

## RADIOLOGICAL HEALTH SCIENCES

Pre-Medical Physics Concentration College of Health and Human Sciences RADH-BS RADH-PRMP 120 credits

Student:		PUID:	Catalog Term: Fall 2023
Additional	Majors: I	Minors:	
Maior Regi	uirements (61 credits)		
	BIOL 11000 Fundamentals of Biology I [Satisfies 1 S	Science Core Coursel	
(4)	BIOL 11100 Fundamentals of Biology II [Satisfies 1	Science Core Coursel	
(4)	BIOL 20300 Human Anatomy & Physiology	•	
(4)	BIOL 20400 Human Anatomy & Physiology		
(4)	CHM 11500 General Chemistry CHM 11600 General Chemistry HSCI 10100 Introduction to the Health Sciences Pro		
(4)	CHM 11600 General Chemistry		
(2)	HSCI 10100 Introduction to the Health Sciences Pro	fessions	
(3)	HSCI 20100 Principles of Public Health Science [Sat		gy & Society Core]
(3)	HSCI 20200 Essentials of Environmental, Occupation	nal, and Radiological Healt	th Sciences
(3)	HSCI 31200 Radiation Science Fundamentals (must	earn a grade of "C" or high	ner)
(2)	HSCI 31300 Principles of Radiation Detection & Mea		
(2)	HSCI 51400 Radiation Instrumentation Laboratory	(must earn a grade of "C" o	or higher)
(3)	HSCI 54000 Radiation Biology (must earn a grade of		
(2)	HSCI 57400 Medical Health Physics (must earn a gra	ade of "C" or higher)	
(4)	MA 26100 Multivariate Calculus		
(3)	PHYS 24100 Electricity & Optics		
(1)	PHYS 34000 Modern Physics Laboratory		
(3)	PHYS 34200 Modern Physics		
(3)			
(3)	Math-Computer Science Sele	ective – select from list	
	lical Physics Concentration (35-37 credits)		
(3)	HSCI 52600 Principles of Health Physics & Dosimetr	У	
(3)	HSCI 57000 Introduction to Medical Diagnostic Imag	ging (must earn a grade of	"C" or higher)
	HSCI 57200 Radiation Oncology Physics (must earn		
(4-5	6)MA 16100 Plane Analytic Geometry & Calculus I or M		ry & Calculus I (must earn a grade of "C
	or higher) [Satisfies Quantitative Reasoning Core]		0.01.1
(4-5	5) MA 16200 Plane Analytic Geometry & Calculus II or	MA 16600 Analytic Geom	etry & Calculus II (must earn a
(4)	grade of "C" or higher)		
	MA 26200 Linear Algebra & Differential Equations	C ((C)) 1 : 1 )	
	PHYS 17200 Modern Mechanics (must earn a grade	of "C" or nigner)	
(1)	PHYS 25200 Electricity & Optics Laboratory	NIVE 20000 or bighor (DIV	VC 21000 Intermediate Machanias DUVC
(3)	Physics Selective – must be P		uctory Nuclear Physics are suggested)
(2)	Physics Selective – select any	•	, ,
(3)	Radiological Health Sciences		
	artmental/Program Course Requirements (18-19		
	COM 11400 Fundamental of Speech Communication		
(4-3	B) ENGL 10600 First-Year Composition or ENGL 10800		omposition [Satisfies Written
(2)	Communication Core and [Information Literacy		
(3)	[Behavioral/Social Science	<b>Corej</b> select course from l	Iniversity list
(3)	English Selective – select ar	iy 20000 ievel or above EN	GL COURSE
(3)	HSCI Humanities, Behavior [Humanities Core] select co	i ai/ Suciai Sciences Selec	uve – select ji om n3Cl list
		urse from University list	
	3-6 credits)		
	( )		
An Ethica a	ourge (augh as DIIII 11100 Ethics DIIII 27000 Diomedia	! [th: DIII 20000 [	

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.

## 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
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 I	Health Sciences Selective List for PRMP
AT 57200	Human Error and Safety
BIOL 41500	Introduction To Molecular Biology
BIOL 44400	Human 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
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 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
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



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Suggested Arrangement of Courses:

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
4	*BIOL 11000cc		4	*BIOL 11100 <sup>cc</sup>	BIOL 11000
4	*CHM 11500 <sup>CC</sup>	MA 15400 or MA 15800 or ALEKS = 75	4	*CHM 11600 <sup>cc</sup>	CHM 11200 or 11500
3	*COM 11400 <sup>CC</sup>		4-3	*ENGL 10600 OR 10800 <sup>℃</sup>	
2	HSCI 10100 Fall of	only	5-4	^*MA 16200 or 16600 <sup>cc</sup>	MA 16500 or 16100 = C-
5-4	^*MA 16100 or 1	6500°C ALEKS = 85			
17-18		·	15-17		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
3	*HSCI 20200 Fal	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 <sup>CC</sup>	MA 16100 or 16500 or ALEKS = 85	3	*PHYS 24100	PHYS 17200
3	*STAT 30100		1	PHYS 25200 PHYS 2	4100 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 <sup>™</sup> Fall only		4	*BIOL 20400 °C Spring only BIOL 20300	
3	^HSCI 31200 Fall only	MA 16600 or 16200 & PHYS 17200 or NUCL 20000	2	^HSCI 51400 Spring only	HSCI 31200
2	^HSCI 31300 Fall only	MA 16600 or 16200 & PHYS 17200 or NUCL 20000	3	^HSCI 54000 Spring only	BIOL 11100 & HSCI 31200
3	PHYS 34200	PHYS 24100	3	MA/CS Science Selective	Select from list
1	PHYS 34000 PH	/S 24100 & 34200 may be taken concurrently	3	*Humanities BSS Sel.	Select from University list
3	English Selectiv	e Select any 20000 or above ENGL course			
16			15		

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

<sup>\*</sup>Satisfies a University Core Requirement.

^A minimum grade of C must be earned in HSCI 31200, HSCI 31300, HSCI 51400, HSCI 54000, 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.

cc Critical Course – a course that a student must be able to pass to persist and succeed in a particular major.