

Student: _____ PUID: _____ Catalog Term: _____

Additional Majors: _____ Minors: _____

Radiological Health Sciences/Pre-Medical Physics 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) HSCI 20100 Principles of Public Health Science [**Science, Technology & Society**]

Required Courses for Radiological Health Sciences/Pre-Medical Physics (84-85 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*
- ____ (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 54000* Radiation Biology
- ____ (3) HSCI 57000* Introduction to Medical Diagnostic Imaging
- ____ (3) HSCI 57200* Radiation Oncology Physics
- ____ (2) HSCI 57400* Medical Health Physics
- ____ (4-5) MA 16200* Plane Analytic Geometry & Calculus II or MA 16600* Analytic Geometry & Calculus II
- ____ (4) MA 26100 Multivariate Calculus
- ____ (4) MA 26200 Linear Algebra & Differential Equations
- ____ (3) _____ Math-Computer Sciences Selective – *select from list*
- ____ (4) PHYS 17200* Modern Mechanics
- ____ (3) PHYS 24100 Electricity & Optics
- ____ (1) PHYS 25200 Electricity & Optics Laboratory
- ____ (3) _____ Physics Selective – *must be PHYS 30000 or higher ***
- ____ (3) _____ Physics Selective – *must be PHYS 30000 or higher ***
- ____ (1) PHYS 34000 Modern Physics Laboratory
- ____ (3) PHYS 34200 Modern Physics
- ____ (3) _____ Radiological Health Sciences Selective – *select from list*
- ____ (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 (3-6 credits)

____ () _____ ____ () _____ ____ () _____ ____ () _____

***A grade of "C" or higher must be earned in HSCI 31200, HSCI 31300, HSCI 51400, HSCI 54000, HSCI 57000, HSCI 57200, HSCI 57400; MA 16100/16200 or MA 16500/16600; and PHYS 17200.**

An Ethics course (such as PHIL 11100 Ethics, PHIL 27000 Biomedical Ethics, or PHIL 29000 Environmental Ethics) is highly recommended.

****Suggested physics selectives are PHYS 31000 Intermediate Mechanics, PHYS 36000 Quantum Mechanics, and/or PHYS 55600 Introductory Nuclear Physics.**

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 5/2014

University Foundational Learning Outcomes List:

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

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

Math-Computer Sciences 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

- 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
- AT 57200 Human Error

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 _____ School of Health Sciences (HSCI) Minor(s) _____

PUID _____ HEALTH SCIENCES RADIOLOGICAL PRE-MEDICAL HEALTH SCIENCES

RHMP

120 credit hours required

Effective: Fall 2014 Beginners

Freshman Year	First Semester	Sem/Yr	Grade
BIOL 11000 (4) (S)*	Fundamentals of Biology I		
CHM 11500 (4) (S)*	General Chemistry I MA 154, 158, or 159 or calculus placement		
COM 11400 (3) or COM 21700 (3)*** (OC)*	Fundamentals of Speech Communication or Science Writing and Presentation		
HSCI 10100 (2)	Intro to Health Science Professions Fall only		
MA 16500 (4) or MA 16100 (5) (QR)*	Plane Analytic GEOM & CALC I** (ALEKS = 85)		
Total Credits = 17 - 18			

	Second Semester	Sem/Yr	Grade
BIOL 11100 (4) (S)*	Fundamentals of Biology II (BIOL 11000)		
CHM 11600 (4) (S)*	General Chemistry II (CHM 11200 or CHM 11500)		
ENGL 10600 (4) or ENGL 10800 (3)*** (WC,IL)*	First-Year English Composition Accelerated First-Year Composition		
MA 16600 (4) or MA 16200 (5) (QR)*	Plane Analytic GEOM & CALC II** (MA 16500 or 16100)		
Total Credits = 15 - 17			

Sophomore Year	Third Semester	Sem/Yr	Grade
HSCI 20200 (3) (STS)*	Essentials of EH, OH and RH Fall only (3 credits in BIOL & CHM)		
MA 26100 (4) (QR)*	Multivariate Calculus (MA 16200 or MA 166000)		
PHYS 17200 (4) (S)*	Modern Mechanics** (MA 16100 or 16500 or ALEKS = 85)		
STAT 301 (3) (IL)*	Elementary Statistical Methods		
Total Credits = 14			

	Fourth Semester	Sem/Yr	Grade
HSCI 20100 (3) (STS)*	Principles of Public Health Sciences Spring only (Classification of at least 03)		
MA 26200 (4) (QR)*	Linear Algebra & Differential Equations (MA 26100)		
PHYS 24100 (3) (S)*	Electricity & Optics (PHYS 17200)		
PHYS 25200 (1)	Electricity & Optics Lab (PHYS 24100 or co-req)		
Humanities Sel. (3) (BSS)*	(Select from University list)		
Total Credits = 14			

***These courses are usually completed during the first/freshman year. However, one or both could be taken during summer or the sophomore year in order to decrease the credit load.

Junior Year	Fifth Semester	Sem/Yr	Grade
BIOL 20300 (4) (S)*	Human Anatomy & Physiology I Fall only		
HSCI 31200 (3)	Radiation Science Fundamentals** Fall only (MA 16600 or 16200 & PHYS 17200)		
HSCI 31300 (2)	Principles of Rad. Detection & Measurement ** Fall only (MA 16600 or 16200 & PHYS 17200)		
PHYS 34200 (3)	Modern Physics (PHYS 24100)		
PHYS 34000 (1)	Modern Physics Lab (PHYS 24100) (PHYS 34200 co-req)		
English Selective (3)			
Total Credits = 16			

Senior Year	Seventh Semester	Sem/Yr	Grade
HSCI 52600 (3)	Principles of HP & Dosimetry Fall only (HSCI 31200)		
HSCI 57400 (2)	Medical Health Physics** Fall only (HSCI 31200 & MA 26100 & PHYS 24100)		
PHYS. Selective (3)***			
Humanities Sel. (3) (H)*	(Select from University list)		
RADH HSCI Sel. (3)	Select from RADH HSCI Selective List		
Total Credits = 14			

University Foundations Learning Outcome List

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

- *(BSS) Behavioral/Social Science - 1 course
- *(H) Humanities - 1 course
- *(OC) Oral Communication - 1 course
- *(QR) Quantitative Reasoning - 1 course
- *(S) Science - 2 courses
- *(IL) Information Literacy - 1 course
- *(STS) Science, Technology, & Society) - 1 course
- *(WC) Written Communication – 1 course

	Sixth Semester	Sem/Yr	Grade
BIOL 20400 (4) (S)*	Human Anatomy & Physiology II Spring only (BIOL 20300)		
HSCI 51400 (2)	Radiation Instr. Lab** Spring only (HSCI 31200)		
HSCI 54000 (3)	Radiation Biology** Spring only (BIOL 11100 & HSCI 31200)		
MA/CS Selective (3)	(Select from MA/CS Selective List)		
HSCI Hum. Sel. (3)			
Total Credits = 15			

	Eighth Semester	Sem/Yr	Grade
HSCI 570000 (3)	Intro to Medical Diagnostic Imaging** Spring only (HSCI 31200 & MA 26200)		
HSCI 57200 (3)	Radiation Oncology Physics** Spring only (HSCI 31200 & MA 26100 & PHYS 24100)		
Physics Selective (3)***			
Elective (3)			
Elective (0 – 3)			
Total Credits = 12 - 15			

Purdue students must complete 32 credit hours of 300 level or above courses for graduation with a Bachelor of Science degree.

Student is responsible for completing and fulfilling all graduation requirements.

****A minimum grade of C must be earned in HSCI 312, 313, 514, 540, 570, 572, CALC I & II, PHYS 172.**

*****Suggested courses: PHYS 31000, 36000, or 55600.**