

COMPUTER SCIENCE, A.A.S.

The **Associate of Applied Science in Computer Science** (AAS CS) gives students a foundation in computer programming and software development and provides academic as well as hands-on coursework in programming, web design, database and SQL, systems administration and network theory. This program will provide students a clear transition to employment in the fields of software development and into the **Bachelor of Applied Technology in Software Engineering** (<https://www.wvup.edu/future-students/academics/wtcis/software-engineering/>) degree.

WVUP offers students the opportunity to gain work experience while completing their associate in Computer Information Technology through a state-funded program called Learn and Earn. The Learn and Earn program creates partnerships between industry and community and technical colleges by allowing students hands-on learning experience, and employers to train ideal future employees. A few examples of local businesses partnered with WVUP for the Learn and Earn in computer science are iTech, Ntiva, and Westbrook Health Services.

For more information on all Learn and Earn programs, click here (<https://www.wvup.edu/learn-and-earn/>).

Milestone Course

These courses are the keys to graduation. Courses should be taken in the recommended semesters to stay on time for completion.

Career Planning

- Computer Programmer
- Database Administration
- Database Designer
- Software Developer
- Web Developer

Capstone Course

A semester long project that must be taken in the graduation semester.

A "C" or better must be earned.

Software Development Fundamentals Certification.

Students should average 15 credit hours per semester, or 30 per year, to graduate on time.

Total Degree Credits: 60

Course	Title	Hours
Semester 1		
COLL 101	ORIENTATION TO COLLEGE ¹	0
CS 121	INTRODUCTION TO PROGRAMMING ²	4
CIT 114	WINDOWS OPERATING SYSTEMS	3
Quantitative Reasoning Elective		3
MATH 125	TECHNICAL MATHEMATICS	
or MATH 126	or ~COLLEGE ALGEBRA	
or MATH 128	or ~COLLEGE TRIGONOMETRY	
or MATH 141	or ~FINITE MATH	
or MATH 150	or INTRODUCTION TO CALCULUS	
or MATH 155	or ~CALCULUS 1	
or MATH 156	or ~CALCULUS 2	
Writing and Rhetoric (https://wvup-public.courseleaf.com/programs-study/general-education-mission/#wr) Elective		3
Hours		13
Semester 2		
Free Elective		3
CS 122	OBJECT ORIENTED PROGRAMMING	4
CIT 130	PRIN OF INFORMATION SYSTEMS	3
CS 129	INTRO TO WEB PAGE DESIGN	3
CS 201	DATABASE THEORY AND DESIGN	3
Hours		16
Semester 3		
Select one of the following:		3
Aesthetics, Creativity, and Appreciation (https://wvup-public.courseleaf.com/programs-study/general-education-mission/#aca)		
Human Communication and Interaction (https://wvup-public.courseleaf.com/programs-study/general-education-mission/#hci)		
People and Their Worlds (https://wvup-public.courseleaf.com/programs-study/general-education-mission/#ptw) (preferred)		

CS 220	WEB APPLICATION DEVELOPMENT	3
CIT 105	INTRODUCTION TO NETWORKS (CISCO 1)	5
Scientific Inquiry (https://wvup-public.courseleaf.com/programs-study/general-education-mission/#si) Elective (PHYS 101 is preferred)		4

Hours	15
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Semester 4

Select one of the following:	3
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Aesthetics, Creativity, and Appreciation (<https://wvup-public.courseleaf.com/programs-study/general-education-mission/#aca>)

Human Communication and Interaction (<https://wvup-public.courseleaf.com/programs-study/general-education-mission/#hci>) (preferred)

People and Their Worlds (<https://wvup-public.courseleaf.com/programs-study/general-education-mission/#ptw>)

CS 221	DATA STRUCTURES	4
CS 260	COMPUTER SCIENCE CAPSTONE ³	3
CIT 240	INTRODUCTION TO LINUX (LINUX Cert.) ²	3
SEC 101	SECURITY FUNDAMENTALS	3

Hours	16
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Total Hours	60
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¹ Required 1-credit hour course, but is not counted in the degree total.

² Milestone Course

³ Capstone Course; C or better must be earned

Degree requires a total of 60 credit hours. [Core Course Credit Hours : 16]

Code	Title	Hours
Core Courses		
COLL 101	ORIENTATION TO COLLEGE ¹	0
Writing and Rhetoric (https://wvup-public.courseleaf.com/programs-study/general-education-mission/#wr)		3
Quantitative Reasoning (https://wvup-public.courseleaf.com/programs-study/general-education-mission/#qr) ²		3
Scientific Inquiry (https://wvup-public.courseleaf.com/programs-study/general-education-mission/#si)		4
Select two of the following:		6
Aesthetics, Creativity, and Appreciation (https://wvup-public.courseleaf.com/programs-study/general-education-mission/#aca)		
Human Communication and Interaction (https://wvup-public.courseleaf.com/programs-study/general-education-mission/#hci)		
People and Their Worlds (https://wvup-public.courseleaf.com/programs-study/general-education-mission/#ptw)		
Program Courses		
CS 121	INTRODUCTION TO PROGRAMMING	4
CS 122	OBJECT ORIENTED PROGRAMMING	4
CIT 130	PRIN OF INFORMATION SYSTEMS	3
CS 129	INTRO TO WEB PAGE DESIGN	3
CS 201	DATABASE THEORY AND DESIGN	3
CS 221	DATA STRUCTURES	4
CIT 114	WINDOWS OPERATING SYSTEMS	3
CS 220	WEB APPLICATION DEVELOPMENT	3
CIT 105	INTRODUCTION TO NETWORKS	5
CIT 240	INTRODUCTION TO LINUX	3
SEC 101	SECURITY FUNDAMENTALS	3
CS 260	COMPUTER SCIENCE CAPSTONE	3
Elective		3
Total Hours		60

¹ Institutional Graduation Requirement, but does not count in degree total.

² Math 125, 126, 128, 141, 150, 155, or 156