Student: __________________________________________ PUID: _____________________________ Catalog Term: _______

Additional Majors: ___________________________________________ Minors: ___________________________________________

**Requirements (106-108 credits)**

**Biology (20 credits)**

- (4) BIOL 11000 Fundamentals of Biology I
- (4) BIOL 11100 Fundamentals of Biology II
- (4) BIOL 20300 Human Anatomy & Physiology
- (4) BIOL 20400 Human Anatomy & Physiology
- (4) CHM 11500 General Chemistry
- (4) CHM 11600 General Chemistry

**English (3 credits)**

- (4) ENGL 10600 First Year Composition
- (3) English Selective – select from list

**General Science or Radiological Health Sciences Selective (3 credits)**

- (3) General Science or Radiological Health Sciences Selective – select from list

**Health Physics Selective (3 credits)**

- (3) Health Physics Selective – select from list
- (3) Math or Computer Science Selective – select from list

**Math or Computer Science or General Science Selective (3 credits)**

- (3) Math or Computer Science Selective or General Science Selective - select from list

**Health Sciences (39 credits)**

- (3) HSCI 10100 Introduction to Health Sciences Professions
- (3) HSCI 20200 Essentials of Environmental, Occupational, and Radiological Health Sciences
- (3) HSCI 31200* Radiation Science Fundamentals
- (3) HSCI 31300* Principles of Radiation Detection & Measurement
- (2) HSCI 51400* Radiation Instrumentation Laboratory
- (3) HSCI 52600* Principles of Health Physics & Dosimetry
- (3) HSCI 53400* Applied Health Physics
- (3) HSCI 54000* Radiation Biology
- (2) HSCI 57400* Medical Health Physics
- (4-5) MA 16100 Plane Analytic Geometry & Calculus I or MA 16500 Analytic Geometry & Calculus I
- (4-5) MA 16200 Plane Analytic Geometry & Calculus II or MA 16600 Analytic Geometry & Calculus II
- (4) MA 26100 Multivariate Calculus
- (3) NUCL 20000 Introduction to Nuclear Engineering
- (2) NUCL 20500 Nuclear Engineering Undergraduate Laboratory I
- (2) NUCL 30500 Nuclear Engineering Undergraduate Laboratory II
- (4) PHYS 17200 Modern Mechanics
- (3) PHYS 24100 Electricity & Optics
- (1) PHYS 34000 Modern Physics Laboratory
- (3) PHYS 34200 Modern Physics
- (3) STAT 30100 Elementary Statistical Methods

**Humanities Selectives – select from list (9 credits)**

- (3) __________________________________________________________________________
- (3) __________________________________________________________________________
- (3) __________________________________________________________________________

**Electives (3-5 credits)**

- (3) __________________________________________________________________________
- (2) __________________________________________________________________________
- (2) __________________________________________________________________________

*A grade of “C” or higher must be earned in HSCI 31200, 31300, 51400, 52600, 53400, 54000, and 57400.

All students must complete 32 credits of 300 level or higher courses at Purdue for graduation.

120 credits required for Bachelor of Science degree

Revised 5/2012
### English Selective List
- ENGL 23000 Great Narrative Works
- ENGL 26600 World Literature: From The Beginnings To 1700 A.D.
- ENGL 26700 World Literature: From 1700 A.D. To The Present
- ENGL 30400 Advanced Composition
- ENGL 30600 Introduction To Professional Writing
- ENGL 42000 Business Writing
- ENGL 42100 Technical Writing

### General Science Selective List
- AT 57200 Human Error
- CHM 22400 Introductory Quantitative Analysis
- CHM 25500 Organic Chemistry
- CHM 25501 Organic Chemistry Laboratory
- CHM 25600 Organic Chemistry
- CHM 25601 Organic Chemistry Laboratory
- CHM 33300 Principles of Biochemistry
- HSCI 34500 Introduction To Occupational and Environmental Health Science
- BIOL 41500 Introduction To Molecular Biology
- BIOL 44400 Human Genetics
- BIOL 54200 Animal Cell Culture
- BIOL 51600 Molecular Biology Of Cancer
- HK 44500 Principles of Epidemiology
- HSCI 54700 Environmental Epidemiology
- HSCI 55100 Health Effects of Non-ionizing Radiation
- HSCI 55200 Introduction to Aerosol Science
- HSCI 56000 Toxicology
- HSCI 58000 Occupational Ergonomics
- PHIL 27000 Biomedical Ethics
- PHIL 29000 Environmental Ethics
- PHIL 35000 Philosophy and Probability
- PHYS 22000 General Physics
- PHYS 22100 General Physics
- PHYS 31000 Intermediate Mechanics
- PHYS 36000 Quantum Mechanics
- PHYS 55000 Introduction To Quantum Mechanics
- PHYS 55600 Introductory Nuclear Physics
- PHYS 56400 Introduction To Elements Particle Physics
- PHYS 56500 Introduction To Elementary Particle Physics II

### Math and Computer Science Selective List
- CS 15800 C Programming
- CS 15900 Programming Applications for Engineers
- CS 18000 Programming I
- CS 31400 Numerical Methods
- CS 47800 Introduction to Bioinformatics
- MA 26200 Linear Algebra and Differential Equations
- MA 41600 Probability
- MA 52700 Advanced Mathematics for Engineers and Physicists I
- MA 52800 Advanced Mathematics for Engineers and Physicists II
- PHYS 58000 Computational Physics
- STAT 31100 Introductory Probability
- STAT 51200 Applied Regression Analysis

### Radiological Health Sciences Selective List
- Any course on the Health Physics Selective List
- HSCI 19000, 29000, 39000, 49000, 59000 - Special Topics in Radiological Health Sciences
- HSCI 57000 Introduction to Medical Diagnostic Imaging
- HSCI 57200 Radiation Oncology Physics
- HSCI 69000 Molecular Radiobiology
- NUPH 41200 Diagnostic Imaging I
- NUPH 41300 Diagnostic Imaging II
- NUPH 41400 Nuclear Pharmacy Laboratory
- NUPH 53000 Applied Nuclear Pharmacy
- NUPH 55000 Introduction to Positron Emission Tomography

### Humanities Selective List
- Any course from the following subjects:
  - Anthropology (ANTH)
  - Art & Design (AD)
  - Classics (CLCS)
  - Communication (COM)
  - Dance (DANC)
  - Economics (ECON)
  - English (ENGL)
  - Foreign Languages & Literatures (FLL)
  - History (HIST)
  - Interdisciplinary Studies (IDIS)
  - Music (MUS)
  - Philosophy (PHIL)
  - Political Science (POL)
  - Psychology (PSY)
  - Sociology (SOC)
  - Theatre (THTR)

### Health Physics Selective List
- HSCI 39000 Radiological Emergency Management
- HSCI 48500 Health Physics Internship
- HSCI 54700 Environmental Epidemiology
- HSCI 55100 Health Effects of Non-ionizing Radiation
- HSCI 55200 Introduction to Aerosol Science
- HSCI 59000 Public Health Law and Policy
- ME 20000 Thermodynamics I
- ME 27000 Basic Mechanics I
- NRES 28000 Hazardous Waste Handling
- NUCL 30000 Nuclear Structure and Radiation Interactions
- NUCL 31000 Introduction to Neutron Physics
- NUCL 35000 Nuclear Thermal–Hydraulics I
- NUCL 35100 Nuclear Thermal-Hydraulics II
- NUCL 50100 Nuclear Engineering Principles
- NUCL 50300 Radioactive Waste Management
- NUCL 50400 Nuclear Engineering Experiments
- NUCL 51000 Nuclear Reactor Theory I

RADH
revised 5/2012
<table>
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<tr>
<th>Freshman Year - First Semester</th>
<th>Student I.D.: ________________________________ Radiological Health Science - RADH 120 Semester Hours</th>
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<tbody>
<tr>
<td>(4) BIOL 11000-Fundamentals of BIOL I</td>
<td>Sem/Yr Grade (4) BIOL 11100-Fundamentals of BIOL II</td>
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<tr>
<td>(4) CHM 11500-General Chemistry I</td>
<td>(CALC) (4) CHM 11600-General Chemistry II (CHM 11500)</td>
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<td>(3) COM 11400 - Fund. Of Speech</td>
<td>(4) ENGL 10600-Freshman Composition</td>
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<td>(2) HSCI 10100-Intro to HSCI Professions</td>
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<td>(4) MA 165 (MA161)Plane Analytic GEOM &amp; CALC I</td>
<td>(4-5) MA 16600 (16200) -Plane Analytic GEOM &amp; CALC II</td>
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<th>Sophomore Year - Third Semester</th>
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<tr>
<td>(4) BIOL 20300-Human ANAT &amp; Physiology I</td>
<td>Sem/Yr Grade (4) BIOL 20400-Human ANAT &amp; Physiology II</td>
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<td>(1 sem of BIOL &amp; 1 sem of CHM)</td>
<td>(4) BIOL 20300</td>
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<td>(3) HSCI 20200-Essentials of EH, OH, +RH</td>
<td>(3) NUCL 20000 - Intro to Nuclear Engrng</td>
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<td>(1 sem of BIOL &amp; 1 sem of CHM)</td>
<td>(MATH 16200/16600 &amp; PHYS 17200)</td>
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<td>(4) MATH 26100 - Multivariate Calculus</td>
<td>(2) NUCL 20500-Nucl Engr - Undergrad Lab 1</td>
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<td>(4) PHYS 17200- Modern Mechanics</td>
<td>(NUCL 20000-may be concurrent)</td>
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<td>(4) Math/Comp Science/General Science Elective</td>
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<td>Notes: All students must complete 32 hours</td>
<td>Notes: Responsibility for completing graduation requirements</td>
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<td>of 300 level or higher courses at Purdue for graduation.</td>
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### Junior Year - Fifth Semester

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<th>Grade</th>
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<tr>
<td>HSCI 31200*-Radiation Science Fund.</td>
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<td>HSCI 31300*-Principles of Rad. Detection &amp; Measurement (HSCI 31200)</td>
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<td>(1 yr CALC+ PHYS 17200)</td>
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<td>(HSCI 31200)</td>
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<td>NUCL 30500-Undergrad Lab II</td>
<td>(2)</td>
<td>Fall only</td>
<td>HSCI 51400*-Radiation Instr. Lab (HSCI 31200 or consent)</td>
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<td>NUCL 20500</td>
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<td>PHYS 24100-Electricity and Optics</td>
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<td>HSCI 54000*-Radiation Biology (HSCI 31200 &amp; BIOL 11100)</td>
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<td>STAT 30100-Elem. Statistical Methods</td>
<td>(College Algebra)</td>
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<td>PHYS 34200-Modern Physics</td>
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**Notes:** *A grade of "C" or higher must be earned in HSCI 312, 313, 514, 526, 534, 540, 574*

### Sixth Semester

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<td>HSCI 53400*-Applied Health Physics (HSCI 31200)</td>
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<td>HSCI 57400-Medical Health Physics (HSCI 31200, MA 16100/16500, PHYS 24100)</td>
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<td>Physics 34000L-Modern Physics Lab</td>
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**Notes:**

### Senior Year - Seventh Semester

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<td>HSCI 52600-Principles of HP and Dosimetry (HSCI 31200)</td>
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<td>HSCI 53400*-Applied Health Physics (HSCI 31200)</td>
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<td>HSCI 57400-Medical Health Physics (HSCI 31200, MA 16100/16500, PHYS 24100)</td>
<td>(2)</td>
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<td>Physics 34000L-Modern Physics Lab</td>
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**Notes:**

### Eighth Semester

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<td>Math/Comp Science Elective</td>
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**Notes:**