

Student: \_\_\_\_\_ PUID: \_\_\_\_\_ Catalog Term: \_\_\_\_\_

Additional Majors: \_\_\_\_\_ Minors: \_\_\_\_\_

**Radiological Health Sciences/Health Physics Emphasis Core (University Foundational Learning Outcomes) (27-29 credits)**

- \_\_\_ (4-3) ENGL 10600 First-Year Composition or ENGL 10800 Accelerated First-Year Composition **[Written Communication]**  
**and [Information Literacy]**
- \_\_\_ (3) COM 11400 Fundamental of Speech Communication or COM 21700 Science Writing & Presentations **[Oral Communication]**
- \_\_\_ (4) BIOL 11000 Fundamentals of Biology I **[Fulfills 1 Science Core Course]**
- \_\_\_ (4) BIOL 11100 Fundamentals of Biology II **[Fulfills 1 Science Core Course]**
- \_\_\_ (3) \_\_\_\_\_ **[Humanities]** *select course from University list*
- \_\_\_ (3) \_\_\_\_\_ **[Behavior/Social Science Humanities]** *select course from University list*
- \_\_\_ (4-5) MA 16100 Plane Analytic Geometry & Calculus I or MA 16500 Analytic Geometry & Calculus I **[Quantitative Reasoning]**
- \_\_\_ (3) \_\_\_\_\_ **[Science, Technology & Society]** - *select from HSCI Science, Technology & Society Core List*

**Required Courses for Radiological Health Sciences/Health Physics Emphasis (87-88 credits)**

- \_\_\_ (4) BIOL 20300 Human Anatomy & Physiology
- \_\_\_ (4) BIOL 20400 Human Anatomy & Physiology
- \_\_\_ (4) CHM 11500 General Chemistry
- \_\_\_ (4) CHM 11600 General Chemistry
- \_\_\_ (3) \_\_\_\_\_ English Selective - *select from list*
- \_\_\_ (3) \_\_\_\_\_ General Science or Radiological Health Sciences Selective - *select from list*
- \_\_\_ (3) \_\_\_\_\_ Health Physics Selective - *select from list*
- \_\_\_ (3) \_\_\_\_\_ Health Physics Selective - *select from list*
- \_\_\_ (2) HSCI 10100 Introduction to Health Sciences Professions
- \_\_\_ (3) HSCI 20200 Essentials of Environmental, Occupational, and Radiological Health Sciences
- \_\_\_ (3) HSCI 31200\* Radiation Science Fundamentals
- \_\_\_ (2) 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
- \_\_\_ (3) \_\_\_\_\_ Math-Computer Science Selective - *select from list*
- \_\_\_ (4) \_\_\_\_\_ Math-Computer Science or General Science Selective - *select from list*
- \_\_\_ (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

**HSCI Humanities, Behavioral/Social Sciences Selectives - select from list (3 credits)**

- \_\_\_ (3) \_\_\_\_\_ *select course from HSCI Humanities, Behavioral/Social Sciences list*

**Electives (0-3 credits)**

\_\_\_ ( ) \_\_\_\_\_    \_\_\_ ( ) \_\_\_\_\_    \_\_\_ ( ) \_\_\_\_\_    \_\_\_ ( ) \_\_\_\_\_

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

*An Ethics course (such as PHIL 11100 Ethics or PHIL 29000 Environmental Ethics) is highly recommended.*

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

**120 credits required for Bachelor of Science degree**

**University Foundational Learning Outcomes List:**

<https://www.purdue.edu/provost/initiatives/curriculum/course.html>

**HSCI Science, Technology & Society Core List**

BCHM 10000 Intro to Biochemistry  
 EAPS 10000 Planet Earth  
 EAPS 11300 Introduction to Environmental Science  
 EAPS 12000 Introduction to Geography  
 HONR 19901 First-Year Honors in Science, Technology & Society  
 HSCI 20100 Principles of Public Health  
 NRES 29000 Introduction to Environmental Science  
 PHIL 27000 Biomedical Ethics  
 STAT 11300 Statistics and Society  
 TECH 12000 Technology and the Individual

**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

**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

**CONTINUED from Health Physics Selective List**

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

**Math-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

**HSCI Humanities, Behavioral/Social Sciences Selectives List - select any course(s) 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)

Name: \_\_\_\_\_

Student I.D.: \_\_\_\_\_

# School of Health Sciences

Radiological Health Science - RADH  
120 Semester Hours

Minor Code: \_\_\_\_\_

# Radiological Health Science

Freshman Year - First Semester		Sem/Yr	Grade	Second Semester		Sem/Yr	Grade
(4)	BIOL 11000 Fundamentals of Biology I (Science)			(4)	BIOL 11100 Fundamentals of BIOL II (BIOL 11000) (Science)		
(4)	CHM 11500 General Chemistry I (MA 15900 or calculus placement) (Science)			(4)	CHM 11600 General Chemistry II (CHM 11500) (Science)		
(3)	COM 11400 Fund. Of Speech or COM 21700 Science Writing & Presentation (Oral Communication)			(4)	ENGL 10600 Freshman Composition (Written Communication & Info Literacy)		
(2)	HSCI 10100 Intro to HSCI Professions Fall only			(4-5)	MA 16600 (16200) Plane Analytic Gometry & CALC II (MA 16100/16500) (Quant. Reasoning)		
(4-5)	MA 16500 (MA16100) Plane Analytic GEOM & CALC I (Quant. Reasoning)			[16-17]			
(17-18)							

Sophomore Year - Third Semester		Sem/Yr	Grade	Fourth Semester		Sem/Yr	Grade
(4)	BIOL 20300 Human ANAT & Physiology I (Science) Fall only			(4)	BIOL 20400 Human ANAT & Physiology II (Science) Spring only		
(3)	HSCI 20200 Essentials of EH, OH, +RH (1 sem of BIOL & 1 sem of CHM) Fall only			(3)	NUCL 20000 Intro to Nuclear Engrng (MATH 16200/16600 & PHYS 17200)		
(4)	MATH 26100 Multivariate Calculus (Quant. Reasoning)			(2)	NUCL 20500 Nucl Engr Undergrad Lab I (NUCL 20000-may be concurrent) Spring Only		
(4)	PHYS 17200 Modern Mechanics (Science)			(3)	HSCI 20100 Principles of Public Health (Science, Technology & Society) Spring only		
[15]				[12]			

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

Note: Responsibility for completing graduation requirements  
is solely that of the student.

# School of Health Sciences

## Radiological Health Science - RADH

120 Semester hours

Junior Year - Fifth Semester		Sem/Yr	Grade	Sixth Semester		Sem/Yr	Grade
(3)	HSCI 31200* Radiation Science Fund. (1 yr CALC+ PHYS 17200) <span style="float: right;">Fall only</span>			(3)	Humanities Selective		
(2)	HSCI 31300* Principles of Rad. Detection & Msrmt. (1yr CALC & PHYS 172) <span style="float: right;">Fall only</span>			(2)	HSCI 51400* Radiation Instr. Lab (HSCI 31200 or consent) <span style="float: right;">Spring only</span>		
(3)	Humanities Selective (Select from the University list)			(3)	HSCI 53400* Applied Health Physics (HSCI 31200) <span style="float: right;">Spring only</span>		
(2)	NUCL 30500 Undergrad Lab II <span style="float: right;">Fall only</span> (NUCL 20500)			(3)	PHYS 34200 Modern Physics		
(3)	PHYS 24100 Electricity and Optics (Science)			(3)	HISCI 54000* Applied Health Physics (HSCI 31200) <span style="float: right;">Spring only</span>		
(3)	STAT 30100 Elem. Statistical Methods (Info Literacy)						
[16]				[14]			
Senior Year - Seventh Semester		Sem/Yr	Grade	Eighth Semester		Sem/Yr	Grade
(3)	HSCI 52600 Principles of HP and Dosimetry (HSCI 31200) <span style="float: right;">Fall Only</span>			(3)	Gen Science or RHS Elective		
(2)	HSCI 57400* Medical Health Physics (HSCI 31200, MA 16100/16500, PHYS 24100) <span style="float: right;">Fall only</span>			(3)	** Humanities Selective (Behavior/Social Science)		
(3)	Health Physics Selective			(4)	Math/Comp Science/General Science Elective		
(1)	Physics 34000L Modern Physics Lab			(3)	English Selective		
(2)	Elective			(3)	Math/Comp Science Elective		
(3)	Health Physics Elective						
[14]				[16]			

Note: \*A grade of "C" or higher must be earned in HSCI 312, 313, 514, 526, 534, 540, 574 and MA 161/162 or MA 165/166.

Note: Selected courses only; please see your advisor