ACADEMIC ROADMAP
Applied Mathematics, B.S.
Updated Fall 2022

Freshman Year (30 credits)

FIRST SEMESTER

Course Title	Catalog Number	Prerequisite(s)
College Writing I (3)	CWP 101	
Calculus I (4)	MAT 161	MAT 124 or equivalent
Using Technology to Explore Calculus I (1)	MAT 163	
Intellectual Foundations (IF) Course(s) (at least 6 credits)		

SECOND SEMESTER

Course Title	Catalog Number	Prerequisite(s)
College Writing II (3)	CWP 102	
Calculus II (4)	MAT 162	MAT 161 with a C or better
Using Technology to Explore Calculus II (1)	MAT 164	MAT 163 with a C or better
IF Course(s) (at least 9 credits)		

Notes and recommendations:
Attend at least one faculty office hour; visit Academic Commons (Math & Writing Centers, tutoring); view your degree audit sheet in Degree Works

Sophomore Year (60 credits)

THIRD SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Calculus III (4)	MAT 263	MAT 162 with a C or better
Using Technology to Explore Calculus III (1)	MAT 264	MAT 164 with a C or better
Computer Mathematics I (3)	MAT 241	MAT 161 & MAT 163
IF Course(s) (at least 6 credits)		

FOURTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Introduction to Linear Algebra (3)	MAT 202	MAT 161
Discrete Mathematics (3)	MAT 270	MAT 161
Mathematical Biology (3) Upper Division Elective	MAT 319	MAT 161
IF Course(s) (at least 6 credits)		

Notes and recommendations:
Form a study group; consider enrolling in a minor or certificate program

Junior Year (90 credits)

FIFTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Probability Theory (3)	MAT 381	MAT 162 and MAT 270
Differential Equations (3)	MAT 315	MAT 263
Mathematical Modeling (3) Upper Division Elective	MAT 318	MAT 162 and MAT 202
Any elective (at least 6 credits)		

SIXTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Mathematical Statistics (3)	MAT 382	MAT 263 and MAT 381
Introduction to Operations Research (3) Upper Division Elective	MAT 390	MAT 202 and MAT 270
Intermediate Differential Equations (3) Upper Division Elective	MAT 316	MAT 315
Any Elective (at least 6 credits)		

Notes and recommendations:
Visit the Career Development Center; talk to your faculty advisor about graduate school options

Senior Year (120 credits)

SEVENTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Applied Statistics I (3)	MAT 383	MAT 382
Stochastic Processes (3)	MAT 481	MAT 325 or MAT 381
Numerical Analysis (3) Upper Division Elective	MAT 461	MAT 202, MAT 263, and MAT 264
Any Elective (at least 6 credits)		

EIGTH SEMESTER

Course Title	Catalog Number	Prerequisite(s)
Applied Statistics II (as an elective)	MAT 484	MAT 383
Special Project	MAT 495/AMT 495	Senior Status; Instruction Permission
Applied Linear Algebra (3) (as an elective)	MAT 404	MAT 202, MAT 263, and MAT 264
Any Elective (at least 6 credits)		

Notes and recommendations:
Apply for graduation; apply to graduate school, if applicable; visit the Career Development Center to have your resume reviewed