

Academic Program Sequence Map

Program Degree Type and Name: BS/MS 4+1 in Computer Science (with Data Science 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 (Quantitative Reasoning	3	x			C or Higher									
CISC120 Intro Computers & App Software	3		x		C or Higher									
Gen Ed ENGL110/LANG115/116/elective	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 LANG116/elective	3	x												
Gen Ed (Scientific Reasoning)	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 (Ethical Reasoning)	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							
CISC505 Objected Oriented Programming	3			x			4+1							
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							
CISC540 Computational Data Analysis	3		x											
CISC550 Machine Learning	3		x											
Major Elective	3		x											
Major Elective	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 LANG115/116/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 (Creative Expression)	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							
CISC510 Theoretical Concepts of CS	3			x			4+1							
CISC520 Database Management Systems	3			x			4+1							
CISC530 Mathematical Methods, Data Analysis	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							
CISC560 Big Data	3		x											
CISC600 Thesis OR CISC602 Data Science Project	3		x											
Term Credit Total:	6		6											

Program Totals	Credits: 120 UG	General Education: 42 (Must have 60 credits Liberal Arts and Sciences)	Major: 62 crs (Students must take 18 crs after conferral to earn Master's Degree)	Open Elective: 16 (12 cr for grad courses)
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Legend: CR: Credits GE: General Education Maj: Major / Major Elective OE: Open Elective SM: Success Marker Co/Prerequisite(s): List of co/ prerequites for noted course GC: Gateway Courses CA: Career Activity ELC: Experiential Learning Course WBE: Work-Based Experience

