

RADIOLOGICAL HEALTH SCIENCES

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

| Student: | PUID: | Catalog Term: Fall 2017 |
|-------------------|--|----------------------------------|
| Additional | Majors: Minors: | |
| Maior Regi | uirements (90-91 credits) | |
| (4) | | |
| (4) | BIOL 20400 Human Anatomy & Physiology | |
| (4) | CHM 11500 General Chemistry | |
| (4) | CHM 11600 General Chemistry | |
| (3) | English Selective – select any 20000 level or above ENGL course | |
| (3) | HSCI 10100 Introduction to Health Sciences Professions | |
| (2) | HSCI 20100 Principles of Public Health Science [Fulfills Science, Technology & Societ | ty Corel |
| (3) | HSCI 20200 Essentials of Environmental, Occupational, and Radiological Health Science | |
| (3) | HSCI 31200 Radiation Science Fundamentals (must earn a grade of "C" or higher) | cs . |
| $\frac{1}{2}$ (2) | HSCI 31300 Principles of Radiation Detection & Measurement (must earn a grade of "C | " or higher) |
| $\frac{1}{2}$ (2) | HSCI 51400 Radiation Instrumentation Laboratory (must earn a grade of "C" or higher | |
| | HSCI 52600 Principles of Health Physics & Dosimetry |) |
| (3) | | |
| (3) | HSCI 54000 Radiation Biology (must earn a grade of "C" or higher) HSCI 57000 Introduction to Medical Diagnostic Imaging (must earn a grade of "C" or higher) | ala a vi) |
| (3) | | gner) |
| | 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) | laulua II (manat a ama |
| (4-5 |) MA 16200 Plane Analytic Geometry & Calculus II or MA 16600 Analytic Geometry & Ca | iculus II (must earn a |
| (4) | 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 | |
| (1) | PHYS 34000 Modern Physics Laboratory | |
| (3) | PHYS 34200 Modern Physics | |
| | STAT 30100 Elementary Statistical Methods | C. Maar II. |
| (3) | HSCI Humanities, Behavioral/Social Sciences Selective – select j | rom HSCI list |
| (3) | Math-Computer Science Selective – select from list | |
| (3) | Physics Selective – must be PHYS 30000 or higher (PHYS 31000 | |
| | 36000 Quantum Mechanics, and/or PHYS 55600 Introductory N | uclear Physics are suggested) |
| (3) | Physics Selective – select any 30000 or above PHYS course | |
| (3) | Radiological Health Sciences Selective – select from list | |
| _ | artmental/Program Course Requirements (24-26 credits) | |
| | BIOL 11000 Fundamentals of Biology I [Fulfills 1 Science Core Course] | |
| | BIOL 11100 Fundamentals of Biology II [Fulfills 1 Science Core Course] | |
| (3) | COM 11400 Fundamental of Speech Communication [Fulfills Oral Communication Co | re] |
| (4-3 | ENGL 10600 First-Year Composition or ENGL 10800 Accelerated First-Year Composition | on [Fulfills Written |
| | Communication Core] and [Information Literacy Core] | |
| (4-5 |)MA 16100 Plane Analytic Geometry & Calculus I or MA 16500 Analytic Geometry & Calc | ulus I (must earn a grade of "C" |
| | or higher) [Fulfills Quantitative Reasoning Core] | |
| (3) | Behavior/Social Science Core] select course from University listBehavior/Social Science Core] select course from University list | ct |
| (3) | Humanities Core] select course from University list | |
| Flectives (| 3-6 credits) | |
| | | () |
| | ()() | (<i>)</i> |

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.

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.

HSCI Humanities, Behavioral/Social Sciences Selectives List select any 10000-59999 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)

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 for PRMP

| AT 57200 | Human Error |
|------------|--|
| BIOL 41500 | Introduction To Molecular Biology |
| BIOL 44400 | Human Genetics |
| BIOL 54200 | Animal Cell Culture |
| BIOL 51600 | Molecular Biology Of Cancer |
| 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 |
| HK 44500 | Principles of Epidemiology |
| HSCI 34500 | Introduction To Occupational and |
| | Environmental Health Science |
| 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 |
| | |

<u>University Foundational Learning Outcomes List:</u> https://www.purdue.edu/provost/initiatives/curriculum/course.htm

Note: 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.



RADIOLOGICAL HEALTH SCIENCES

Pre-Medical Physics Concentration College of Health and Human Sciences

HLSC-BS RADH-PRMP 120 credits Fall 2017

Suggested Arrangement of Courses:

| Credits | Fall 1st Year | Prerequisite | Credits | Spring 1st Year | Prerequisite |
|---------|------------------------------------|------------------------------------|---------|------------------------------------|------------------------|
| 4 | *BIOL 11000 ^{CC} | | 4 | *BIOL 11100 ^{cc} | BIOL 11000 |
| 4 | *CHM 11500 ^{CC} | MA 15400 or MA 15800 or ALEKS = 75 | 4 | *CHM 11600 ^{cc} | CHM 11200 or 11500 |
| 3 | *COM 11400 ^{CC} | | 4-3 | *ENGL 10600 OR 10800 ^{cc} | |
| 2 | HSCI 10100 ^{cc} Fall only | | 5-4 | ~*MA 16200 or 16600 ^{cc} | MA 16500 or 16100 = C- |
| 5-4 | ~*MA 16100 or 16 | 500 ^{cc} ALEKS = 85 | | | |
| | | | | | |
| 17-18 | | | 15-17 | | |

| Credits | Fall 2nd Year | Prerequisite | Credits | Spring 2nd Year | Prerequisite |
|---------|---------------------------|---------------------------------|---------|----------------------------|------------------------------------|
| 3 | *HSCI 20200 cc Fall | only 3 credits in BIOL & CHM | 3 | *HSCI 20100 cc Spring only | Classification of 03 |
| 4 | *MATH 26100 ^{CC} | 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 Fall | *BIOL 20300 Fall only | | *BIOL 20400 Spring only | BIOL 20300 |
| 3 | ~HSCI 31200 | MA 16600 or 16200 & PHYS 17200 or NUCL 20000 | 2 | ~HSCI 51400 Spring only | HSCI 31200 |
| 2 | ~HSCI 31300 | 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 | YS 24100) & 34200 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 on | ly HSCI 31200 | 3 | ~HSCI 57000 Spring only | HSCI 31200 & MA 26200 |
| 2 | ~HSCI 57400 Fall o | nly HSCI 31200 & MA 26100 & PHYS 241 | 3 | ~HSCI 57200 Spring only нs | CI 31200 & MA 26100 & PHYS 24100 |
| 3 | Physics Selective | PHYS 31000, 36000, or 55600 suggested | 3 | PHYS Selective PHYS | 31000, 36000, or 55600 suggested |
| 3 | *Humanities Sel. | Select from University list | 3 | Elective | |
| 3 | RADH HSCI Sel. | Select from list | 0-3 | Elective | |
| | | | | | |
| 14 | | | 12-15 | | |

^{*}Satisfies a University Core Requirement.

~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.

Students must complete 32 credit hours of 30000 level or higher courses 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.