COLLEGE OF ARTS AND SCIENCES

BACHELOR OF SCIENCE IN APPLIED AND COMPUTATIONAL MATHEMATICS

MATHEMATICAL MODELING CONCENTRATION

ADMITTED IN 2024-2025 ACADEMIC YEAR

YE/		MAJOR COURSES						GENERAL EDUCATION		TOTAL CREDITS
YEAR 1	FALL	MATH 170 4 CALCULUS I Pre-Req: Requires Placement or MATH 136 or MATH 141		CSCI 125 COMPUTER PROGRAMMING I Co-Req: MATH 136, MATH 141 or higher	3	GENERAL ELECTIVE	3	FCWR 101/111 3 DATA 101 FOUNDATIONS OF COLLEGE COMPOSITION Pre-Req: Requires Placement SOCIETY		16
	SPRING	MATH 180 4 CALCULUS II Pre-Req: MATH 170		CSCI 185 COMPUTER PROGRAMMING II Pre-Req: CSCI 125	3 PHYS 170 4 GENERAL PHYSICS I Co-Req: MATH 170	GENERAL ELECTIVE	3	FCWR 151/161 3 FOUNDATIONS OF RESEARCH WRITING Pre-Req: FCWR 101/111		17
YEAR 2	FALL	MATH 260 4 CALCULUS III Pre-Req: MATH 180	MATH 220 3 PROBABILITY & STATISTICS Pre-Req: MATH 180		PHYS 180 4 GENERAL PHYSICS II Pre-Req: PHYS 170; Co-Req: MATH 180	GENERAL ELECTIVE	3			14
	SPRING	MATH 350 3 ADVANCED CALCULUS Pre-Req: MATH 260	MATH 310 3 LINEAR ALGEBRA Pre-Req: MATH 180	MATH 330 COMPUTATIONAL ANALYSIS Pre-Req: MATH 260	4 PHYS 220 4 GENERAL PHYSICS III Pre-Req: PHYS 180			FCWR 3XX 3 PROFESSIONAL COMMUNICATION CHOICE Pre-Req: FCWR 151/161		17
YEAR 3	FALL	MATH 320 3 DIFFERENTIAL EQUATIONS Pre-Req: MATH 260	MATH 410 3 NUMERICAL LINEAR ALGEBRA Pre-Req: MATH 310		PHYS 225 3 INTRO TO MODERN PHYSICS Pre-Req: PHYS 180	COMPUTER SCIENCE ELECTIVE	3	ICXX 3XX * 3 SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS**) Pre-Req: FCWR 101/111 and FCWR 151/161		15
	SPRING	MATH 450 3 PARTIAL DIFFERENTIAL EQUATIONS Pre-Req: MATH 320			PHYS 450 3 MATHEMATICAL PHYSICS Pre-Req: MATH 260 AND PHYS 220	GENERAL ELECTIVE	3	ICXX 3XX * 3 SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS**) Pre-Req: FCWR 101/111 and FCWR 151/161		12
YEAR 4	FALL	MATH 470 3 MATHEMATICAL FLUID DYNAMICS Pre-Req: MATH 450	MATH 3 ELECTIVE	MATH ELECTIVE	3	GENERAL ELECTIVE	3	ICXX 3XX * 3 SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS**) Pre-Req: FCWR 101/111 and FCWR 151/161		15
	SPRING	MATH 490 5 MATHEMATICAL MODELING CAPSTONE Pre-Req: MATH 450 or MATH 455			COMPUTER 3 SCIENCE ELECTICE OR SCIENCE ELECTIVE	GENERAL ELECTIVE	3	ICXX 3XX * 3 SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS**) Pre-Req: FCWR 101/111 and FCWR 151/161		14
CREI	DITS									120
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^{*}Of the four required ICXX seminar courses (ICBS, ICLT, ICPH, ICSS), at least three must be in different subject areas.

(Rev. 3/24)

Course names, numbers and/or pre-requisites are subject to change.

^{**} IENG 400 (Technology and Global Issues) may be substituted for an ICSS choice.