COMPUTER PROGRAMMER, **CERTIFICATE**

(Code 170-605)

The Department of Computer Science offers a certificate to students and working computer professionals who desire the knowledge and hands-on experience necessary to become computer programmers.

Code	Title	Credits
Fifteen semester cr	redits, including:	
CS 145	Programming for New Programmers	4
or CS 148	Programming for Experienced Programmers	
CS 163	Introduction to Programming in C++	3
or DS 150	Computing in Python: Fundamentals and Pro Programming	cedural
CS 245	Advanced Programming and Data Structures	4
CS 252	Computer Systems	4
Total Credits		15

Note: Students cannot pursue the Computer Science Major and the Computer Programmer Certificate to meet graduation requirements for completing a first and second degree program.

Program Learning Outcomes

Students completing this program will be expected to meet the following learning outcome:

• Use and evaluate a wide variety of modern tools and languages used in the practical construction of computing systems.