



Wyoming Transfer Alignment Guide (WyoTAG)

Computer Science, B.S.

A state-of-the-art curriculum that provides a solid foundation in programming, algorithm design and analysis, cybersecurity, databases, and computer systems. Elective topics include: AI, ML, AR/VR, and Mobile apps.

Accreditation

This B.S. program is accredited by the CAC Accreditation Commission of ABET, under the commission's General Criteria and Program Criteria for Computing Programs.

Degree Requirements

The degree requires 120 credits, 42 of which must be upper-division.

University Studies Program

This degree requires that The University Studies Program 2015 requirements are met before graduation. Some of the courses required for this major fulfill USP requirements, but not all. Students should check their degree evaluations and consult with their assigned academic advisor to discuss their specific course plan.

Course Name	Credits	UW Course in Major	AA/AS/AB/ADN satisfies this USP
C 1-Communication 1 (U5C1) (COM1)	3		X
C 2-Communication 2 (U5C2) (COM2)	3		X
C 3-Communication 3 (U5C3) (COM3)	3	(Must be completed at UW)	
Q-Quantitative Reasoning (U5Q)	3		X
PN-Physical and Natural World (1) (U5PN)	3		X
PN-Physical and Natural World (2) (U5PN)	3		X
H-Human Culture (1) (U5H)	3		X
H-Human Culture (2) (U5H)	3		X
V-US & WY Constitution (U5V)	3		X
FYS or USP Elective-Any 3-credit hour of FYS or 3-credit hours of USP electives	3		X

Note: FYS courses have been paused. 3 hours from any additional USP designated courses is still required.

Computer Science General Information

Computer Science majors must satisfactorily meet the requirements of the University Studies Program (USP), and they must complete a minimum of 120 credit hours, at least 42 of which must be upper division hours.

Note that some of the courses required for the Computer Science core or the concentrations will meet some of the USP requirements. Students do not have to take additional courses to meet those requirements.

All courses in Computer Science, Mathematics, and Statistics must be completed with a grade of C or better.

Math and Science Courses

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
MATH 2200 - Calculus I Q	4	X	X	X	X	X	X	X
MATH 2205 - Calculus II Q	4	X	X	X	X	X	X	X
MATH 2250 - Elementary Linear Algebra	3	X	X	X	X	X	X	X
STAT 2050 - Fundamentals of Statistics Q	4	X	X	X	X	X	X	X
COSC/MATH 2300 - Discrete Structures	3	COSC 2300 MATH 2300	COSC 2300 MATH 2300		COSC 2300 MATH 2300	MATH 2300	MATH 2300	COSC 2300 MATH 2300

Approved Science course - 4 credits

Approved Science course - 4 credits

Approved Math/Science Elective - 4 credits

ABET requires a minimum of 30 Math/Science credit hours.

Math elective means any MATH course above Calculus II or STAT courses 3000 and up.

Exceptions: cannot count MATH 2350, MATH 2355, MATH 4000, STAT 4220 [Inactive] or any variable credit courses toward this requirement.

Courses meeting the Science requirement must have a lab component and be for science or engineering majors. See Department web pages for a current list of approved courses.

Computer Science Courses

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
COSC 1010 - Computational Thinking and Programming	3	X	X	X	X	X	X	X
COSC 1030 - Computer Programming	4	X	X	X	X	X	X	X
COSC 2030 - Data Structures	4	X	X		X	X	X	X
COSC/EE 2150 - Computer Organization	3	X					X	
COSC 3011 - Introduction to Software Design	3							
COSC 3015 - Functional Programming	3							
COSC 3020 - Algorithm Design and Analysis	4							
COSC 3050 - Ethics for the Computer Professional	1							
COSC 3765 - Computer Security	3							

Theory Course - Choose one of:

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
COSC 4100 - Foundations of Computing	3							
COSC 4200 - Computability and Complexity	3							

Operating Systems Course - Choose one of:

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
COSC 4740 - Operating Systems Design	4							
COSC 3750 - Linux Programming for System Applications	3							

Programming Language Course - Choose one of:

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
COSC 4780 - Principles of Programming Languages	3							
COSC 4785 - Compiler Construction	3							

Systems Course - Choose one of:

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
COSC 4760 - Computer Networks	3							
COSC 4820 - Database Systems	3							

Additional Courses -

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
COSC 4950 - Senior Design I	1							
OSC 4955 - Senior Design II	2							

Electives

9 credits of COSC Electives (3000-level or above, not used to complete any other requirement)

General Electives to reach 120 credits.

Only 3 credit hours of COSC 3970 (or COMP 4950 or COMP 4975) can be used for the computer science degree.

Approved EE courses may also be taken as COSC electives. See Department web pages for a current list of approved courses.

General electives include any course at or above the 1000 level, not used to complete any other requirement.

Electives should be selected to meet the 42 hour requirement for Upper Division credits.

Computer Science Program Educational Objectives

The following are the objectives that the Computer Science program is preparing its graduates to achieve:

- Success: Graduates will be employed in a computer science-related field or making progress toward an advanced graduate degree.
- Growing: Graduates show continued learning and leading in computing-related professions.
- Ethics: Graduates exhibit ethical and responsible behavior in all professional and community endeavors.

Computer Science - Student Learning Outcomes

The program of study in Computer Science enables students to achieve, by the time of graduation:

- Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- Communicate effectively in a variety of professional contexts.
- Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- Apply computer science theory and software development fundamentals to produce computing-based solutions.

Notes

COURSE SUBSTITUTIONS: WyoTAGs reflect published equivalencies. UW academic departments occasionally arrange for course substitutions when indirect equivalencies exist. Please contact your UW Academic Advisor for details.

EFFECTIVE DATE: This document is in effect as of the 2026-2027 catalog year; it reflects the published UW curriculum as of that date. Any changes to the UW curriculum or the WYCC course equivalents will require this document to be updated. To request an updated document, faculty should contact transfer@uwyo.edu via email.