

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 30000 level or higher courses at Purdue for graduation.

120 credits required for Bachelor of Science degree

Revised 5/2015

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 _____
PUID _____

School of Health Sciences (HSCI)
RADIOLOGICAL HEALTH SCIENCE PRE-MEDICAL PHYSICS
RHMP
120 credit hours required

Minor(s) _____
RHMP

Freshman Year	First Semester	Sem/Yr	Grade
BIOL 11000 (4) (S)*	Fundamentals of Biology I		
CHM 11500 (4) (S)*	General Chemistry I MA 15400, 15800, or 15900 or calculus placement)		
	OR ALEKS = 75		
COM 11400 (3) or COM 21700 (3)***	Fundamentals of Speech Communication or Science Writing and Presentation (OC)*		
HSCI 10100 (2)	Intro to Health Science Professions		
	Fall only		
MA 16500 (4) or MA 16100 (5)	Plane Analytic GEOM & CALC I** (ALEKS = 85) (QR)*		
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 = C-)		
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 = C-)		
PHYS 17200 (4) (S)*	Modern Mechanics** (MA 16100 or 16500 or ALEKS = 85)		
STAT 30100 (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 = C-)		
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 sophomore year in order to decrease credit load.

Junior Year	Fifth Semester	Sem/Yr	Grade
BIOL 20300 (4)	Human Anatomy & Physiology I		
(S)*	Fall only		
HSCI 31200 (3)	Radiation Science Fundamentals**		
Fall only	(MA 16600 or 16200 & PHYS 17200 or NUCL 20000~)		
HSCI 31300 (2)	Principles of Rad. Detection & Measurement **		
Fall only	(MA 16600 or 16200 & PHYS 17200 or NUCL 20000~)		
	~Minimum grade of C- in NUCL 20000.		
PHYS 34200 (3)	Modern Physics		
	(PHYS 24100)		
PHYS 34000 (1)	Modern Physics Lab		
	(PHYS 24100) PHYS 34200 may be taken concurrently.		
English Selective (3)			
Total Credits = 16			

	Sixth Semester	Sem/Yr	Grade
BIOL 20400 (4)	Human Anatomy & Physiology II		
(S)*	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			

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			

	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			

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

Purdue students must complete 32 credit hours of 30000 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 31200, 31300, 51400, 54000, 57000, 57200, CALC I & II, PHYS 17200.**

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

Rad'l Hlth Pre-Med Phys
05/2015