



2024-2025

## COMPUTER SCIENCE MATHEMATICS MAJOR, B.A.

Mathematics & Computer Science Department; Shaw School of Sciences

To graduate must complete all major requirements, foundational requirements, and additional electives needed for 124 hour minimum degree requirement.

### MAJOR REQUIREMENTS (69-71)

(45 Core + 24-26 Concentration)

__ 4	CSC	121	Computer Programming I	__ Lab
__ 4	CSC	122	Computer Programming II	__ Lab
__ 3	CSC	210	Programming in Python	
__ 3	CSC	231	Computer Organization	
__ 3	CSC	300	Data Structures & Algorithms	
__ 3	CSC	320	Operating Systems	
__ 3	CSC	330	Programming Languages	
__ 3	CSC	400	Parallel & Distributed Systems Programming	
__ 3	CSC	410	Artificial Intelligence	
__ 3	MAT	152	Discrete Math	
__ 1	MAT	170	Intro to Math Modeling	
__ 4	MAT	181	Calculus I	__ Lab
__ 4	MAT	182	Calculus II	__ Lab
__ 3	MAT	271	Linear Algebra	
__ 1	MAT	475	Senior Seminar	

### REQUIRED CONCENTRATION (choose one):

#### CSMC - COMPUTATIONAL MATH (26)

__ 4	MAT	183	Calculus III	__ Lab
__ 3	MAT	241	Logic & Sets	
__ 3	MAT	252	Diff Equations/Modeling	
__ 3	MAT	350	Mathematical Modeling	
__ 3	MAT	442	Numerical Analysis	
__ 5	PHY	211	General Physics I	__ Lab __ Recitation
__ 5	PHY	212	General Physics II	__ Lab __ Recitation

#### CSME - ENGINEERING MATH (24)

__ 3	CSC	115	Web Programming	
__ 3	CSC	310	Software Design & Engineering	
__ 4	MAT	183	Calculus III	__ Lab
__ 3	MAT	241	Logic & Sets	
__ 3	MAT	252	Diff Equations/Modeling	
__ 3	MAT	350	Mathematical Modeling	
__ 5	PHY	211	General Physics I	__ Lab __ Recitation

### PLUS FOUNDATIONS REQUIREMENTS (49)

(3 hours Math and 4 hours Science satisfied by required major courses.)

### Plus electives needed for the 124 hour degree requirement (4-6)