

# PROGRAMMING AND SYSTEMS ANALYSIS LEVEL II, CERTIFICATE OF COMPLETION



**COMPUTER AND  
INFORMATION  
TECHNOLOGY**

## Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
<b>Required Courses</b>			
The following courses are required and included in CCL Programming and Systems Analysis Level I			
CIS105	Survey of Computer Information Systems	3	
Select one of the following:			
CIS119DO	Introduction to Oracle: SQL		
CIS276DA	MySQL Database		
CIS276DB	SQL Server Database		
Select one of the following:			
CIS126DL	Linux Operating System		
CIS126RH	Red Hat System Administration I		
MST150++	Any Microsoft Windows course		
CIS133DA	Internet/Web Development Level I	3	
CIS150	Programming Fundamentals	3	
or CIS150AB	Object-Oriented Programming Fundamentals		
Select one of the following:			
CIS156	Python Programming: Level I		
CIS159	Visual Basic Programming I		
CIS162++	Any C Programming: Level I course		
CIS163AA	Java Programming: Level I		

CIS165++	Any Mobile Application Development course		
CIS166++	Any Web Scripting course(s)	3	
GBS151	Introduction to Business	3	
The following courses are required for CCL Programming and Systems Level II			
Select one of the following:			
CIS190	Introduction to Networking		
CNT140AB	Introduction to Networks		
MST140	Microsoft Networking Essentials		
Select one of the following:			
CIS225	Business Systems Analysis and Design	3	
CIS225AB	Object-Oriented Analysis and Design		
CIS250	Management of Information Systems		
Select a programming language from below that best aligns with academic and professional goals in one of the following areas:			
CIS256	Python Programming Level II		
CIS259	Visual Basic Programming II		
CIS262++	Any C Programming: Level II course		
CIS263AA	Java Programming: Level II		
CIS265	Advanced iOS Application Development		
<b>Restricted Electives</b>			
Select one of the courses below that best aligns with academic and professional goals :			
Students may not choose courses they have taken from the Required Courses area			
CIS151	Computer Game Development - Level I		

CIS156	Python Programming: Level I	_____
CIS159	Visual Basic Programming I	_____
CIS162++	Any C Programming: Level I course	_____
CIS163AA	Java Programming: Level I	_____
CIS165++	Any Mobile Application Development course	_____
CIS224	Project Management Microsoft Project for Windows	_____
CIS251	Computer Game Development - Level II	_____
CIS256	Python Programming Level II	_____
CIS259	Visual Basic Programming II	_____
CIS262++	Any C Programming: Level II course	_____
CIS263AA	Java Programming: Level II	_____
CIS265	Advanced iOS Application Development	_____
CIS267	Pega System Architect Essentials	_____
GBS211	Legal, Ethical and Regulatory Issues of the Internet Studies	_____
<b>Total Credits</b>		<b>36-38</b> _____