

Radiation and Health Physics

Bachelor of Science (BS)

This degree map is based on the 2023-24 Academic Catalog and is subject to change. Students should meet with their academic advisor each semester and use Degree Works to monitor their individual progress toward degree completion. The time it takes to earn a degree will vary based on several factors including summer/winter enrollment, dual enrollment and number of courses successfully completed each semester. We recommend taking a minimum of 15 credits each fall and spring semester.

Sample 4-Year Plan

First Year			
Fall Courses	Credits	Spring Courses	Credits
RASC140 Radioecology or RASC150 Radiation Regulations	3	PHYS211 General Phys.ics 1 or PHYS208 Intro to Physics 1	4
First Year Seminar	3	CHEM122 General Chemistry 2	4
CHEM121 General Chemistry 1	4	STAT141 Intro to Statistics or STAT241 Probability and Statistics	3
MATH160 Calculus I or MATH140 Pre-Calculus	4	Oral Communication Course	3
English Writing Course	3		
Semester Total	17	Semester Total	14
Second Year			
Fall Courses	Credits	Spring Courses	Credits
RASC140 Radioecology or RASC150 Radiation Regulations	3	General Education Course	3
PHYS212 General Physics 2 or PHYS209 Intro to Physics 2	4	(Ethical reasoning GE)	3
(Global Perspectives GE)	3	(Critical Reasoning GE)	3
(Diversity of History GE)	3	(Technology GE-programming)	3
BIOL110 Principles of Biology 1	3	BIOL111 Principles of Biology 2	4
Semester Total	16	Semester Total	16
Third Year			
Fall Courses	Credits	Spring Courses	Credits
PHYS315 Analog Electronics or PHYS316 Digital Electronics or ENGT141 Electronics	3	BIO411 Radiation Biology	3
(Free elective)	3	RASC Elective I	3
(Literature GE)	3	(Arts or Creativity GE)	3
Bio Elective I or BIOL180 Anatomy and Physiology I	3 or 4	Bio Elective II or BIOL181 Anatomy and Physiology II	3 or 4
BIOL208 Human Genetics or BIO209 Genetics	4	RASC410 Radiation Detection Lab**	3
Semester Total	13 or 14	Semester Total	15 or 16
Fourth Year			
Fall Courses	Credits	Spring Courses	Credits
RASC360 Health Physics	3	RASC460 Applied Health Physics	3
RASC Elective II	3	RASC498 Internship in Health Physics	3
(General Education)	3	(Free elective)	3
(Free elective)	3	(Free elective)	3
(Free elective)	3		
Semester Total	15	Semester Total	12

Winter/Summer College - Optional

While not required, Winter and Summer sessions are offered each year and may help you stay on track or get ahead. You may take up to seven (7) credits during Winter College and up to 14 credits during Summer College.

Radiation and Health Physics

Curriculum Checklist

Required Courses (53 credits)

- ___ RASC140 Radioecology (3)
- ___ RASC150 Radiation Regulations (3)
- ___ BIOL411 Radiation Biology (3)
- ___ RASC410 Radiation Detection Lab (3)
- ___ RASC360 Health Physics (3)
- ___ RASC460 Applied Health Physics (3)
- ___ RASC498 Internship in Health Physics (3)
- ___ PHYS315 Analog Electronics or PHYS316 Digital Electronics or ENGT141 Electronics (3)
- ___ PHYS211 Gen. Phys. 1 or PHYS208 Intro. Physics 1 (4)
- ___ PHYS212 Gen. Phys. 2 or PHYS209 Intro. Physics 2 (4)
- ___ CHEM121 Gen. Chem 1 (4)
- ___ CHEM122 Gen. Chem 2 (4)
- ___ MATH 160 Calculus I or MATH140 Pre-Calculus (4)
- ___ STAT141 Intro to Statistics or STAT241 Probability and Statistics (3)
- ___ BIO110 Principles of Biology 1 (3)
- ___ BIO208 Human Genetics or BIO209 Genetics (3)

Elective Courses (6-7 credits)

- ___ PHY205 Physics for Medical Imaging (3)
- ___ CSMC115 Computer Science Programming (3)
- ___ MATH170 Calculus II (4)
- ___ BIOL180 Anatomy and Physiology I (4)
- ___ BIOL181 Anatomy and Physiology II (4)
- ___ BIOL210 Genetics Lab (1)
- ___ BIOL108 Medical Terminology (3)
- ___ BIOL211 Cell Biology (3-4)
- ___ BIOL443 Molecular Biology (3)
- ___ BIOL462 Cancer Biology (3)
- ___ PHYS310 Modern Physics (3)
- ___ PHYS491 Independent Study/Research (3)
- ___ PHYS304 Nanosciences (3)
- ___ PHYS404 Advanced Nanosciences Lab (3)

General Education Requirements

(45 credits)

Note: Some requirements may be fulfilled by coursework in your major program including directed Gen Ed courses noted below

- Foundations (15 credits)
 - FYS (U): FYS100 First Year Seminar
 - Writing (W):
 - Oral Comm. (O):
 - Quantitative (Q):
 - History (H):
- Interconnections (9 credits)
 - Diversity (D):
 - Global Perspectives. (G):
 - D or G or Foreign Lang. (F):
- Citizenship & Responsibility (6 credits from at least two goals)
 - Goal 1: Citizenship (C):
 - Goal 2 Ethical Reasoning (E):
 - Goal 3: Crit. Reasoning (R):
- Natural World & Technologies (9 credits)
 - Natural World (N): CHEM121 General Chemistry 1
 - Natural World (N): CHEM122 General Chemistry 2
 - Technology (T):
- Creativity & Expression (6 credits)
 - Literature (L):
 - Arts (A) or Creativity (C):

Degree Requirements

All students must obtain a minimum of 120 credits, complete all General Education requirements, and all requirements for the selected major. Meet with your advisor and consult Degree Works to monitor your progress and for all graduation requirements.

A minimum GPA of 2.0 in the major and overall are required.

Campus Locations

- | | |
|-------------------|--|
| Bloomsburg | <input checked="" type="checkbox"/> Online; <input checked="" type="checkbox"/> In-person; <input checked="" type="checkbox"/> Blended |
| Lock Haven | <input checked="" type="checkbox"/> Online; <input checked="" type="checkbox"/> In-person; <input checked="" type="checkbox"/> Blended |
| Mansfield | <input checked="" type="checkbox"/> Online; <input checked="" type="checkbox"/> In-person; <input checked="" type="checkbox"/> Blended |
| Clearfield | <input type="checkbox"/> Online; <input type="checkbox"/> In-person; <input type="checkbox"/> Blended |