## **COLLEGE OF ARTS AND SCIENCES**

## BACHELOR OF SCIENCE IN APPLIED AND COMPUTATIONAL MATHEMATICS SCIENTIFIC COMPUTATION CONCENTRATION

## ADMITTED IN 2024-2025 ACADEMIC YEAR

YEAR TERM				MAJOR COURSES	5				GENERAL EDUCATION	TOTAL CREDITS
YEAR 1 FALL	MATH 170 CALCULUS I Pre-Req: Requires Placement or MATH 130 or MATH 141	<b>4</b>		CSCI 125 COMPUTER PROGRAMMING I Co-Req: MATH 136, MATH 141 or higher	3		GENERAL ELECTIVE	3	FCWR 101/1113DATA 1013FOUNDATIONS OF COLLEGE COMPOSITION Pre-Req: Requires PlacementMAKING SENSE OF A DATA-ORIENTED SOCIETY	16
YE SPRING	MATH 180 CALCULUS II Pre-Req: MATH 170	4		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
r 2 FALL	MATH 260 CALCULUS III Pre-Req: MATH 180	4	MATH 2203PROBABILITY &STATISTICSPre-Req: MATH 180			PHYS 1804GENERAL PHYSICS IIPre-Req: PHYS 170;Co-Req: MATH 180	GENERAL ELECTIVE	3		14
YEAR	MATH 350 ADVANCED CALCULU Pre-Req: MATH 260	<b>3</b> JS	MATH 310 3 LINEAR ALGEBRA Pre-Req: MATH 180	MATH 330 COMPUTATIONAL ANALYSIS Pre-Req: MATH 260	4	CSCI 235 3 ELEMENTS OF DISCRETE STRUCTURES Pre-Req: CSCI 185 and MATH 170			FCWR 3XX 3   PROFESSIONAL   COMMUNICATION   CHOICE   Pre-Req: FCWR 151/161	16
R 3 FALL	MATH 320 DIFFERENTIAL EQUATIONS Pre-Req: MATH 260	3	MATH 4103NUMERICAL LINEARALGEBRAPre-Req: MATH 310			CSCI 312 3 THEORY OF COMPUTATIONS Pre-Req: CSCI 235	COMPUTER SCIENCE ELECTIVE <u>OR</u> SCIENCE ELECTIVE	3	ICXX 3XX * 3 SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS**) Pre-Req: FCWR 101/111 and FCWR 151/161	15
YEAR SPRING	MATH 455 NUMERICAL ANALYS Pre-Req: MATH 320	<b>3</b> IIS				SCIENCE 4 ELECTIVE	GENERAL ELECTIVE	3	ICXX 3XX * 3 SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS**) Pre-Req: FCWR 101/111 and FCWR 151/161	13
R 4 FALL	MATH 440 NUMERICAL OPTIMIZATION Pre-Req: MATH 410	3	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
YEAR 4 SPRING	MATH 490 MATHEMATICAL MODELING CAPSTON Pre-Req: MATH 450 or MATH 455	<b>5</b> NE				CSCI 335 3 DESIGN AND ANALYSIS OF ALGORITHMS Pre-Req: CSCI 260	GENERAL ELECTIVE	3	ICXX 3XX * 3 SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS**) Pre-Req: FCWR 101/111 and FCWR 151/161	14

\*Of the four required ICXX seminar courses (ICBS, ICLT, ICPH, ICSS), at least three must be in different subject areas.

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

(Rev. 3/24)

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