College of Health, Science, and Technology
Department of Physical and Environmental Sciences: Biochemistry, Chemistry, Engineering, Geography, Geology, and Physics

Bloomsburg LOCK HAVEN MANSFIELD
COMMONWEALTH UNIVERSITY

Engineering Physics 3+2

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**
ENGT101 Intro to Engineering	3	MATH170 Calculus 2	4
MATH160 Calculus 1 (GenEd: Q)	4	PHYS212 General Physics 2	4
General Education course (U, First Year Seminar)	3	COMM101 Public Speaking (O)	3
WRIT103 Foundations in Composition (W)	3	ENGT180 CAD & Engineering Graphics	3
PHYS211 General Physics 1 (N)	4	General Education Course (H)	3
Semester Total	17	Semester Total	17

Second Year			
Fall Courses	**Credits**	**Spring Courses**	**Credits**
ENGT141 Circuit Analysis	4	PHYS310 Modern Physics	3
PHYS301 Statics	3	PHYS302 Dynamics	3
MATH270 Calculus 3	4	CMSC115 Python Programming (T)	3
ENG270 Technical Writing	3	ECC122 Principles of Microeconomics	3
General Education Course (D)	3	MATH370 Differential Equations	3
		General Education (A or C)	3
Semester Total	17	Semester Total	18

Third Year			
Fall Courses	**Credits**	**Spring Courses**	**Credits**
PHYS316 Digital Electronics	3	PHYS442 Math Methods	3
PHYS422 Thermodynamics	3	Major Elective (PHYS, CHEM, GEO, or MATH)*	3
CHEM121 General Chemistry 1	4	General Education Course (L)	3
General Education Course (D or G or F)	3	General Education Course (E)	3
MATH250 Discrete Math	3	General Education Course (G)	3
Semester Total	16	Semester Total	15

Fourth Year			
Fall Courses	**Credits**	**Spring Courses**	**Credits**
Students begin their time at Penn State University		Students continue taking courses at Penn State University	
		Students will transfer 20 credits taken at Penn State back to Commonwealth University to complete a	
		B.S. Engineering Physics degree	
Students may wish to lighten their load by taking a		GENTRANS XXX	20
general education course(s) over winter or summer			
Semester Total	0	Semester Total	20

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 (73 credits)

___ ENGT101 Introduction to Engineering Technology (3)
___ ENGT180 Computer Aided Design & Engineering Graphics (3)
___ ENGT141 Circuit Analysis (4)
___ PHYS212 General Physics 2 (4)
___ PHYS310 Modern Physics (3)*
___ PHYS301 Statics (3)*
___ PHYS302 Dynamics (3)*
___ PHYS316 Digital Electronics (3)*
___ PHYS422 Thermodynamics (3)*
___ PHYS442 Math Methods (3)*
___ MATH170 Calculus 2 (4)*
___ MATH250 Discrete Math (3)*
___ MATH270 Calculus 3 (4)*
___ MATH370 Differential Equations (3)*
___ ENGL270 Technical Writing (3)
___ MATH160 Calculus 1 (Q) (4)*
___ PHYS211 General Physics 1 (N) (4)*
___ CHEM121 General Chemistry 1 (4)
___ COMM101 Public Speaking (3)(O)
___ CMSC115 Python Programming (T) (3)
___ ECC122 Principles of Microeconomics (3)
___ WRIT103 Foundations in Composition (W) (3)

Elective Courses (3 credits)

___ Elective as suits the curriculum of Penn State (3)

Transfer Courses (20 credits)

___ Engineering courses from a Penn State Campus (vary depending on program)

*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): WRIT103 Foundations in Composition
  - Oral Comm. (O): COMM101 Public Speaking
  - Quantitative (Q): MATH160 Calculus 1
  - 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): ECC122 Principles of Microeconomics
- Natural World & Technologies (9 credits)
  - Natural World (N): PHYS211 General Physics 1
  - Natural World (N): CHEM121 General Chemistry 1
  - Technology (T): CMSC115 Python Programming
- 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.

*Pathway for Lock Haven and Mansfield campuses:

2 years blended learning at LH or MA, followed by

1 year in person at BL

2 years in person at Penn State University with 20 credits transferred back to CU to complete a BS Engineering Physics

Revised March 2025