethics Overlay is taken as either a humanities elective or social science elective in the NRE curriculum.
7. NRE students do not take ME 2202, so NRE 3301 or NRE 2110 will satisfy the pre-req for registration.

### 126 Total Hours
Undergraduate Curriculum Sheet Explained

Understanding the Curriculum Guide

GPA & Grade Requirements

1. All classes taken for the BSNRE 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 for each class except as noted.
   - C or better is required for MATH 1551, MATH 1552, MATH 1553, MATH 2551, MATH 2552 and MATH 3670.

4. Major GPA:
   - All NRE classes are used to calculate the major GPA.
   - Technical electives used if they are NRE classes.
   - Must be 2.00 or above (truncated) at graduation.

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 who are eligible to take graduate level classes may use most 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.

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: Ethics must be one of PHIL 3105, PHIL 3109, PHIL 3127, PHIL 4176, HTS 2084 or INTA 2030. Ethics can be used for a humanities elective or a social science elective depending on which class is selected.

   Humanities Versions of Ethics: PHIL 3105, PHIL 3109, PHIL 3127 or PHIL 4176

   Social Science Versions of Ethics: HTS 2084 or INTA 2030

Frequency of Class Offerings

<table>
<thead>
<tr>
<th>Class</th>
<th>Semesters Available</th>
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<tbody>
<tr>
<td>NRE 2110</td>
<td>Spring Only</td>
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<tr>
<td>NRE 3112</td>
<td>Fall Only</td>
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<tr>
<td>NRE 3208</td>
<td>Spring Only</td>
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<tr>
<td>NRE 3301</td>
<td>Spring Only</td>
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<tr>
<td>NRE 3316</td>
<td>Spring Only</td>
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<td>NRE 4206</td>
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<tr>
<td>NRE 4232</td>
<td>Spring Only</td>
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<tr>
<td>NRE 4328</td>
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<tr>
<td>COE 2001</td>
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<td>COE 3001</td>
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<td>ECE 3025</td>
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<td>ME 3340</td>
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<tr>
<td>ME 3345</td>
<td>Summer, Fall, Spring *</td>
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* Summer classes may be cancelled due to low enrollments.

www.me.gatech.edu/files/ug/program_of_study_nre1617.pdf