

# C++ and Objective-C/iPhone Programming One-Year Certificate

PROFESSIONAL TECHNICAL

2012-2013 Certificate Requirements

## Major Courses

Course	No.	Course Title	Credits	Qtr. Completed	Comments/Substitution
CS	106	Database Systems <i>or</i>	5		
CS	225	SQL Server Programming	5		
CS	117	Computer Ethics <i>or</i>	2		
CS	118	Customer Service	3		
CS&	131	Computer Science I C++	5		
CS	150	Computer Security	5		
CS	162	C++2	5		
CS	260	Data Structures in C++	5		
CS	262	Game Programming Design & Development	5		
CS	265	Objective-C/iPhone Programming	5		
CS	275	Secure Coding & Software Development/Sr. Project	5		
<b>Select 5 additional credits from any CS courses</b>			5		

**Subtotal 47-48**

## General Education

Course	No.	Course Title	Credits	Qtr. Completed	Comments/Substitution
ENG&	101+	English Composition <i>or</i> above	5		
MATH	106+	Business Mathematics <i>or</i> above	5		
<b>Psychology or Sociology (select 5 credits)</b>					
PSYC&	100+	General Psychology <i>or</i> above <i>or</i>	5		
SOC&	101	Intro to Sociology <i>or</i>	5		
SOC&	201	Social Proglems	5		
<b>Communication Studies (select 3-5 credits)</b>					
CMST	101	Speech Essentials <i>or</i>	3		
CMST	110	Communication Behavior <i>or</i>	3		
CMST&	220	Public Speaking <i>or</i>	5		
CMST&	210	Interpersonal Communication <i>or</i>	5		
CMST	260	Multicultural Communication	5		

**Subtotal 18-20**

**Total Credits Required 65-68**

C-PlusPlus (C++) is a computer language that provides fundamental programming skills needed for advanced programming in other high level computer languages. Students who complete this certificate will have basic skills to design appropriate data structures for object-oriented programs, use Objective-C language to write apps for Apple's mobile devices such as the iPhone and iPad. The students have an option to develop applications using the following tools: GNUStep, MINGW, XCode, Eclipse or Microsoft Visual .Net, and will have the opportunity to work on team projects. Career opportunities: C++ programming and iPhone/iPad programming jobs. Mobile devices: Windows phones, Androids, or iPhone/iPad