



2024-2025

ENGINEERING MATHEMATICS MAJOR, B.A.

Mathematics & Computer Science Department; Shaw School of Sciences

This degree prepares students to enter a Master of Engineering program within the areas of concentration.

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

MAJOR REQUIREMENTS (62-64)

(47 Core + 15-17 Concentration)

__ 3	CHE	121	Gen College Chemistry I	
__ 3	CHE	122	Gen College Chemistry II	
__ 1	CHE	123	Gen College Chemistry Lab I	
__ 1	CHE	124	Gen College Chemistry Lab II	
__ 4	CSC	121	Computer Programming I	__ Lab
__ 4	MAT	181	Calculus I	__ Lab
__ 4	MAT	182	Calculus II	__ Lab
__ 4	MAT	183	Calculus III	__ Lab
__ 3	MAT	252	Differential Equations	
__ 3	MAT	271	Linear Algebra	
__ 3	MAT	350	Mathematical Modeling	
__ 3	MAT	442	Numerical Analysis	
__ 1	MAT	475	Senior Seminar	
__ 5	PHY	211	Gen Physics I	
			__ Lab	__ Recitation
__ 5	PHY	212	Gen Physics II	
			__ Lab	__ Recitation

EGMM - ENGINEERING MANAGEMENT (15)

__ 3	ACC	201	Financial Accounting
__ 3	ACC	202	Managerial Accounting
__ 3	BU	211	Principles of Management
__ 3	BU	412	Organizational Behavior & Structure
__ 3	MAT	255	Financial Mathematics

EGMI - INDUSTRIAL ENGINEERING (16)

__ 3	BU	211	Principles of Management	
__ 3	BU	412	Organizational Behavior & Structure	
__ 4	CSC	122	Computer Programming II	__ Lab
__ 3	MAT	241	Logic & Sets	
__ 3	MAT	281	Probability	

EGMS - MATERIALS & ENERGY SCIENCE ENGINEERING (17)

__ 3	BU	211	Principles of Management	
__ 4	CHE	421	Physical Chemistry I	__ Lab
__ 4	CSC	122	Computer Programming II	__ Lab
__ 3	MAT	152	Discrete Math	
__ 3	MAT	241	Logic & Sets	

REQUIRED CONCENTRATION (choose one):

EGMB - BIOENGINEERING (16)

__ 3	BIO	201	General Biology I
__ 3	BIO	202	General Biology II
__ 1	BIO	203	General Biology I Lab
__ 1	BIO	204	General Biology II Lab
__ 3	BIO	331	Human Anatomy
__ 1	BIO	333	Human Anatomy Lab
__ 3	BIO	372	Cellular & Molecular Biology
__ 1	BIO	374	Cell & Molecular Biology Lab

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 (11-13)