College of Health, Science and Technology
Department of Mathematics, Computer Science, Digital Forensics

Bloomsburg LOCK HAVEN MANSFIELD
COMMONWEALTH UNIVERSITY

Applied Computer Science – Web Development

Bachelor of Science (BS)

This degree map is based on the 2025-26 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**
CMSC 100 – Fundamentals of Computing	3	CMSC 125 – Fundamentals of Web Development	3
CMSC 115 – Python Programming	3	DATS 110 – Introduction to Data Science	3
COMM 101 – Public Speaking (Oral Communications General Education Course)	3	General Education Course (D, G, or F)	3
STAT 141 – Intro to Statistics (Quantitative Gen. Ed.)	3	Natural World General Education Course	3
General Education Course – First Year Seminar	3	Writing General Education Course	3
Semester Total	15	Semester Total	15

Second Year			
Fall Courses	**Credits**	**Spring Courses**	**Credits**
CMSC 120 – OOP with Java (Technology Gen. Ed.)	4	CMSC 130 – Graphical User Interfaces in Java	4
CMSC 150 – Principles of Database Design	3	DGFR 275 – Introduction to Networks	3
CMSC 225 – Advanced Web Development	3	CMSC 255/CMSC355 – Server-Side/Client-side Frameworks	3
Natural World General Education Course	3	General Education Course (D, G, or F)	3
General Education Course (D, G, or F)	3	History General Education Course	3
Semester Total	16	Semester Total	16

Third Year			
Fall Courses	**Credits**	**Spring Courses**	**Credits**
CMSC 230 – Advanced Java	4	CMSC 250 – Operating System	3
CMSC 320 – Computer Ethics Social Impact & Security	3	CMSC 255/CMSC355 – Server-Side/Client-side Frameworks	3
MATH 230 – Discrete Structures	3	Concentration Elective1	3
Literature General Education Course	3	Critical Reasoning General Education Course	3
Elective	3	Elective	3
Semester Total	16	Semester Total	15

Fourth Year			
Fall Courses	**Credits**	**Spring Courses**	**Credits**
Concentration Elective 2	3	CMSC 480 – Software Engineering	4
Arts or Creative General Education Course	3	Citizenship General Education Course	3
Elective	3	Elective	3
Elective	3	Elective	2
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.

Applied Computer Science - Web Development

Bloomsburg LOCK HAVEN MANSFIELD
COMMONWEALTH UNIVERSITY

Curriculum Checklist

Core Courses (35 credits) – All Concentrations

___ CMSC 100 – Fundamentals of Computing (3)
___ CMSC 115 – Python Programming (3)
___ CMSC 125 – Fundamentals of Web Development (3)
___ CMSC 150 – Principles of Database Design (3)
___ CMSC 250 – Operating System (3)
___ DGFR 275 – Introduction to Networks (3)*
___ CMSC 320 – Computer Ethics, Social Impact & Security (3)*
___ DATS 110 – Introduction to Data Science (3)
___ CMSC 130 – GUI in Java (4)
___ CMSC 480 – Software Engineering (4)*
___ MATH 230 – Discrete Structures (3)*

Web Development Concentration (19 credits)

___ CMSC 225 – Advanced Web Development (3)*
___ CMSC 230 – Advanced Java (4)*
___ CMSC 255 – Server-Side Frameworks (3)*
___ CMSC 355 – Client-Side Frameworks (3)*
___ Elective - Any CMSC or DATS course numbers 200 or above (3)
___ Elective – Any CMSC or DATS course numbers 200 or above (3)

*Denotes advanced coursework
Students must take a minimum of 42 credits of advanced coursework to complete their undergraduate degree. 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)
  - STAT 141 Introduction to Statistics (3)
  - COMM 101 Public Speaking (3)
- Interconnections (9 credits)
- Citizenship & Responsibility
  (6 credits from at least two goals)
- Natural World & Technologies (9 credits)
  - CMSC 120 – OOP with Java (4)
- Creativity & Expression (6 credits)

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	☐ Online; ☒ In-person; ☒ Blended
Lock Haven	☐ Online; ☒ In-person; ☒ Blended
Mansfield	☐ Online; ☐ In-person; ☐ Blended