Health Physics Concentration (51-53 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
- (4) CHM 11500 General Chemistry
- (4) CHM 11600 General Chemistry
- (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 54000 Radiation Instrumentation Laboratory (must earn a grade of "C" or higher)
- (3) HSCI 53400 Applied Health Physics (must earn a grade of "C" or higher)
- (3) HSCI 52600 Principles of Health Physics & Dosimetry (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) (must earn a grade of "C" or higher)

Health Physics Concentration RADH-HLPH

- (4-5) MA 16100 Plane Analytic Geometry & Calculus I or MA 16500 Analytic Geometry & Calculus I [Satisfies Quantitative Reasoning Core]
- (4-5) MA 16200 Plane Analytic Geometry & Calculus II or MA 16600 Analytic Geometry & Calculus II
- (4) MA 26100 Multivariate Calculus
- (3) NUCL 20000 Introduction to Nuclear Engineering
- (2) NUCL 20500 Nuclear Engineering Undergraduate Laboratory I
- (2) NUCL 30500 Nuclear Engineering Undergraduate Laboratory II
- (4) PHYS 17200 Modern Mechanics
- (3) PHYS 24100 Electricity & Optics
- (1) PHYS 34000 Modern Physics Laboratory
- (3) PHYS 34200 Modern Physics
- (3) ___________________Math-Computer Science Selective – select from list
- (3) ___________________Health Physics Selective – select from list
- (4) ___________________General Science or Radiological Health Sciences Selective – select from list
- (3) ___________________Health Sciences Selective – select from list
- (3) ___________________Math-Computer Science or General Science 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 or ENGL 10800 Accelerated 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 (0-3 credits)

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 52600, HSCI 53400, HSCI 54000, and HSCI 57400.

An Ethics course (such as PHIL 11100 Ethics or PHIL 29000 Environmental Ethics) is highly recommended.
### General Science Selective List for HLPH
- AT 57200 Human Error and Safety
- BIOL 41500 Introduction To Molecular Biology
- BIOL 44400 Human Genetics
- BIOL 51600 Molecular Biology Of Cancer
- BIOL 54200 Modular Upper-Division Laboratory Course
- CHM 22400 Introductory Quantitative Analysis
- CHM 25500 Organic Chemistry
- CHM 25501 Organic Chemistry Laboratory
- CHM 25600 Organic Chemistry Laboratory
- CHM 25601 Organic Chemistry Laboratory
- HSCI 34500 Introduction To Occupational and Environmental Health Sciences
- 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

### Health Physics Selective List
- HSCI 39000 Radiological Emergency Management
- 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 59000 Public Health Law and Policy
- ME 20000 Thermodynamics I
- ME 27000 Basic Mechanics I
- NUCL 30000 Nuclear Structure and Radiation Interactions
- NUCL 31000 Introduction to Neutron Physics
- NUCL 35000 Nuclear Thermal-Hydraulics I
- NUCL 35100 Nuclear Thermal-Hydraulics II
- NUCL 50100 Nuclear Engineering Principles
- NUCL 50300 Radioactive Waste Management
- NUCL 50400 Nuclear Engineering Experiments
- NUCL 51000 Nuclear Reactor Theory I

### Radiological Health Sciences Selective List for HLPH
- Any course on the Health Physics Selective List
- HSCI 19000, 29000, 39000, 49000, or 59000 - Special Topics in Radiological Health Sciences
- HSCI 30500 Basics of Oncology
- HSCI 31000 Imaging in Medicine
- HSCI 57000 Introduction to Medical Diagnostic Imaging
- HSCI 57200 Radiation Oncology Physics

### HSCI Humanities, Behavioral/Social Sciences Selective 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 and 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

### University Foundational Learning Outcomes List: [Link](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.

RADH-HLPH 5/2024
## Suggested Arrangement of Courses:

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<tr>
<th>Credits</th>
<th>Fall 1st Year</th>
<th>Prerequisite</th>
<th>Credits</th>
<th>Spring 1st Year</th>
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<th>Prerequisite</th>
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<td>HSCI 31200</td>
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<td>^HSCI 53400</td>
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<td>^HSCI 57400</td>
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</table>

*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, 31300, 51400, 52600, 53400, 54000, and 57400, 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 2024