

Concord University
Bachelor of Science in Computer Science
Registrar's Office Official Document

Name _____

120 Semester hours minimum for graduation with a 2.00 average
 overall 56 hours from a four-year institution

2019-2020 Catalog

Course	Title	HRS	GR	QP
Written and Oral Communications (9 credit hours) Select one course from BGEN 205 or COMM 101				
ENGL 101	Composition & Rhetoric I	3		
ENGL 102	Composition & Rhetoric II	3		
		3		
Literature and Humanities (6 credit hours) Select one (1) course from Literature and one (1) course from History and Philosophy. *May be repeated for 3 credit hours.				
	ENGL 203, 204, *224 or *225	3		
	HIST 101, 102, 203, 204, PHIL 101, 308, 316, or 361	3		
Fine Arts– (3 credit hours) Select one (1) course from the following:				
	ART 101, 103, 105, 106, 204, 205, 216, 303, 304, 308, MUS 101, *451, *453A, or THEA 102	3		
Social and Behavioral Sciences (9 credit hours) Select one (1) course from three different categories.				
	Category 1 - Business and Professional Studies BGEN 105, ECON 203, ECON 204, FIN 200, RTM 100 or SOWK 161	3		
	Category 2 - Geography GEOG 101, 255 or 321	3		
	Category 3 - Political Science POSC 101, 104, or 202	3		
	Category 4 - Psychology PSY 101 or 200			
	Category 5 – Sociology SOC 101, 201, or 301			
Natural Sciences (7-8 credit hours) Select one (1) course from two different categories.				
PHYS 101/ PHYS 201	Category 1-Biological Science BIOL 101, 102, 121, or 122	4	See Major	
	Category 2-Earth & Space Science GEOL 101, GEOL 150, GEOG 200, PHSC 104, or PHYS 105	3-4		
	Category 3-Physical Science CHEM 100, CHEM 101/111, PHSC 103, PHYS 101, or PHYS 201			
Mathematics (3 credit hours) Select one (1) Mathematics course numbered 100 or higher.				
MATH ---		3	See Major	
Physical Wellness (2 credit hours) Select one or more courses listed below for a total of at least two hours.				
	H ED 120, 304, P ED 101M, 117, 118, or RTM 220	2-3		
Modern/Classical Language – (Optional 6 credit hours) Select two courses within the same Modern/Classical Language for substitution purposes.				
	May not substitute Modern Language for ENGL 101, ENGL 102, the 3 hour Mathematics requirement or the 4-hour lab science requirement.			

Computer Science (2.00 GPA required)				
CS 151	Introduction to Computer Science	3		
CS 221	Computer Networking	3		
CS 232	Introduction of Computer Security	3		
CS 252	Data Structures and Object Oriented Programming	3		
CS 253	Software Engineering	3		
CS 261	Introduction to Intelligent Systems	3		
CS 272	Human Centered Design	3		
CS 282	Database and Information Management	3		
CS 325	Computer Organization and Hardware	3		
CS 375	Parallel and Distributed Computing	3		
CS 421	Operating Systems	3		
CS 442	Analysis of Algorithms	3		
CS 456	Capstone Project (4 credit hours total)	2,2		
MATH 103*	College Algebra	3		
MATH 104*	College Trigonometry	3		
MATH 219	Discrete Mathematics	3		
MATH 253	Calculus with Analytic Geometry I	3		
PHYS 101 or PHYS 201	Introduction to Physics or University Physics w/Calculus 1	4		
PHYS 102 or PHYS 202	Intermediate Physics or University Physics w/Calculus 2	4		
PHYS 319 or PHYS 325	Digital Electronics or Computational Physics	2/3		

*Math 103 and/or 104 may be waived for students establishing proficiency

Students must select ONE of the concentrations on the following page

RESIDENCE CREDIT:

36 hours at Concord
 16 of last 32 hours at Concord
 Note: In some degree programs, this is prior to entering professional training.
 9 hours in Major, Teaching Fields

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ANALYSIS, SIMULATION AND MODELING				
CS 283	Data Analytics	3		
CS 374	Introduction to Simulation and Modeling	3		
CS 376	Artificial Intelligence	3		
	Choose one of the following options:			
	10 credit hours in BIOL			
	10 credit hours in CHEM			
	10 credit hours in GEOL			
	10 additional credit hours in MATH (MATH 105 or above)			
	OR			
	10 credit hours in PHYS			

CYBERSECURITY				
CS 331	Digital Forensics and Incident Response	3		
CS 332	Network Security	3		
CS 333	Secure Coding	3		
CS 281 or CS 381	Linux System Administration or Systems Analysis and Design	3		
	3 additional credit hours in CS or MATH	3		

SOFTWARE DEVELOPMENT				
CS 351	Web Development	3		
CS 352	Mobile Development	3		
CS 353	Game Development	3		
CS 384	DevOps	3		
	3 additional credit hours in CS or MATH	3		