Crafton Hills College
Certificate of Achievement
Programming
2015-2016

Student Name: _____

ID #: _____

Date: _____

Counselor: _____

The objective of this certificate is to provide students the knowledge and skills necessary for employment in entry-level positions in the field of computer programming or to continue to pursue a four-year degree in Computer Information Systems or Computer Science. The Programming Certificate indicates the student has acquired knowledge of various programming languages including basic language structures, syntax, debugging, and application development.

Certificate Requirements:
Students intending to earn a certificate from Crafton Hills College must complete no less than 50 percent of the courses required for the certificate in residence at Crafton Hills College and must earn a "C" or better in all coursework required as a part of the certificate.

Completion of the following 18-20 units qualifies the student for the Programming Certificate:

Required Courses:		Units	IP	Need	Grade
CIS 095	Employability Skills for Technical Careers	2			
CIS 114 **or** CSCI 110	C++ Programming I **or** Introduction to Computer Science I	3			
CIS 116 **or** CSCI 120	C++ Programming II **or** Introduction to Computer Science II	3			
	Total Required Units:	**8**			

Complete at least ten (10) additional units from the following courses:		Units	IP	Need	Grade
CIS 104	Object Oriented Programming with Visual Basic	3			
CIS 105	Database Concepts and Design	3			
CIS 111	Web Page programming and Design	3			
CIS 113	Java Programming	3			
CIS 117	Scripting	3			
CIS 121	Android Application Development	3			
CIS 125	Introduction to C#.net Programming	3			
CIS 190D	Software Development Internship	1-3			
MATH 102	College Algebra	4			
	Total Additional Units:	**10**			

	Units	IP	Need	Grade
Total Required and Additional Units:	**18-20**			

A student receiving a certificate in this field will be able to:
- Demonstrate the ability to write, compile, debug and execute well engineered and maintainable computer programs using a variety of programming languages that effectively meet the application requirements
- Demonstrate the ability to develop and apply systematic debugging and testing processes
- Demonstrate the ability to work collaboratively in a team environment
- Demonstrate the ability to explain and apply the necessary processes, tools and skills used in application development
- Demonstrate the ability to communicate effectively in technical and business environments