## BACHELOR OF SCIENCE IN APPLIED AND COMPUTATIONAL MATHEMATICS

SCIENTIFIC COMPUTATION CONCENTRATION

YEA		MAJOR COURSES					CORE COURSES		TOTAL CREDITS
YEAR 1	FALL	MATH 170 4 CALCULUS I Pre-Req: Placement Exam or MATH 136 or MATH 141		CSCI 125 3 COMPUTER PROGRAMMING I Co-Req: MATH 136, MATH 141 or higher		GENERAL 3 ELECTIVE	FCWR 101* 3 FOUNDATIONS OF COLLEGE COMPOSITION Pre-Req: Placement or WRIT 100	FCIQ 101 3 FOUNDATIONS OF INQUIRY	16
YE	SPRING	MATH 180 4 CALCULUS II Pre-Req: MATH 170		CSCI 185 3 COMPUTER PROGRAMMING II Pre-Req: CSCI 125	PHYS 170 4 GENERAL PHYSICS I Co-Req: MATH 170		FCWR 151* 3 FOUNDATIONS OF RESEARCH WRITING Pre-Req: FCWR 101	FCSC 101 3 FOUNDATIONS OF SCIENTIFIC PROCESS	17
3.2	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		FCSP 105 3 FOUNDATIONS OF SPEECH COMMUNICATION		14
YEAR	SPRING	MATH 350 3 ADVANCED CALCULUS Pre-Req: MATH 260	MATH 310 3 LINEAR ALGEBRA Pre-Req: MATH 180	MATH 330 4 COMPUTATIONAL ANALYSIS Pre-Req: MATH 260	CSCI 235 3 ELEMENTS OF DISCRETE STRUCTURES Pre-Req: CSCI 185 AND MATH 170		FCWR 3XX 3 PROFESSIONAL COMMUNICATION CHOICE Pre-Req: FCWR 151		16
	FALL	MATH 320 3 DIFFERENTIAL EQUATIONS Pre-Req: MATH 260	MATH 410 3 NUMERICAL LINEAR ALGEBRA Pre-Req: MATH 310		CSCI 312 3 THEORY OF COMPUTATIONS Pre-Req: CSCI 235	COMPUTER 3 SCIENCE ELECTIVE	ICLT 3XX** 3 LITERATURE CHOICE		15
YEAR 3	SPRING	MATH 455 3 NUMERICAL ANALYSIS Pre-Req: MATH 320			SCIENCE 4 ELECTIVE	GENERAL 3 ELECTIVE	ICBS 3XX** 3 BEHAVIORAL SCIENCE CHOICE		13
4	FALL	MATH 440 3 NUMERICAL OPTIMIZATION Pre-Req: MATH 410	MATH 3 ELECTIVE	MATH 3 ELECTIVE		GENERAL 3 ELECTIVE	ICPH 3XX** 3 PHILOSOPHY CHOICE		15
YEAR	SPRING	MATH 490 5 MATHEMATICAL MODELING CAPSTONE Pre-Req: MATH 450 or MATH 455			CSCI 335 3 DESIGN AND ANALYSIS OF ALGORITHMS Pre-Req: CSCI 260	GENERAL 3 ELECTIVE	ICSS 3XX** 3  OR IENG 400 TECHNOLOGY AND GLOBAL ISSUES		14
CREDITS 120									

<sup>\*</sup>Non-native English speakers should take FCWR 111 in lieu of FCWR 101 and FCWR 161 in lieu of FCWR 151.

(Rev. 2/2023)

Grades for all MATH courses must be a C or higher.

The combined GPA for all mathematics courses must be a 2.7 or higher.

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

<sup>\*\*</sup>Pre-Req: FCWR 101, FCWR 151, FCIQ 101, FCSP 105, FCSC 101