College of 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 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**
CMSC 115 – Python Programming	3	CMSC 125 – Fundamentals of Web Development	3
STATS 141 – Intro to Statistics (Quantitative GenEd)	3	CMSC 150 – Principles of Database Design	3
COMM 101 – Public Speaking (Oral Communications General Education)	3	General Education Course (D, G, or F)	3
General Education Course – First Year Seminar	3	Writing General Education Course	3
General Education Course (D, G, or F)	3	Arts or Creative General Education Course	3
Semester Total	15	Semester Total	15

Second Year			
Fall Courses	**Credits**	**Spring Courses**	**Credits**
CMSC 120 – OOP with Java (Technology General Education)	4	DGFR 275 – Introduction to Networks	3
CMSC 155 – Introduction to Java Script	3	CMSC 225 – Advanced JavaScript	3
Natural World General Education Course	3	Natural World General Education Course	3
MATH 230 – Discrete Structures	3	CMSC 255 – Server-Side Programming	3
History General Education Course	3	General Education Course (D, G, or F)	3
Semester Total	16	Semester Total	15

Third Year			
Fall Courses	**Credits**	**Spring Courses**	**Credits**
Literature General Education Course	3	CMSC 375 – Web Application Frameworks	3
CMSC 310 – Software Development Methods	3	Web Development Track Elective	3
CMSC 320 – Computer Ethics Social Impact and Security	3	CMSC 355 – Web Application Development and Deployment	3
CMSC 325 – Advanced SQL	3	Elective	3
Critical Reasoning General Education Course	3	Elective	3
Semester Total	15	Semester Total	15

Fourth Year			
Fall Courses	**Credits**	**Spring Courses**	**Credits**
CMSC 395 – Web Services	3	CMSC 485 – Senior Capstone	3
Elective	3	Web Development Track Elective	3
Web Development Track Elective	3	Elective	3
Elective	3	Elective	3
Elective	3	Elective	2
Semester Total	15	Semester Total	14

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 June, 2023

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Curriculum Checklist

Core Courses (28 credits) – All Tracks

___ CMSC 120 – Objected-Oriented Programming with Java (4)
___ CMSC 125 – Fundamentals of Web Development (3)
___ CMSC 150 – Principles of Database Design (3)
___ DGFR 275 – Introduction to Networks (3)
___ CMSC 310 – Software Development Methods (3)
___ CMSC 320 – Computer Ethics, Social Impact & Security (3)
___ CMSC 485 – Senior Capstone (3)
___ STAT 141 – Introduction to statistics (3)
___ MATH 230 – Discrete Structures (3)

Web Development Track Requirements (33 credits)

___ CMSC 115 – Python Programming (3)
___ CMSC 155 – Introduction to Java Script (3)
___ CMSC 225 – Advanced JavaScript (3)
___ CMSC 255 – Server-Side Programming (3)
___ CMSC 325 – Advanced SQL (3)
___ CMSC 355 – Web Application Development and Deployment (3)
___ CNSC 375 – Web Application Frameworks (3)
___ CMSC 395 – Web Services (3)
___ Elective – Any CMSC Course Numbered 200 or above (3)
___ Elective – Any DATS or CMSC Course Numbered 200 or above (3)
___ Elective – Any STAT, DATS, MATH, or CMSC Course Numbered 200 or above (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

Note: Applied Computer Science students are required to take a class from each Ethical Reasoning (E) and Critical Reasoning (R) as part of their general education program.

- 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
Clearfield	☐ Online; ☐ In-person; ☐ Blended

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