

	General Education	Requirements					
Fundamental Studies							
Requii	rement	Course	Credits	Completed?			
AW	Academic Writing (before 30 credits)		3				
PW	Professional Writing (after 60 credits)		3				
ОС	Oral Communication		3				
	Distributive	Studies	•				
Requii	rement	Course	Credits	Completed?			
NL	Natural Science with Lab		4				
NS	Natural Science		3 or 4				
HS	History and Social Sciences		3				
HS	History and Social Sciences		3				
HU	Humanities		3				
HU	Humanities		3				
SP	Scholarship in Practice (non-major)		3				
SP	Scholarship in Practice (non-major)		3				
	Big Ques	stion					
	Overlap with Distributive Stud	lies and/or Big Question					
Requii	rement	Course	Credits	Completed?			
IS	Big Question						
IS	Big Question						
	Divers	ity	-				
	Can overlap with Distributive	Studies or Big Question					
Requii	rement	Course	Credits	Completed?			
UP	Understanding Plural Societies						
UP oi	Understanding Plural Societies or Cultural Competence						
Gen Ed	Mathematics (MA) and Analytic Reasoning (AR) are satisf	fied by major requirements.		1			

Upper Level C	oncentration	
Students must complete a minimum of 12 credit le discipline outside of Computer Science. No cours counted in this requirement. Only 1 independent used. Students who are pursuing a minor or a se Consult with your academic advisor to ensure each	se that is in, or cross-listed as, CMS study or experiential learning course cond major can use those credits in	C may be e may be n this area
Course	Credits	Completed

Students must take enough elective courses in any discipline(s) they choose to reach the total number of 120 credits required for graduation. Students who are pursuing a minor or a second major can use those credits in this area.						
Course		Cred	dits	Completed?		

Major Requirements	<b>;</b>		
Lower Level Requirements (Must pass with a	grade of C- or h	nigher)	
Title	Course	Credits	Completed?
Calculus I	MATH 140	4	
Calculus II	MATH 141	4	
Object-Oriented Programming I	CMSC 131 or	4	
Programming with Purpose I: Data-Centric Computing	CMSC 141	4	
Object-Oriented Programming II	CMSC 132 or	4	
Programming with Purpose II: Data Structures and Algorithms	CMSC 142	4	
Introduction to Computer Systems	CMSC 216	4	
Discrete Structures	CMSC 250	4	
Organization of Programming Languages	CMSC 330	3	
Algorithms	CMSC 351	3	
STAT 4xx with MATH 141 prerequisite	STAT 4XX	3	
MATH/AMSC/STAT xxx with MATH 141 prerequisite		3/4	

STAT 4xx with MATH 141 prerequisite	STAT 4XX	3	
MATH/AMSC/STAT xxx with MATH 141 prerequisite		3/4	
Upper Level Courses (Must pass with a grade	de of C- or higl	her)	
Select 5 courses from at least 3 of the following areas with no mor	re than 3 courses in	a given are	a
Area 1: Systems	Course	Credits	Completed
Computer Systems Architecture	CMSC 411	3	
Operating Systems *	CMSC 412	4	
Computer and Network Security	CMSC 414	3	
Introduction to Parallel Computing	CMSC 416	3	
Computer Networks	CMSC 417	3	
Area 2: Information Processing	Course	Credits	Completed?
Data Structures	CMSC 420	3	
Introduction to Artificial Intelligence	CMSC 421	3	
Introduction to Machine Learning *	CMSC 422	3	
Bioinformatic Algorithms, Databases and Tools	CMSC 423	3	
Database Design	CMSC 424	3	
Computer Vision *	CMSC 424	3	
Computer Vision  Computer Graphics *	CMSC 420	3	
	CMSC 427	3	
Introduction to Natural Language Processing *		3	
Introduction to Data Visualization (Area 2 <u>OR</u> Area 3)	CMSC 471	3	
Introduction to Deep Learning *	CMSC 472	3	
Area 3: Software Engineering and Programming Languages	Course	Credits	Completed
Introduction to Compilers	CMSC 430	3	
Programming Language Technologies and Paradigms	CMSC 433	3	
Introduction to Human-Computer Interaction	CMSC 434	3	
Software Engineering *	CMSC 435	3	
Programming Handheld Systems	CMSC 436	3	
Introduction to Data Visualization (Area 2 <u>OR</u> Area 3)	CMSC 471	3	
			_
Area 4: Theory	Course	Credits	Completed
Design and Analysis of Computer Algorithms	CMSC 451	3	
Elementary Theory of Computation	CMSC 452	3	
Algorithms for Data Science	CMSC 454	3	
Cryptology	CMSC 456	3	

Introduction to Numerical Analysis *
* Indicates the course has unique prerequisites

Introduction to Quantum Computing

Area 5: Numerical Analysis

Computational Methods \*

Introduction to Computational Game Theory

	Upper Level Elective Courses (Must pass with a	grade of C- o	r higher)	
	Select 6 credits from CMSC 300- or 400-level courses (not eligible	ole CMSC330 & CMS	SC351)	
Title		Course	Credits	Completed?

CMSC 457

CMSC 474

Course

CMSC 460 or CMSC 466 Credits

Completed?

## **College of Computer, Mathematical and Natural Sciences**

## Computer Science - General Track Effective Fall 2024

This is a generalized academic plan, not an official audit

Year 1	Fa	II	
	Course	Credit	Grade
	CMSC131 or CMSC141	4	
Gateway & Benchmark 1	MATH140 (FSMA, FSAR)	4 4 3	
Requirements: CMSC131, CMSC132, and MATH140 must be completed with a C- or higher by 45 credits (AP/IB credits excluded)	ENGL101 (FSAW)	3	
	Oral Comm (FSOC)	3	
	CMSC100	1	
	Total	15	

Spri	ng	
Course	Credit	Grade
CMSC132 or CMSC142	4	
MATH141	4	
Natural Science w/ Lab (DSNL)	4	
History & Social Science (DSHS)*	3	
Total	15	

Year 2	Fall			
CMSC330, CMSC351, and MATH or STAT must be completed with a C- or higher	Course	Credit	Grade	
	CMSC216	4		
	CMSC250	4		
	MATH/STAT/AMSC	3 or 4		
	Scholarship in Practice (DSSP)*	3		
	Total	14 or 15		

	Spring		
Course	Credit		Grade
CMSC330		3	
CMSC351		3	
STAT4XX		3	
Natural Science (DSNS)		3	
Humanities (DSHU)*		3	
Total		15	

Year 3	Fall				
	Course	Credit	Grade		
	CMSC4XX	3			
	CMSC4XX	3			
	History & Social Sciences (DSHS)*	3			
	Humanities (DSHU)*	3			
	Big Question (SCIS)	3			
	Total	15			

Spring				
Course	Credit	Grade		
CMSC4XX	3			
CMSC4XX	3			
ENGL39X (FSPW)**	3			
Scholarship in Practice (DSSP)*	3			
Big Question (SCIS)	3			
Total	15			

Year 4	Fall		
	Course	Credit	Grade
	CMSC4XX	3	
	CMSC Elective	3	
	UL Concentration	3	
	UL Concentration	3	
	Plural Societies (DVUP)*	3	
	Total	15	

Spring				
Course	Credit	Grade		
CMSC Elective	3			
UL Concentration	3			
UL Concentration	3			
Plural Societies (DVUP) or Cultural Competence (DVCC)*	3			
Elective	3 or 4			
Total	15 or 16			

<sup>\*</sup>All students must complete two Distributive Studies courses that are approved for Big Question courses. The Understanding Plural Societies (UP) and Cultural Competence (CC) courses may also fulfill Distributive Studies categories.

<sup>\*\*</sup>Students may take any Professional Writing course to fulfill this requirement.