

## COMPUTER SCIENCE B.S.CS.

All students must meet the Degree and University Requirements.

All students must meet the Catamount Core Curriculum Requirements.

All students must meet the College Requirements.

A minimum of 120 credits are required and must include the following:

Requirement Description		Credits
COMPUTER SCIENCE (52 Credits)		
Core:		
CS 1210	Computer Programming I <sup>1</sup>	3
CS 1500	Seminar for New CS Majors	1
CS 1640	Discrete Structures	3
CS 2100	Intermediate Programming <sup>1</sup>	4
CS 2210	Computer Organization	3
CS 2240	Data Struc & Algorithms	3
CS 2250	Computability & Complexity	3
CS 2300	Advanced Programming	3
CS 3010	Operating Systems	3
CS 3240	Algorithm Design & Analysis	3
CS 3920	Senior Seminar	1
CEMS 1500	CEMS First Year Seminar <sup>2</sup>	1
Capstone Experience		3
A comprehensive, project-based experience, typically occurring during the Senior year, that draws from the full breadth of skills and knowledge developed throughout a student's undergraduate program. Students may choose from the following courses:		
CS 3020	Compiler Construction	
CS 3050	Software Engineering <sup>3</sup>	
CS 3060	Evolutionary Robotics	
CS 3110	Data Privacy	
CS 3250	Programming Languages	
CS 3280	Human-Computer Interaction	
CS 3540	Machine Learning	
CS 3750	Mobile App Development <sup>3</sup>	
18 additional credits in CS, including 3 at the 1000-level (or above), 6 at the 2000-level (or above), and 9 credits at the 3000-level (or above).		18

MATHEMATICS (14 Credits)		
MATH 1234	Calculus I <sup>4</sup>	4
MATH 1248	Calculus II <sup>4</sup>	4
Choose 2 of the following courses:		6-7
MATH 2248	Calculus III	
MATH 2522	Applied Linear Algebra	
or MATH 2544 Linear Algebra		
MATH 2678	Basic Combinatorial Theory	
MATH 3201	Adv Engineering Mathematics	
PROBABILITY & STATISTICS (6 Credits)		
STAT 2430	Statistics for Engineering	3
STAT 2510	Applied Probability	3
NATURAL SCIENCES (7 Credits):		
2 courses, one of which must be a lab adding up to 4 credits, chosen from:		
Astronomy (ASTR) - All courses		
Biology (BIOL) - All courses		
BioCore (BCOR) - All courses		
Chemistry (CHEM) - All courses		
Geology (GEOL) - All courses		
Physics (PHYS) - All courses		
Plant Biology (PBIO) - All courses		
GEOG 1200	Weather, Climate & Landscapes	
GEOG 2230	Climatology: Concepts & Tools	
GEOG 2250	Global Environmental Change	
MMG 1650	Microbiology & Pathogenesis	
PSYS 2100	Learning, Cognition & Behavior	
PSYS 2200	Biopsychology	
PSYS 3100	Learning	
PSYS 3200	Physiological Psychology w/lab	
PSYS 3250	Psychopharmacology	
PSYS 3205	Hormones and Behavior	

<sup>1</sup> C- or higher required in CS 1210 and CS 2100.

<sup>2</sup> CEMS degree requirement designed for first-year students.

Students entering the College after their first semester should work with their academic advisor to identify an appropriate substitution as approved for their major. The course used to fulfill the CEMS

1500 requirement cannot be used to fulfill another requirement in the major.

<sup>3</sup> Satisfies CEMS Professional Development Requirement.

<sup>4</sup> MATH 1212 and MATH 1242 are acceptable substitutions for MATH 1234 and MATH 1248.