

# COMPUTER SCIENCE UNDERGRADUATE CERTIFICATE

**Banner Code:** VS-CERB-CS

## Academic Advising

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 Website: [cs.gmu.edu/prospective-students/undergraduate-programs/undergraduate-certificate/](http://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 programming experience at the level of CS 112 Introduction to Computer Programming and CS 211 Object-Oriented Programming, and either a BS in a technical field with a 3.00 GPA or higher or current enrollment in a technical 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
Total Credits		16

#### Mathematics

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

#### Additional Coursework

Code	Title	Credits
Complete the following:		
CS 483	Analysis of Algorithms	3
AND two of the following		
CS 321	Software Engineering	
CS 440	Language Processors and Programming Environments	
CS 450	Database Concepts	
CS 451	Computer Graphics	
CS 455	Computer Communications and Networking	
CS 465	Computer Systems Architecture	
CS 468	Secure Programming and Systems	
CS 480	Introduction to Artificial Intelligence	
CS 484	Data Mining	
Total Credits		9