

COLLEGE OF COMPUTING AND ENGINEERING  
 SAMPLE FOUR YEAR CURRICULUM | 2022-2023 CATALOG  
 Bachelor of Science — Computer Science

Freshman Year				
Fall		Winter		
Course	Credits	Course	Credits	
UNIV 1000: First Year Seminar	3	Open Written Communication	3	
CSIS 1800 Introduction to Computer and Info. Sciences	3	CSIS 3101 Advanced Computer Programming	4	
MATH 2100 Calculus I	4	CSIS 2050 Discrete Mathematics	4	
CSIS 2101 Fundamentals of Computer Programming	4	Open Elective	3	
<b>Total Credits</b>	<b>14</b>	<b>Total Credits</b>	<b>14</b>	

Sophomore Year				
Fall		Winter		
Course	Credits	Course	Credits	
CSIS 3200 Organization of Programming Language	3	Open Written Communication	3	
CSIS 3400 Data Structures	4	MATH 3300 Introductory Linear Algebra	3	
CSIS 3500 Networks and Data Communication	3	CSIS 3051 Computer Organization & Architecture	4	
MATH 2200 Calculus II	4	CSIS 3750 Software Engineering	4	
<b>Total Credits</b>	<b>14</b>	<b>Total Credits</b>	<b>14</b>	

Junior Year				
Fall		Winter		
Course	Credits	Course	Credits	
Open Social & Behavioral Sciences	3	CSIS 3460 Object Oriented Design	3	
CSIS 3023 Legal and Ethical Aspects of Computers	3	Major Elective	3	
CSIS 3810 Operating Systems Concepts	3	Science Course (BIOL, CHEM, ENV5, MBIO, or PHYS)	4	
PHYS 2400 Physics I/Lab	4	Open Arts & Humanities	3	
Open Elective	3	Open Elective	3	
<b>Total Credits</b>	<b>16</b>	<b>Total Credits</b>	<b>16</b>	

Senior Year				
Fall		Winter		
Course	Credits	Course	Credits	
Open Social & Behavioral Sciences	3	CSIS 4610 Design and Analysis Algorithms	3	
MATH 4500 Probability and Statistics	3	CSIS 4903 Capstone Course or CSIS 4953 Internship	3	
CSIS 3610 Numerical Analysis	4	Major Elective	3	
Major Elective	3	Open Elective	3	
Open Arts & Humanities	3	Open Elective	4	
<b>Total Credits</b>	<b>16</b>	<b>Total Credits</b>	<b>16</b>	

**TOTAL CREDITS: 120**

FIRST YEAR SEMINAR		
Course	Credits	Frequency
UNIV 1000: First Year Seminar	3	
<b>Total First Year Seminar Credits</b>	<b>3</b>	

GENERAL EDUCATION REQUIREMENTS		
Area/Course	Credits	Frequency
<b>Written Composition</b>		
<i>6 credits at or above COMP 1500</i>		
COMP 1500 College Writing	3	FW
COMP 2000 Advanced College Writing	3	FW
<b>Mathematics</b>		
<i>6 credits at or above MATH 1040</i>		
satisfied by major	3	
satisfied by major	3	
<b>Arts &amp; Humanities</b>		
<i>6 credits in HIST, ARTS, PHIL, HUMN, LITR, THEA, FILM, MUSC, DANC, WRIT, foreign language</i>		
Open Arts & Humanities	3	
Open Arts & Humanities	3	
<b>Social &amp; Behavioral Sciences</b>		
<i>6 credits in PSYC, SOCL, ANTH, ECN, COMM, GEOG, GEST, INST, POLS</i>		
Open Social & Behavioral Sciences	3	
Open Social & Behavioral Sciences	3	
<b>Science</b>		
<i>6 credits in BIOL, MBIO, CHEM, SCIE, ENVS, PHYS</i>		
satisfied by major	3	
satisfied by major	3	
<b>Total General Education Credits</b>	<b>30</b>	

OPEN ELECTIVES		
Course	Credits	Frequency
take 17 open elective credits		
<b>Total Open Elective Credits</b>	<b>13</b>	

Frequency Key: F-Every Fall; W-Every Winter; FO - Odd Year Fall; FE - Even Year Fall; WO - Odd Year Winter; WE - Even Year Winter

MAJOR PREREQUISITES		
Course	Credits	Frequency
take 16 open elective credits		
<i>Some recommended open electives:</i>		
MATH 2100 Calculus I	4	FW
MATH 2200 Calculus II	4	FW
MATH 3300 Introductory Linear Algebra	3	FW
MATH 4500 Probability and Statistics	3	F
PHYS 2400 Physics I	4	FW
Any Science Credits (BIOL, MBIO, CHEM, ENVS, PHYS)	4	FW
<b>Total Major Prerequisites Credits</b>	<b>22</b>	

MAJOR		
Course	Credits	Frequency
CSIS 1800 Introduction to Computer and Info. Sciences	3	FW
CSIS 2050 Discrete Mathematics	4	W
CSIS 2101 Fundamentals of Computer Programming	4	FW
CSIS 3023 Legal and Ethical Aspects of Computers	3	F
CSIS 3051 Computer Organization and Architecture	4	W
CSIS 3101 Advanced Computer Programming	4	W
CSIS 3200 Organization of Programming Language	3	F
CSIS 3400 Data Structures	4	F
CSIS 3460 Object Oriented Design	3	W
CSIS 3500 Networks and Data Communication	3	F
CSIS 3610 Numerical Analysis or MATH course at the 3000 level or higher not counted as Major Requirement	4	F
CSIS 3750 Software Engineering	4	W
CSIS 3810 Operating Systems Concepts	3	F
CSIS 4610 Design and Analysis Algorithms	3	W
<b>Capstone</b>		
CSIS 4903 Capstone Project for Computer Science <i>or</i>	3	FW
CSIS 4953 Capstone Internship in Computer Science	3	FW
<b>Total Major Credits</b>	<b>52</b>	

MAJOR ELECTIVES		
Course	Credits	Frequency
Select 9 credits from any CSIS, CENG, EENG, or SENG courses of level 3000 or higher not listed above provided the student has satisfied prerequisites.		
<b>Total Major Elective Credits</b>	<b>9</b>	

**TOTAL CREDITS: 120**