

# NRE Undergraduate Curriculum (2004-2006)

Rev. 8, 9/12/2005

## FRESHMAN

Fall	<b>CHEM 1310</b> Chemistry 1 3-3-4	<b>MATH 1501</b> Calculus 1 (Minimum Grade C) 4-0-4	<b>History</b> HIST 2111, HIST 2112, POL 1101, INTA 1200 or PUBP 3000 (Soc Scien, See Note 4) 3-0-3	<b>HPS 1040</b> Wellness 2-0-2	<b>ENGL 1101</b> English Composition 1 (Humanities) 3-0-3	= 16 hrs
	Spring	<b>PHYS 2211</b> Physics 1 3-3-4 MATH 1502*	<b>MATH 1502</b> Calculus 2 (Minimum Grade C) 4-0-4 MATH 1501	<b>CS 1371</b> Introduction To Computing 3-0-3	<b>NRE 2110</b> Introduction To NRE 2-0-2	

## SOPHOMORE

Fall	<b>PHYS 2212</b> Physics 2 3-3-4 PHYS 2211	<b>MATH 2401</b> Calculus 3 (Minimum Grade C) 4-0-4 MATH 1502	<b>ME 2211</b> Introduction To Mechanics 3-0-3 PHYS 2211, MATH 1502	<b>Economics</b> ECON 2100, 2105 or 2106 (Soc Scien, See Note 5) 3-0-3	<b>Humanities Elective</b> 3-0-3	= 17 hrs
	Spring	<b>PHYS 2213</b> Introduction to Modern Physics 3-0-3 PHYS 2212	<b>MATH 2403</b> Differential Equations (Minimum Grade C) 4-0-4 MATH 1502	<b>NRE 3212</b> NRE Fundamentals 3-0-3 PHYS 2211, MATH 2401 PHYS 2213*, MATH 2403*	<b>MSE 2001</b> Engineering Materials 3-0-3 CHEM 1310	

## JUNIOR

Fall	<b>NRE 3301</b> Radiation Physics 3-0-3 PHYS 2213	<b>ME 3322</b> Thermo- dynamics 3-0-3 ME 2211, MATH 2403	<b>ME 3340</b> Fluid Mechanics 3-0-3 ME 2202, ME 3322*	<b>ECE 3741</b> Instrument & Electronics Lab 0-3-1 ECE 3710	<b>ISYE 3025</b> Engineering Economics 1-0-1 Economics (ECON 2100, 2105 or 2106)	<b>Social Science Elective</b> 3-0-3	= 14 hrs
	Spring	<b>NRE 3112</b> Radiation Detection (See Note 6, No W's) 2-3-3 NRE 2110, NRE 3301	<b>NRE 3316</b> Radiation Protection Engineering 3-0-3 NRE 3301, MATH 2403	<b>ME 3201</b> Mechanics of Materials 3-0-3 ME 2211, MSE 2001*, MATH 2403*	<b>ME 3345</b> Heat Transfer 3-0-3 ME 3340	<b>ECE 3301</b> Energy Conversion & Mechatronics 1-2-2 ECE 3710	

## SENIOR

Fall	<b>NRE 4204</b> Nuclear Reactor Physics 4-0-4 NRE 3301, MATH/ISYE 3770	<b>NRE 4214</b> Reactor Engineering 3-0-3 ME 3340, ME 3345	<b>NRE 4328</b> Radiation Sources & Applications 3-0-3 NRE 3301, (NRE 3112 OR NRE 3212)	<b>Technical Elective</b> (See Note 2) 3-0-3	<b>Ethics</b> HTS 2084, INTA 2030, PST 3105, PST 3109, PST 3127 or PST 4176 (See Note 1) 3-0-3	= 16 hrs
	Spring	<b>NRE 4206</b> Radiation Physics Lab (See Note 6, No W's) 1-3-2 NRE 3212, NRE 4204	<b>NRE 4232</b> NRE Design (See Note 6, No W's) 1-9-4 NRE 4328, NRE 4204	<b>Technical Elective</b> (See Note 2) 3-0-3	<b>Technical Elective</b> (See Note 2) 3-0-3	

### NOTES:

1. PST classes are humanities, HTS & INTA classes are social sciences.
2. Technical Electives may be selected from any course offered in the Colleges of Engineering, Science, or Computing at the 3000 or 4000 level excluding Psychology (PSYC) and Applied Physiology (APPH). This course cannot substantially overlap an undergraduate course which you intend to include in your degree petition.
3. If Ethics is humanities, social science elective is required for this class. If Ethics is social science, humanities elective is required for this class.
4. No credit is awarded for both INTA 1200 and POL 1101.
5. No credit is awarded for (ECON 2100 and ECON 2105) or (ECON 2100 and ECON 2106).
6. NRE 3112, NRE 4206 and NRE 4232 cannot be dropped without approval from the advisor.

Pre-Reqs and Co-Reqs\*

**126 Total Hrs**

### GRADUATION REQUIREMENTS:

1. No PASS/FAIL classes allowed.
2. Minimum grade of D required for each class except as noted.
3. Overall GPA must be greater than 2.0.
4. Overall ME GPA must both be greater than 2.0.
5. No more than 3 withdrawals (W's) are allowed in ME or NRE classes except for documented and approved reasons.