

Academic Program Sequence Map

Program Degree Type and Name: BS/MS 4+1 in Computer Science (with AIML Specialization)

Catalog Year: 2026-2027

Program Level: Undergrad/Graduate

Academic Term Type: Semester

* Denote core course with an asterisk and (cc) next to the course number																			
Year and Term: Year 1 Fall term		Credits Per Classification																	
Course Number & Title	CR	GE	Maj	OE	SM	Co / Prerequisite(s)	Milestone/Advice												
Comp I: ENGL111	3	x																	
Mercy Seminar I: FYS	3	x																	
MATH116 College Algebra (Qunatitative Reasoning	3	x			C or Higher														
CISC120 Intro Computers & App Software	3		x		C or Higher														
Gen Ed ENGL 110/LANG 115/LANG116	3	x																	
Term Credit Total:	15	12	3																
Year and Term: Year 2 Fall term		Credits Per Classification																	
Course Number & Title	CR	GE	Maj	OE	SM	Co / Prerequisite(s)	Milestone/Advice												
MATH244 Discrete Structures	3		x			MATH 201													
CISC231 Foundations of Computing II	3		x		C or Higher	CISC 131	GC												
Major Elective	3		x																
Gen Ed (Scientific Reasoning)	3	x																	
Gen Ed LANG116/ Elective	3	x																	
Term Credit Total:	15	6	9																
Year and Term: Year 3 Fall term		Credits Per Classification																	
Course Number & Title	CR	GE	Maj	OE	SM	Co / Prerequisite(s)	Milestone/Advice												
Gen Ed (Creative Expression)	3	x																	
CISC339 Artificial Intelligence	3		x			CISC231 & MATH244													
CISC335 Computer Network II	3		x			CISC231													
Gen Ed (Self & Society)	3	x																	
Major Elective	3		x																
Term credit total:	15	6	9																
Year and Term: Year 4 Fall term		Credits Per Classification																	
Course Number & Title	CR	GE	Maj	OE	SM	Co / Prerequisite(s)	Milestone/Advice												
CISC371 Sftwr Engineering I:Principles	3		x		C or Higher	CISC311													
CISC411 Object/Structure/Algorithm II	3		x			CISC311													
MATH350 Probability:Theory/Application	3		x			MATH261													
CISC380 Co-op Computer Science I	3		x				WBE												
CISC520 Database Management Systems	3			x			4+1 grad course												
Term Credit Total:	15		12	3															
Year and Term: Year 5 Fall Term		Credits Per Classification																	
Course Number & Title	CR	GE	Maj	OE	SM	Co / Prerequisite(s)	Milestone/Advice												
CISC560 Big Data	3		x																
CISC602 Data Science Project	3		x																
CISC580 Computer Vision	3		x																
CISC 585 NaturalLanguage Processing	3		x																
Term Credit Total:	12		12																
Year and Term: Year 1 Spring term		Credits Per Classification																	
Course Number & Title	CR	GE	Maj	OE	SM	Co / Prerequisite(s)	Milestone/Advice												
Comp II: ENGL112	3	x																	
MATH201 Precalculus	3		x		C or Higher	MATH116 or B in HS algebra													
CISC131 Foundations of Computing I	3		x		C or Higher	CISC120	GC												
Gen Ed (LANG 115/116/elective)	3	x																	
Mercy Seminar II: Transformative Ideas	3	x																	
Term Credit Total:	15	9	6																
Year and Term: Year 2 Spring term		Credits Per Classification																	
Course Number & Title	CR	GE	Maj	OE	SM	Co / Prerequisite(s)	Milestone/Advice												
CISC311 Object/Structure/Algorithm I	3		x		C or Higher	CISC231 & MATH244													
CISC341 Computer Architecture	3		x			CISC231 & MATH244													
MATH260 Calculus I	4		x		C or Higher	MATH201													
Mercy Seminar III: Big Problems	3	x																	
Gen Ed (Ethical Reasoning)	3	x																	
Term Credit Total:	16	6	10																
Year and Term: Year 3 Spring term		Credits Per Classification																	
Course Number & Title	CR	GE	Maj	OE	SM	Co / Prerequisite(s)	Milestone/Advice												
CISC421 Operating Systems	3		x			CISC231 & MATH244													
MATH261 Calculus II	4		x			MATH260													
Gen Ed (Humanities)	3	x																	
Open Elective	3			x															
Open Elective	1			x															
Term Credit Total:	14	3	7	4															
Year and Term: Year 4 Spring term		Credits Per Classification																	
Course Number & Title	CR	GE	Maj	OE	SM	Co / Prerequisite(s)	Milestone/Advice												
CISC471 Sftwr Engrg II:Snr Cpstn Prj	3		x			CISC371	CA/ELC												
CISC381 Co-op Computer Science II	3		x			CISC380	WBE												
CISC530 Mathematical Methods Data Analysis	3			x			4+1												
CISC540 Computational Data Analysis	3			x															
CISC550 Machine Learning	3			x			4+1												
Term Credit Total:	15		6	9															
Year and Term: Year 5 Spring Term		Credits Per Classification																	
Course Number & Title	CR	GE	Maj	OE	SM	Co / Prerequisite(s)	Milestone/Advice												
CISC610 DevOps and MLOps	3		x																
CISC620 Data Engineering Services in the Cloud	3		x																
CISC702 CS Capstone II	3		x																
CISC703 CS Capstone III	3		x																
Term Credit Total:	12		12																
Program Totals		Credits: 144 (120 UG)			General Education: 42 (Must have 60 credits in Liberal Arts and Sciences including Gen Ed)					Major & Major Elective: 62 crs (Students would need an additional 24 credits after conferral to earn Master's Degree)					Open Elective: 16 (all but 4 cr used for graduate courses)				