COLLEGE OF ENGINEERING AND TECHNOLOGY
COMPUTER SCIENCE DEPARTMENT
BACHELOR OF SCIENCE DEGREE
2021-2022 COMPUTER SCIENCE
COMPUTER SCIENCE

COMPUTER SCIENCE CORE REQUIREMENTS				
COURSE #	**COURSE TITLE**	**PREREQUISITE**	**CR**	
CS 1400◆	Fundamentals of Programming	MAT 1000 or 1010 with a B or better or math test score. CS 1030 recommended	3	F, Sp, Su
CS 1410◆	Object-Oriented Programming	CS 1400 and Math 1050 with a C+ or higher	3	F, Sp, Su
CS 2300◆	Discrete Mathematical Structures I	CS 1410 and MATH 1050	3	F, Sp, Su
CS 2370	C plus plus programming	CS 1410	3	F, Sp, Su
CS 2420◆	Intro to Algorithms and Data Structures	CS 1410	3	F, Sp, Su
CS 2550*	Web Programming I	CS 1410 or DGM 2760 or INFO 1200	3	F, Sp
CS 2600*	Computer Networks I	CS 2810 or (INFO 1200 and IT 1600)	3	F, Sp
CS 2690*	Computer Networks II	CS 1410, CS 2300, CS 2600, **Pre- or Corequisite:** MATH 1210	3	F, Sp
CS 2810*	Computer Organization and Architecture	CS 1400	3	F, Sp, Su
CS 305G*	Global Social & Ethical Issues in Computing	ENGL 2010 & (CS 1030 or CS 1400 or INFO 1120 or DGM 1110)	3	F, Sp
CS 3060*	Operating Systems Theory	CS 2810, COSC	3	F, Sp
CS 3100	Data Security and Privacy	CS 2420, UAS	3	F
CS 3240*	Discrete Mathematical Structures II	CS 2810, COSC	3	F, Sp
CS 3320*	Numerical Software Development	COSC	3	F, Sp
CS 3520*	Database Theory	COSC	3	F, Sp, Su
CS 496R*	Senior Seminar (1 credit required for graduation)	CS 2450, CS 2690, CS 2810, CS 3240, CS 3250 & at least one of the following: (CS 3250 or CS 3260 or CS 3270 or CS 3370 or CS 3380)	1	F, Sp
ECE 3710*	Applied Probability & Stats for Engineers	MATH 1210	3	F, Sp, Su
COMPUTER SCIENCE EMPHASIS REQUIREMENTS				
CS 2450*	Software Engineering	CS 2300, CS 2420	3	F, Sp, Su
CS 3250* or 3260* or 3270*	Java Software Development Csharp NET Software Development Python Software Development	COSC COSC CS 2420 or INFO 2200, COSC	3	F F, Sp Sp
CS 3310*	Analysis of Algorithms	COSC	3	F, Sp
CS 3370*	C++ Software Development	CS 2810, COSC	3	F, Sp
CS 3450*	Principles and Patterns of Software Design	(CS 3250 or CS 3260 or CS 3270 or CS 3370)	3	F, Sp
CS 4380*	Adv. High Performance Computer Architecture	CS 3060, (CS 3370 recommended)	3	F, Sp
CS 4450*	Analysis of Programming Languages	CS 3240, (one of CS 3250 or CS 3260 or CS 3270 or CS 3370)	3	F
CS 4470*	Artificial Intelligence	CS 3240, CS 3310, CS 3320, & (CS 3250 or CS 3260 or CS 3270 or CS 3370)	3	F, Sp
CS 4490*	Compiler Construction	CS 4380, CS 4450	3	F Sp
Complete 6 credits from the following: any CS 3000 or 4000 level course not already required. (Minimum grade of C- required in these courses.):			9	

UAS - University Advanced Standing Requirement: Before students can register for upper-division coursework (3000 or higher), they must qualify for University Advanced Standing (UAS) by:

- Completing, and/or transferring in, at least 24 credits of college-level coursework (1000 or higher);
- Having a cumulative GPA of 2.0 or higher;
- Complete Quantitative Literacy, (MAT 1030 or higher) and ENGL 2010 or equivalent.

COSC: Matriculation into Advanced Standing required: (CS 1400, 1410, 2300, 2420 Min grade C+) & (MATH 1210, ENGL 1010 Min grade C). Each class cannot be taken more than twice to obtain the required grade.

ADVISOR SITE: https://www.uvu.edu/cet/advising/departments/cs.html

GENERAL EDUCATION REQUIREMENTS			
COURSE #	**COURSE TITLE**	**PREREQUISITE**	**CR**
ENGL 1010◆	Introduction to Writing	ENGH 1000 (or appropriate test scores within 5 years)	3
ENGL 2010	Intermediate Writing	ENGH 1010 (or appropriate test scores within 5 years)	3
MATH 1210◆	Calculus I	One of the following within the past two years: (MATH 1050 or MATH 1055) and MATH 1060, OR MATH 1080 OR appropriate placement by math placement test.	5
American Institutions: HIST 1700 American Civilization or HIST 1740 US Economic History or POLS 1000 American Heritage or POLS 1100 American National Gov't or HIST 2700 & HIST 2710 US History			3
HLTH 1100 OR PES 1097	Personal Health & Wellness or Fitness for Life		2
PHIL 2050	Ethics & Values	ENGL 1010. ENGL 2020 highly recommended	3
COMM 1020 & COMM 1025 lab	Public Speaking & Public Speaking lab	COMM 1020 required for Computer Science also counts as Humanities	3
COMM 2110*	Interpersonal Communication	COMM 2110 required for Computer Science also counts as Social Science	3
PHYS 2210* & 2215* Physics for Scientists and Engineers I & Lab		MATH 1210	5
Complete one of the following course/lab combinations:* BIOL 1610 & 1615 College Biology I & Lab (5) CHEM 1210 & 1215 Principles of Chemistry I & Lab (5) GEO 1010 & 1015 & 202R Introduction to Geology & Labs (5) PHYS 2020 & 2025 College Physics II & Lab (5) PHYS 2220 & 2225 Physics for Scientists & Engineers II & Lab (5)		ACT composite score of 21+, or completion of ENGL1010 (or higher) with a minimum grade of C- MATH 1050, prior chemistry experience highly recommended. PHYS 2010 (or PHYS 2210 & PHYS Dept. Approval) PHYS 2210 & MATH 1220	5
Fine Arts Distribution			3
Biology Science Distribution			3
Total Credits Required for Degree:			120

*** Minimum grade of C- required in courses marked with asterisk**

NOTE: For each of the following, a maximum of three hours may be counted towards graduation without prior written CS Department approval: CS 339R, CS 439R, CS 479R, CS 481R, CS 489R,and CS 491R.

◆ Matriculation into Advanced Standing (COSC) Requirements

Students must be Formally Matriculated to this program before they can graduate. *Please see your advisor for more information*

Completion of the following:

CS 1400 Minimum grade C+
CS 1410 Minimum grade C+
CS 2300 Minimum grade C+
CS 2420 Minimum grade C+
MATH 1210 Minimum grade C
ENGL 1010 Minimum grade C
Overall UVU GPA of 2.5 or higher. Each class cannot be taken more than twice.

Graduation Requirements

1. Completion of a minimum of 120 semester credits, with a minimum of 40 upper-division credits.
2. Overall grade point average of 2.0 or above. Must have a minimum grade of C- with a combined GPA of 2.5 or higher in all discipline core and emphasis requirements and the General Education requirements marked with an asterisk.
3. Residency hours -- minimum of 30 credit hours through course attendance at UVU. 10 of these hours must be within the last 45 hours earned. At least 12 of the credit hours earned in residence must be in approved CSE Department courses.
4. All transfer credit must be approved in writing by UVU.
5. No more than 80 semester hours and no more than 20 hours in CS type courses of transfer credit from a two-year college.
6. No more than 30 semester hours may be earned through independent study and/or extension classes.
7. Successful completion of at least one Global/Intercultural course. CS 305G satisfies this requirement.