

Certificate in Computer Programming Education

UMSL

UMSL is a NSA/DHS National Center of Academic Excellence in Cyber Defense Education



College of Arts and Sciences

Department of Mathematics and Computer Science

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Undergraduate Certificate in Computer Programming Education



The undergraduate Certificate in Computer Programming Education is an 18 credit hour program. It is designed to serve secondary school science teachers, with training needed to implement a range of computer programming related courses in their schools. A minimum GPA of 2.5 is required for admission. A minimum of four courses must be taken from UMSL. Courses may be substituted with the permission of the program director.

Required core courses		Availability
CMP SCI 1250	Introduction to Computing	EO FPS
CMP SCI 2250	Programming and Data Structures	EO FPS
CMP SCI 2261	Object-Oriented Programming	EO FPS
ED TECH 3420/5420	Teaching Computer Programming	O FP
Choose two of the electives		
CMP SCI 2700	Computer Organization and Architecture	EO FPS
CMP SCI 2750	Linux Environment and Programming	EO FPS
CMP SCI 3010	Web programming	EO FPS
CMP SCI 3702	Intro to Cyber Threats and Defense	EO FP
CMP SCI 4010	Advanced Web Development with Java	E FP
CMP SCI 4011	Client-Side Technologies	E P
CMP SCI 4020/5020	Intro to Android Apps: Android Fundamentals	O P
CMP SCI 4220	Introduction to iOS Programming and Apps	O S
CMP SCI 4222/5222	iOS Apps	O F
CMP SCI 4610	Database Management Systems	EO FP
INFSYS 3844	Developing Business Applications in .NET	EO FP
Total courses (credit hours)		6(18)

For more info visit umsl.edu/cs. For careers visit umsl.edu/cs/careers.

For electronic version visit <http://umsl.edu/cs/certificates>.

Availability: Online as of FS2020 (O ) , Evening (E ) , Summer (S), Fall (F), Spring (P)