COMPUTER SCIENCE UNDERGRADUATE CERTIFICATE

Banner Code: EC-CERB-CS

Academic Advising

Phone: 703-993-1530
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Website: cs.gmu.edu/prospective-students/undergraduate-programs/undergraduate-certificate/

This certificate targets students who are working on or possess an undergraduate degree in a technical (science or engineering) field but lack a formal credential in the computer science field. The certificate also targets students who have shown an aptitude for graduate study but do not have the academic prerequisites required for admittance into a graduate MS computer science program.

The undergraduate certificate in computer science may be pursued on a full-time basis except when limited by prerequisite constraints.

Admissions & Policies

Admissions

Students must have two semesters of calculus (equivalent to MATH 113 Analytic Geometry and Calculus I (Mason Core) (http://catalog.gmu.edu/mason-core/) and MATH 114 Analytic Geometry and Calculus II), two semesters of programming experience (equivalent to CS 112 Introduction to Computer Programming (Mason Core) (http://catalog.gmu.edu/mason-core/) and CS 211 Object-Oriented Programming), and either a bachelor's degree with at least a 3.00 GPA or current enrollment in an undergraduate major.

Policies

For policies governing all undergraduate programs, see AP.5 Undergraduate Policies (http://catalog.gmu.edu/policies/academic/undergraduate-policies/).

Requirements

Certificate Requirements

Total credits: 28

This certificate may be pursued on a full-time basis only.

Basic Computer Science

Code	Title	Credits
CS 262	Introduction to Low-Level Programming	3
CS 310	Data Structures	3
CS 330	Formal Methods and Models	3
CS 367	Computer Systems and Programming	4
CS 471	Operating Systems	3
CS 483	Analysis of Algorithms	3
Total Credits		19

Mathematics

Code	Title	Credits
MATH 125	Discrete Mathematics I (Mason Core) (http://catalog.gmu.edu/mason-core/)	3
Total Credits		3

Additional Coursework

Code	Title	Credits
Complete two of the following:		6
CS 321	Software Engineering	
or CS 351	Visual Computing	
CS 425	Game Programming I	
CS 440	Language Processors and Programming Environments	
CS 450	Database Concepts	
CS 451	Computer Graphics	
CS 452	Virtual Reality	
CS 455	Computer Communications and Networking	
CS 463	Comparative Programming Languages	
CS 465	Computer Systems Architecture	
CS 468	Secure Programming and Systems	
CS 475	Concurrent and Distributed Systems	
CS 477	Mobile Application Development	
CS 478	Natural Language Processing	
CS 480	Introduction to Artificial Intelligence	
CS 482	Computer Vision	
CS 484	Data Mining	
CS 485	Autonomous Robotics	
CS 487	Introduction to Cryptography	
CS 499	Special Topics in Computer Science [1]	
Total Credits		6

[1]   At most 3 credits of CS 499 may be taken for this certificate.