RADIOLOGICAL HEALTH SCIENCES
Pre-Medical Physics Concentration
College of Health and Human Sciences

RADH-BS
RADH-PRMP
120 credits

Student: _____ PUID: _____ Catalog Term: Fall 2025

Additional Majors: _____ Minors: _____

Major Requirements (48 credits)

____ (4) BIOL 11000 Fundamentals of Biology I **[Satisfies 1 Science Core Course]**
____ (4) BIOL 11100 Fundamentals of Biology II **[Satisfies 1 Science Core Course]**
____ (4) BIOL 20300 Human Anatomy & Physiology
____ (4) BIOL 20400 Human Anatomy & Physiology
____ (3) CHM 11510 General Chemistry
____ (1) CHM 11520 General Chemistry Lab
____ (3) CHM 11610 General Chemistry
____ (1) CHM 11620 General Chemistry Lab
____ (2) HSCI 10100 Introduction to the Health Sciences Professions
____ (3) HSCI 20100 Principles of Public Health Science **[Satisfies Science, Technology & Society Core]**
____ (3) HSCI 20200 Essentials of Environmental, Occupational, and Radiological Health Sciences
____ (3) HSCI 31200 Radiation Science Fundamentals (must earn a grade of "C" or higher)
____ (2) HSCI 31300 Principles of Radiation Detection & Measurement (must earn a grade of "C" or higher)
____ (2) HSCI 51400 Radiation Instrumentation Laboratory (must earn a grade of "C" or higher)
____ (3) HSCI 54000 Radiation Biology (must earn a grade of "C" or higher)
____ (3) STAT 30100 Elementary Statistical Methods
____ (3) _____Math-Computer Science Selective – *select from list*

Pre-Medical Physics Concentration (49-51 credits)

____ (3) HSCI 52600 Principles of Health Physics & Dosimetry
____ (3) HSCI 57000 Introduction to Medical Diagnostic Imaging (must earn a grade of "C" or higher)
____ (3) HSCI 57200 Radiation Oncology Physics (must earn a grade of "C" or higher)
____ (2) HSCI 57400 Medical Health Physics (must earn a grade of "C" or higher)
____ (4-5) MA 16100 Plane Analytic Geometry & Calculus I or MA 16500 Analytic Geometry & Calculus I (must earn a grade of "C" or higher) **[Satisfies Quantitative Reasoning Core]**
____ (4-5) MA 16200 Plane Analytic Geometry & Calculus II or MA 16600 Analytic Geometry & Calculus II (must earn a grade of "C" or higher)
____ (4) MA 26100 Multivariate Calculus
____ (4) MA 26200 Linear Algebra & Differential Equations
____ (4) PHYS 17200 Modern Mechanics (must earn a grade of "C" or higher)
____ (3) PHYS 24100 Electricity & Optics
____ (1) PHYS 25200 Electricity & Optics Laboratory
____ (2) PHYS 34000 Quantum Science Laboratory
____ (3) PHYS 34202 Introduction to Quantum Science
____ (3) _____Physics Selective – *must be PHYS 30000 or higher (PHYS 31000 Intermediate Mechanics, PHYS 36000 Quantum Mechanics, and/or PHYS 55600 Introductory Nuclear Physics are suggested)*
____ (3) _____Physics Selective – *select any 30000 or above PHYS course*
____ (3) _____Radiological Health Sciences Selective – *select from list*

Other Departmental/Program Course Requirements (18-19 credits)

____ (3) COM 11400 Fundamental of Speech Communication **[Satisfies Oral Communication Core]**
____ (4-3) ENGL 10600 First Year Composition with Conferences *or* ENGL 10800 First-Year Composition **[Satisfies Written Communication Core] and [Information Literacy Core]**
____ (3) _____**[Behavioral/Social Science Core]** *select course from University list*
____ (3) _____**English Selective** – *select any 20000 level or above ENGL course*
____ (3) _____**HSCI Humanities, Behavioral/Social Sciences Selective** – *select from HSCI list*
____ (3) _____**[Humanities Core]** *select course from University list*

Electives (2-5 credits)

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

An Ethics course (such as PHIL 11100 Ethics, PHIL 27000 Biomedical Ethics, or PHIL 29000 Environmental Ethics) is highly recommended for students pursuing the PRMP concentration.

All students must complete 32 credits of 30000 level or higher courses at Purdue for graduation.
120 credits required for Bachelor of Science degree
Must earn a grade of "C" or higher 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.

5/2025

HSCI Humanities, Behavioral/Social Sciences Selectives List - select any 10000-59999 course(s) from the following subjects:

- American Sign Language (ASL)
- Anthropology (ANTH)
- Arabic (ARAB)
- Art & Design (AD)
- Chinese (CHNS)
- Classics (CLCS)
- Communication (COM)
- Dance (DANC)
- Economics (ECON)
- English (ENGL)
- French (FR)
- German (GER)
- Greek (GREK)
- Hebrew (HEBR)
- History (HIST)
- Interdisciplinary Studies (IDIS)
- Italian (ITAL)
- Japanese (JPNS)
- Korean (KOR)
- Latin (LTN)
- Music (MUS)
- Philosophy (PHIL)
- Political Science (POL)
- Portuguese (PTGS)
- Psychology (PSY)
- Russian (RUS)
- Sociology (SOC)
- Spanish (SPAN)
- Theatre (THTR)

Math-Computer Science Selective List

CS 15900	C Programming
CS 18000	Problem Solving & Object-Oriented Programming
CS 31400	Numerical Methods
CS 47800	Introduction to Bioinformatics
ECE 20875	Python for Data Science
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 for PRMP

AT 57200	Human Error and Safety
BIOL 41500	Introduction To Molecular Biology
BIOL 44400	Human Medical Genetics
BIOL 51600	Molecular Biology Of Cancer
BIOL 54200	Animal Cell Culture
CHM 22400	Introductory Quantitative Analysis
CHM 25500	Organic Chemistry
CHM 25501	Organic Chemistry Laboratory
CHM 25600	Organic Chemistry
CHM 25601	Organic Chemistry Laboratory
ECE 20875	Python for Data Science
ECE 26400	Advanced C Programming
ECE 30100	Signals and Systems
ECE 30200	Probabilistic Methods in Electrical and Computer Engineering
ECE 36800	Data Structures
ECE 36900	Discrete Mathematics for Computer Engineering
ECE 43800	Digital Signal Processing with Applications
ECE 47300	Introduction to Artificial Intelligence
ECE 49595	Selected Topics in Electrical and Computer Engineering Titles: Data Mining Basic Concepts & Techniques; Cameras, Images, and Statistical Inverse Problems
ECE 50024	Machine Learning
ECE 56900	Introduction to Robotic Systems
ECE 59500	Selected Topics in Electrical Engineering Titles: Intro to Deep Learning; Deep Learning for Computer Vision; Natural Language Processing; Introduction to Data Mining
HSCI 30500	Basics of Oncology
HSCI 31000	Imaging in Medicine
HSCI 34500	Introduction To Occupational and Environmental Health Sciences
HSCI 41500	Introduction to Nuclear and Radiological Source Security
HSCI 54700	Fundamentals of Epidemiology
HSCI 55100	Physical Agents in Environmental Health
HSCI 55200	Introduction to Aerosol Science
HSCI 56000	Toxicology
HSCI 58000	Occupational Biomechanics and Ergonomics
PHIL 27000	Biomedical Ethics
PHIL 29000	Environmental Ethics
PHIL 35000	Philosophy and Probability
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
PUBH 40500	Principles of Epidemiology

University Foundational Learning Outcomes List: https://www.purdue.edu/provost/students/s-initiatives/curriculum/courses.html

A student may elect the Pass / Not-Pass (P/NP) grading option for elective courses only, unless an academic unit requires that a specific departmental course/s be taken P/NP. Students may elect to take University Core Curriculum courses P/NP; however, some major Plans of Study require courses that also fulfill UCC foundational outcomes. In such cases, students may not elect the P/NP option. A maximum of 24 credits of elective courses under the P/NP grading option can be used toward graduation requirements. For further information, students should refer to the College of Health and Human Sciences P/NP Policy.

Students are encouraged to use this advising worksheet as a resource when planning progress toward completion of degree requirements. An Academic Advisor may be contacted for assistance in interpreting this worksheet. This worksheet is not an academic transcript, and it is not official notification of completion of degree or certificate requirements. The University Catalog is the authoritative source for displaying plans of study. The student is ultimately responsible for knowing and completing all degree requirements

PURDUE UNIVERSITY

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Suggested Arrangement of Courses:

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
4	*BIOL 11000[CC]		4	*BIOL 11100[CC]	BIOL 11000
3	*CHM 11510[CC]	MA 15400 or MA 15800 or ALEKS = 75	3	*CHM 11610[CC]	CHM 11500 or CHM 11510
1	CHM 11520[CC]	CHM 11500 or (CHM 11510 or may be taken concurrently)	1	CHM 11620[CC]	CHM 11520 Prerequisite and (CHM 11610 or may be taken concurrently)
3	*COM 11400[CC]		4-3	*ENGL 10600 OR 10800[CC]	
2	HSCI 10100 Fall only		5-4	^*MA 16200 or 16600[CC]	MA 16500 or 16100 = C-
5-4	^*MA 16100 or 16500[CC]	ALEKS = 85			
17-18			**15-17**		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
3	*HSCI 20200 Fall only	3 credits in BIOL & CHM	3	*HSCI 20100 Spring only	Classification of 03
4	*MATH 26100	MA 16200 or 16600 = C-	4	*MA 26200	MA 26100 = C-
4	^*PHYS 17200 [CC]	MA 16100 or 16500 or ALEKS = 85	3	*PHYS 24100	PHYS 17200
3	*STAT 30100		1	PHYS 25200	PHYS 24100 or may be taken concurrently
			3	HSCI Humanities Sel.	Select from HSCI list
14			**14**		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
4	*BIOL 20300 [CC] Fall only		4	*BIOL 20400 [CC] Spring only	BIOL 20300
3	^HSCI 31200 Fall only	MA 16010, 16100, or 16500 & PHYS 22100, 23400, 24100, 27200 or NUCL 20000	2	^HSCI 51400 Spring only	HSCI 31200
2	^HSCI 31300 Fall only	MA 16010, 16100, or 16500 & PHYS 22100, 23400, 24100, 27200 or NUCL 20000	3	^HSCI 54000 Spring only	BIOL 11100 & HSCI 31200
3	PHYS 34202	PHYS 24100	3	MA/CS Science Selective	Select from list
1	PHYS 34000	PHYS 24100 may be taken concurrently	3	*Humanities BSS Sel.	Select from University list
3	English Selective	Select any 20000 or above ENGL course			
16			**15**		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
3	HSCI 52600 Fall only	HSCI 31200	3	^HSCI 57000 Spring only	HSCI 31200 & MA 26200
2	^HSCI 57400 Fall only	HSCI 31200 & PHYS 24100	3	^HSCI 57200 Spring only	HSCI 31200 & MA 26100 & PHYS 24100
3	Physics Selective	PHYS 31000, 36000, or 55600 suggested	3	Physics Selective	PHYS 31000, 36000, or 55600 suggested
3	*Humanities Selective	Select from University list	3	Elective	
3	RADH HSCI Selective	Select from list	3	Elective	
14			**15**		

*Satisfies a University Core Requirement.
[CC] Critical Course – a course that a student must be able to pass to persist and succeed in a particular major.

^A minimum grade of C 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, and they cannot be taken as pass/no pass.

Students must complete 32 credit hours of 30000 level or higher courses at Purdue University for graduation.
120 semester credits required for Bachelor of Science degree.
2.0 Graduation GPA required for Bachelor of Science degree.
The student is ultimately responsible for knowing and completing all degree requirements.
Degree Works is knowledge source for specific requirements and completion.

Fall 2025