College of Health, Science and Technology

Radiation and Health Physics

Bloomsburg LOCK HAVEN MANSFIELD
COMMONWEALTH UNIVERSITY

Bachelor of Science (BS)

This degree map is based on the current Academic Catalog and is subject to change. Please note that the degree map is designed to give you a sense of roughly how courses might be distributed over a 4-year degree. Your exact schedule will differ depending on a range of factors though we recommend taking a minimum of 15 credits each fall and spring semester. Regular consultation with your academic advisor is the best way to make sure that you are taking the courses you need in the right order to ensure efficient progress through your degree program.

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.

Revised March 2025

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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 2 (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)*

*Denotes advanced coursework
Students must take a minimum of 42 credits of advanced coursework. Advanced coursework can be met in major courses, minor courses, free elective courses, and general education courses. Courses that meet this requirement are designated in Banner.

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 (S):
  - 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 (a minimum of 42 credits must be advanced coursework), 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.