

Catalog Term: Fall 2016

Major Requirements (93-94 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 any 20000 level or above ENGL course*
- ___ (2) HSCI 10100 Introduction to Health Sciences Professions
- ___ (3) HSCI 20100 Principles of Public Health Science **[Fulfills 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 52600 Principles of Health Physics & Dosimetry (must earn a grade of “C” or higher)
- ___ (3) HSCI 53400 Applied Health Physics (must earn a grade of “C” or higher)
- ___ (3) HSCI 54000 Radiation Biology (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 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) STAT 30100 Elementary Statistical Methods
- ___ (3) _____ General Science or Radiological Health Sciences Selective – *select from list*
- ___ (3) _____ Health Physics Selective – *select from list*
- ___ (3) _____ Health Physics Selective – *select from list*
- ___ (3) _____ HSCI Humanities, Behavioral/Social Sciences Selective – *select from HSCI list*
- ___ (3) _____ Math-Computer Science Selective – *select from list*
- ___ (4) _____ Math-Computer Science or General Science Selective – *select from list*

Required Courses in Other Departments (24-26 credits)

- ___ (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) COM 11400 Fundamental of Speech Communication **[Fulfills Oral Communication Core]**
- ___ (4-3) ENGL 10600 First-Year Composition or ENGL 10800 Accelerated First-Year Composition **[Fulfills Written Communication Core] and [Information Literacy Core]**
- ___ (4-5) MA 16100 Plane Analytic Geometry & Calculus I or MA 16500 Analytic Geometry & Calculus I **[Fulfills Quantitative Reasoning Core]**
- ___ (3) _____ **[Behavior/Social Science Core]** *select course from University 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

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

Health Physics Selective List

HSCI 39000 Radiological Emergency Management
 HSCI 48500 Health Physics Internship
 HSCI 54700 Environmental Epidemiology
 HSCI 55100 Health Effects of Non-ionizing Radiation
 HSCI 55200 Introduction to Aerosol Science
 HSCI 59000 Public Health Law and Policy
 ME 20000 Thermodynamics I
 ME 27000 Basic Mechanics I
 NRES 28000 Hazardous Waste Handling
 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

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 HLPH

Any course on the Health Physics Selective List
 HSCI 19000, 29000, 39000, 49000, 59000 - Special Topics in Radiological Health Sciences
 HSCI 57000 Introduction to Medical Diagnostic Imaging
 HSCI 57200 Radiation Oncology Physics
 HSCI 69000 Molecular Radiobiology
 NUPH 41200 Diagnostic Imaging I
 NUPH 41300 Diagnostic Imaging II
 NUPH 41400 Nuclear Pharmacy Laboratory
 NUPH 53000 Applied Nuclear Pharmacy
 NUPH 55000 Introduction to Positron Emission Tomography

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

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 16500 ^{CC}	ALEKS = 85			
17-18			15-17		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
4	*BIOL 20300 ^{CC} Fall only		4	*BIOL 20400 ^{CC} Spring only	BIOL 20300
3	*HSCI 20200 ^{CC} Fall only	3 credits in BIOL & CHM	3	*HSCI 20100 ^{CC} Spring only	Classification of 03
4	*MA 26100 ^{CC}	MA 16200 or 16600 = C-	3	NUCL 20000 Spring only	MA 16200 or 16600 & PHYS 17200
4	*PHYS 17200 ^{CC}	MA 16100 or 16500 or ALEKS = 85	2	NUCL 20500 Spring only	NUCL 20000 or may be taken concurrently
			1	Elective	
15			13		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
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
2	NUCL 30500 Fall only	NUCL 20500	3	PHYS 34200	PHYS 24100
3	*PHYS 24100	PHYS 17200	1	PHYS 34000	PHYS 24100 or 34200 may be taken concurrently
3	*STAT 30100		3	*Humanities BSS Sel.	Select from University list
3	HSCI Humanities Sel.	Select from HSCI 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 53400 Spring only	HSCI 31200
2	~HSCI 57400 Fall only	HSCI 31200 & MA 26100 & PHYS 241	4	MA/CS Science Selective	Select from list
3	MA/CS Selective	Select from list	3	General Science or RADH Sel.	Select from list
3	Health Physics Sel.	Select from list	3	*Humanities Sel.	Select from University list
3	Health Physics Sel.	Select from list			
2	Elective				
16			13		

*Satisfies a University Core Requirement.

^{CC} Critical Courses - identified by the state of Indiana that a student must be able to persist and succeed.

~A minimum grade of C must be earned in HSCI 31200, 31300, 51400, 52600, 53400, 54000, and 57400.

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