

# Computer Science, AS



## Casper College

### FRESHMAN YEAR

Fall Semester				Hrs	Spring Semester				Hrs
COSC	1010	Introduction to Computer Science	4	COSC	1030	Computer Science I	4		
ENGL	1010	English I: Composition	3	ENGL	1020	English II: Composition	3		
MATH	2200	Calculus I	5	MATH	2205	Calculus II	5		
		Lab Science Elective <sup>1</sup>	4			Lab Science Elective <sup>1</sup>	4		
<b>TOTAL</b>				<b><u>16</u></b>	<b>TOTAL</b>				<b><u>16</u></b>

### SOPHOMORE YEAR

Fall Semester				Hrs	Spring Semester				Hrs
		Cultural Environment Requirement	3			General Education Elective	3		
		Physical Education Requirement	1			Human Behavior Requirement	3		
COSC	2030	Computer Science II	4			US/Wyoming Constitution Requirement <sup>2</sup>	3		
COSC	2150	Computer Organization	3	COSC	2409	Programming in Java	4		
STAT	2050	Fundamentals of Statistics	4	COSC	2300	Discrete Structures	3		
		<b>OR</b>				<b>OR</b>			
STAT	2070	Introductory Statistics for Social Sciences (4 hrs)		MATH	2300	Discrete Structures (3 hrs)			
<b>TOTAL</b>				<b><u>15</u></b>	<b>TOTAL</b>				<b><u>16</u></b>
<b>TOTAL CASPER AS DEGREE HOURS</b>									<b><u>63</u></b>

Successful completion of the 2+2 plan requires that a student remain continuously enrolled and graduate with the associate's degree from his or her respective community college. • This is a guide for course work in the major; actual course sequence may vary by student. Please refer to the online student degree evaluation. • Not all courses are offered every semester and some electives may have prerequisites. Students should review the course descriptions in the catalogs of their respective institutions and consult with their academic advisor to plan accordingly. • Academic plans and course schedules may need to be altered if ACT or Math Placement scores require a student to take pre-college courses (e.g., MATH 0900, 0921, or 0925) before taking required math or English courses.

#### Casper College requirements:

In order to graduate, students must successfully complete a minimum of 60 credit hours, with 15 of the last 30 semester hours completed as a degree-seeking student at Casper College, and with a grade point average of 2.0 or higher in those courses counted toward graduation. • Students must earn at least 24 of the semester credits applied toward graduation through the completion of Casper College coursework, including at least six (6) hours with the desired major. • Only courses numbered 1000 or above can be used toward the degree.

#### University of Wyoming requirements:

Students must have a minimum cumulative GPA of 2.0 to graduate. • Students must complete 42 hours of upper division (3000-level or above) coursework, 30 of which must be from the University of Wyoming. • Courses must be taken for a letter grade unless offered only for S/U.

#### UW College of Engineering and Applied Science requirements:

Students must have a minimum cumulative GPA of 2.0 in all engineering courses for graduation. • A grade of C or higher is required for all prerequisite courses. Students must also achieve a grade of C or better in all required mathematics courses.

#### UW Department of Computer Science requirements:

All courses in Computer Science, Mathematics, Application Area (Big Data), and Statistics must be completed with a grade of C or better. A grade of C- is not acceptable.

# Computer Science, BS



University of Wyoming

## JUNIOR YEAR

Fall Semester				Hrs	Spring Semester				Hrs
COSC	3015	Functional Programming		3	COSC	3011	Software Design		3
COSC	3020	Algorithms & Data Structures		4	COSC	3050	Ethics for the Computer Professional		1
		Computer Science Elective I <sup>a</sup>		3			Computer Science Elective II <sup>a</sup>		3
		Math Elective I <sup>b</sup>		3			Math Elective II <sup>b</sup>		3
		Science Elective I <sup>c</sup>		4			Science Elective II <sup>c</sup>		4
							Upper Division Elective I		3
<b>TOTAL</b>				<b><u>17</u></b>	<b>TOTAL</b>				<b><u>17</u></b>

## SENIOR YEAR

Fall Semester				Hrs	Spring Semester				Hrs
		USP Communication 3	C3	3	COSC	4955	Senior Design II		2
COSC	4740	Operating Systems Design		4			COSC Programming Language Course <sup>f</sup>		3
COSC	4950	Senior Design I		1			Computer Science Elective III <sup>a</sup>		3
		Computer Science Systems Course <sup>d</sup>		3			Computer Science Elective IV <sup>a</sup>		3
		Computer Science Theory Course <sup>e</sup>		3			Upper Division Elective II		3
<b>TOTAL</b>				<b><u>14</u></b>	<b>TOTAL</b>				<b><u>14</u></b>
<b>TOTAL UW HOURS</b>								<b><u>62</u></b>	
<b>TOTAL UW BS DEGREE HOURS</b>								<b><u>125</u></b>	

### Casper College Computer Science Program Notes:

1) **Lab Science Electives** are two semesters of courses selected from a tightly coupled series. Options include:

CHEM 1025 (Chemistry I) + CHEM 1028 (Chemistry Laboratory I) **AND**

CHEM 1035 (Chemistry II) + CHEM 1038 (Chemistry Laboratory II)

PHYS 1310 (College Physics I) **AND** PHYS 1320 (College Physics II)

BIOL 1010 (General Biology I) **AND** BIOL 2022 (Animal Biology) **OR** BIOL 2023 (Plant and Fungal Biology)

2) **UW/Wyoming Constitutional Requirement.** Students may choose from the following courses: HIST 1211 (United States to 1865) or POLS 1000 (American and Wyoming Government).

### UW Computer Science Program Notes:

a) **Computer Science Electives.** A total of 12 hours of upper division (3000-level or above) computer science electives are required. A maximum of three (3) hours of COSC 3970 (Internship) can be included in this requirement.

b) **Math Elective I & II.** A total of six (6) additional hours of math course work is required. Students must choose math courses above Calculus II or statistics courses 3000-level or above. Exceptions: MATH 2350 (Business Calculus), MATH 2355 (Mathematical Applications for Business), MATH 4000 (History of Mathematics), or any variable length credit courses cannot be counted toward this requirement.

c) **Science Electives.** Please see the Computer Science Department web page [www.uwyo.edu/cosc/undergraduate\\_students/current-students/curriculum/curric-bulletin/ScienceElectives2015.pdf](http://www.uwyo.edu/cosc/undergraduate_students/current-students/curriculum/curric-bulletin/ScienceElectives2015.pdf) for a current list of approved courses. These course selections must have a lab component and be recommended for science or engineering majors.

d) **Computer Science Systems Course.** Choose from COSC 4760 (Computer Networks) or COSC 4820 (Database Systems).

e) **Computer Science Theory Course.** Choose from COSC 4100 (Found of Computer) or COSC 4200 (Computability & Complexity).

f) **COSC Programming Language Course.** Choose from COSC 4780 (Principles of Programming Language) or COSC 4785 (Compiler Construction).