

# Certificate in Computer Systems and Programming

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Certificates may be earned by regularly matriculated or extended learning students and denote successful completion of a prescribed program of study designed to:

1. impart specified professional/vocational/career competencies; or
2. produce mastery of the content of a sub-field of an academic major (discipline); or
3. provide exposure to the range of materials in a traditional or emerging interdisciplinary field.

Certain certificate programs contain 6000-level courses as requirements and/or electives. These 6000-level courses may not be taken by undergraduate students. Candidates must receive two-thirds of their certificate-applicable credit from the university. The transferring of credit or the substitution of courses may occur only after application to the appropriate campus authority.

Courses taken in fulfillment of the Certificate cannot be applied toward a Minor in Computer Science.

## Certificate Requirements (20 units)

CSE 2010	Computer Science I	4
CSE 2020	Computer Science II	4
MATH 2720	Discrete Mathematics	3
	or MATH 3372 Combinatorics	
Nine units of upper-division CSE courses.		9
<b>Total Units</b>		<b>20</b>