



M.S. in Computer Science Program Planning Guide

Aug. 2024

NOTES

1. Program requirements to completion: 33 credits beyond the Foundation courses. Foundation courses are not eligible to be used as electives.
2. All degree requirements must be met within seven (7) years of enrolling in the first course applied towards the program. International students may be required to complete *EAP 500 English for Academic Purposes*.
3. It is the student's responsibility to: (a) know and follow the program requirements and fulfil them, (b) plan their semester course schedules to remain compliant with external requirements (e.g. visa, scholarship) using the projected schedule below (schedule subject to adjustment), and, (c) request written approval for any course substitutions from your academic adviser or program director prior to enrollment. Failure to receive approval for course substitutions prior to enrollment may result in a delay in program completion.

Student Name: _____ **Term/Year of first course:** _____

REQUIREMENTS	CREDITS	WAIVED	SEMESTER OFFERED	PREREQUISITES	SEMESTER	GRADE
FOUNDATION COURSES						
EAP 500 English for Academic Purposes	(3)		FALL, SPRING	None		
MATH 505 - Discrete Math	3		FALL	None		
CSIT 512 Elements of Computer Programming	3		FALL, SPRING	None		
CS 508 Computer Organization & Design	3		FALL, SPRING	CSIT 512, MATH 505		
CS 519 Advanced Data Structures	3		FALL, SPRING	CSIT 512		
Foundation Total:	3-18					
CS CORE - REQUIRED COURSES						
CS 520 Algorithm Analysis	3		SPRING	MATH 505, CS 519		
CS 524 Principles of Software Engineering	3		FALL	CSIT 512		
CS 528 Artificial Intelligence	3		FALL	CSIT 512		
CS 564 Operating Systems	3		SPRING	CS 508, CS 519		
Select <u>one</u> from the following:						
CS 561 Computer Architecture	3		FALL (even years)	CS 508, CS 519		
CS 571 Programming Languages	3		FALL (odd years)	CS 508, CS 519		
CS ELECTIVES - COURSE OPTIONS (18.0 credits with no RESEARCH or 12.0 credits with RESEARCH)						
CS Elective #1	3					
CS Elective #2	3					
CS Elective #3	3					
CS Elective #4	3					
CS Elective #5	3					
CS Elective #6	3					
CS ELECTIVES - RESEARCH OPTIONS (Select <u>one</u> of the options below, advisor approval required)						
CS 580 Master's Thesis OR CS 585 Fieldwork Project OR CS 595 Software Engineering Project	6		ANY	ALL COURSES		
Program Total (Core+Electives):	33					

CONCENTRATIONS: Students may use their electives to get a concentration in *Data Science* or *Cybersecurity* or take electives from either or both areas.

DATA SCIENCE	SEMESTER OFFERED	PREREQUISITES
CS 522 Data Mining	FALL	MATH 500 and CS 519
CS 527 Data Science	SPRING	CS 530
CS 543 Machine Learning	SPRING	CS 528
CS 565 Adv DBMS	FALL	CS 519 and CS 530

CYBERSECURITY*	SEMESTER OFFERED	PREREQUISITES
CSIT 555 Info Sys Security	FALL, SPRING	IT 510
CSIT 548 Telecom & Networking	FALL, SPRING	None
CSIT 534 Net & Internet Sec	FALL, SPRING	CYBR 555
CSIT 532 Computer Forensics	SPRING	CYBR 555
Select <u>one</u> from the options below:		
CYBR 556 Ethical Hacking	FALL, SPRING	CYBR 534
CSIT Encr & Crypto	SPRING (even yrs)	CYBR 555

*Completion of this concentration earns a Cybersecurity Certificate.

Advisor Signature & Date: _____