Computer Science (Certificate)

Those interested in developing their computer science knowledge and skills, but not ready to commit to a degree program, might consider the online/on-campus Computer Science Graduate Certificate. Students who complete the certificate will gain in-depth knowledge in Computer Science concepts, methods and tools. Applicants are expected to have an accredited Bachelor of Science degree in Computer Science or any sciences or engineering discipline. A minimum GPA of 3.0, on a 4-point scale, is also expected. The GRE is not required for admission.

Financial aid is not available through our program. Interested applicants will need to review other means of assistance, if needed.

Certificate in Computer Science

Code	Title	Hours	Counts towards
Required Courses		**12**	
Select a minimum of four CSC courses at the 500- or 700-level – see optional tracks listed below			
Total Hours		**12**	

Computer Science Foundations Track

Code	Title	Hours	Counts towards
Theory Core			
Complete two		6	
CSC 503	Computational Applied Logic		
CSC 505	Design and Analysis Of Algorithms		
CSC 512	Compiler Construction		
CSC 565	Graph Theory		
CSC 574	Computer and Network Security		
CSC 579	Introduction to Computer Performance Modeling		
CSC 580	Numerical Analysis I		
CSC 707	Automata, Languages and Computability Theory		
Systems Core			
Complete two		6	
CSC 501	Operating Systems Principles		
CSC 506	Architecture Of Parallel Computers		
CSC 510	Software Engineering		
CSC 514	Foundations of Cryptography		
CSC 520	Artificial Intelligence I		
CSC 540	Database Management concepts and Systems		
CSC 561	Principles of Computer Graphics		
CSC 570	Computer Networks		
Total Hours		**12**	

Networking Track

Code	Title	Hours	Counts towards
Core Courses			
Complete at least one		3-6	
CSC 570	Computer Networks		
CSC 573	Internet Protocols		
Elective Courses			
Complete at least two		6-9	
CSC 574	Computer and Network Security		
CSC 575	Introduction to Wireless Networking		
CSC 577	Switched Network Management		
CSC 591	Special Topics In Computer Science (Topics Include: Internet of Things Analytics; Software Defined NetworkingInterne of Things: Application and Implementation; Internet of Things: A Primer; Network Design and Management; Network Science;)		
CSC 773	Advanced Topics in Internet Protocols		

CSC 774	Advanced Network Security	
Total Hours		**12**

Security/Privacy Track

Code	Title	Hours	Counts towards
Core Course			
Following courses is required to complete the Security/Privacy Track:			
CSC 574	Computer and Network Security	3	
Elective Courses			
Complete at least three		9	
CSC 514	Foundations of Cryptography		
CSC 515	Software Security		
CSC 705	Operating Systems Security		
CSC 533	Privacy in the Digital Age		
CSC 591	Special Topics In Computer Science		
Total Hours		**12**	

Systems Track

Code	Title	Hours	Counts towards
Core Courses			
Complete at least one		3-6	
CSC 501	Operating Systems Principles		
CSC 548	Parallel Systems		
Elective Courses			
Complete at least two		6-9	
CSC 506	Architecture Of Parallel Computers		
CSC 512	Compiler Construction		
CSC 547	Cloud Computing Technology		
CSC 568	Enterprise Storage Architecture		
CSC 591	Special Topics In Computer Science (Topics Include: Data-Intensive Computing; Reliable Time Computer Systems)		
CSC 714	Real Time Computer Systems		
CSC 724	Advanced Distributed Systems		
CSC 766	Code Optimization for Scalar and Parallel Programs		
Total Hours		**12**	