MS in Cybersecurity, Computer Science Track

Core Courses (12 credits)

- INFO 517 – Principles of Cybersecurity
- INFO 679 – Information Ethics
- INFO 725 – Information Policy
- SE 578 – Security Engineering

Track-Specific Technical Electives (choose 8 courses, 24 credits)

SUBJ	#	Title	Prereq
CS	500	Fundamentals of Databases	CS 571 (cbtc), CS 520, and CS 570
CS	510	Introduction to Artificial Intelligence	CS 571 (cbtc), CS 520, and CS 570
CS	520	Computer Science Foundations	CS 570 (cbtc)
CS	521	Data Structures and Algorithms I	CS 571 (cbtc), CS 520, and CS 570
CS	522	Data Structures and Algorithms II	CS 521
CS	540	High Performance Computing	CS 571 (cbtc), CS 520, and CS 570
CS	543	Operating Systems	CS 571 (cbtc), CS 520, and CS 570
CS	544	Computer Networks	CS 571 (cbtc), CS 520, and CS 570
CS	550	Programming Languages	CS 571 (cbtc), CS 520, and CS 570
CS	551	Compiler Construction I	CS 525
CS	552	Compiler Construction II	CS 551
CS	570	Programming Foundations	
CS	571	Advanced Programming Techniques	CS 570
CS	575	Software Design	CS 571 (cbtc), CS 520, and CS 570
CS	576	Dependable Software Systems	CS 571 (cbtc), CS 520, and CS 570
CS	590	Privacy	CS 571 (cbtc), CS 520, and CS 570
CS	610	Advanced Artificial Intelligence	CS 510
CS	612	Knowledge-based Agents	CS 510
CS	613	Machine Learning	CS 571 (cbtc), CS 520, and CS 570
CS	620	Advanced Data Structure and Algorithms	CS 522
CS	621	Approximation Algorithms	CS 522
CS	630	Cognitive Systems	CS 510 or CS 530
CS	643	Advanced Operating Systems	CS 543
CS	645	Network Security	CS 543, CS 544
CS	647	Distributed Systems Software	CS 571 (cbtc), CS 520, and CS 570
CS	650	Program Generation and Optimization	CS 540 and CS 550
CS	675	Reverse Software Engineering	CS 575
CS	676	Parallel Programming	CS 521 and CS 543
CS	695	Research Rotations in Cybersecurity	
CS	741	Computer Networks II	CS 544
CS	751	Database Theory II	CS 500
CS	759	Complexity Theory	CS 525
CS	770	Topics in Artificial Intelligence	CS 610
CS	780	Advanced Topics in Software Engineering	CS 575 or CS 576

Non-Track-Specific Technical Electives (choose 3 courses, 9 credits)

- *Choose 3 courses (9 credits) from either CYBR-ECE or CYBR-IS Technical Electives List*