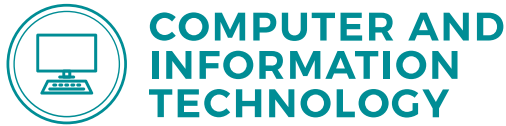# PROGRAMMING AND SYSTEMS ANALYSIS, ASSOCIATE IN APPLIED SCIENCE

## COMPUTER AND INFORMATION TECHNOLOGY

## Program Requirements

**Program Prerequisites: None**

| Code | Title | Credits | Semester |
|---|---|---|---|
| **Required Courses** | | | _____ |
| CIS105 | Survey of Computer Information Systems | 3 | _____ |
| GBS151 | Introduction to Business | 3 | _____ |
| Select one of the following: | | 3 | _____ |
| CIS126DL | Linux Operating System | | _____ |
| CIS126RH | Red Hat System Administration I | | _____ |
| MST150++ | Any Microsoft Windows course | | _____ |
| CIS133DA | Internet/Web Development Level I | 3 | _____ |
| Select one of the following: | | 3 | _____ |
| CIS150 | Programming Fundamentals | | _____ |
| CIS150AB | Object-Oriented Programming Fundamentals [1] | | _____ |
| CIS166++ | Any Web Scripting course(s) | 3 | _____ |
| Select one of the following: | | 3-4 | _____ |
| CIS190 | Introduction to Networking | | _____ |
| CNT140AB | Introduction to Networks | | _____ |
| MST140 | Microsoft Networking Essentials | | _____ |
| Select one of the following: | | 3 | _____ |
| CIS225 | Business Systems Analysis and Design | | _____ |
| CIS225AB | Object-Oriented Analysis and Design | | _____ |
| CIS250 | Management of Information Systems | | _____ |
| Select one of the following: | | 3 | _____ |
| CIS119DO | Introduction to Oracle: SQL | | _____ |
| CIS276DA | MySQL Database | | _____ |
| CIS276DB | SQL Server Database | | _____ |
| FYE101 | Introduction to College, Career and Personal Success | 1-3 | _____ |
| or FYE103 | Exploration of College, Career and Personal Success | | _____ |
| Select a programming language from below that best aligns with academic and professional goals (2 courses for a total of 6 credits) in one of the following areas: | | 6 | _____ |
| CIS156 & CIS256 | Python Programming: Level I and Python Programming Level II | | _____ |
| CIS159 & CIS259 | Visual Basic Programming I and Visual Basic Programming II | | _____ |
| CIS162++ | Any C Programming: Level I course | | _____ |
| & CIS262++ | Any C Programming: Level II course | | _____ |
| CIS163AA & CIS263AA | Java Programming: Level I and Java Programming: Level II | | _____ |
| CIS265 | Advanced iOS Application Development | | _____ |
| & CIS165++ Any Mobile Application Development course | | | _____ |
| **Restricted Electives** | | | _____ |
| Students may not use courses from the Required Courses Area. | | | _____ |
| Select two of the following: | | 6 | _____ |
| CIS224 | Project Management Microsoft Project for Windows | | _____ |

| Course | Title | Credits | |
|---|---|---|---|
| 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 | | _____ |
| 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 | | _____ |
| GBS211 | Legal, Ethical and Regulatory Issues of the Internet Studies | | _____ |

**General Electives** _____

**Core** _____

*First-Year Composition* _____

| Course | Title | Credits | |
|---|---|---|---|
| ENG101 | First-Year Composition | 3 | _____ |
| or ENG107 | First-Year Composition for ESL | | _____ |
| ENG102 | First-Year Composition | 3 | _____ |
| or ENG108 | First-Year Composition for ESL | | _____ |

*Oral Communication* _____

| | Credits | |
|---|---|---|
| Any approved General Education course from the Oral Communication area | 3 | _____ |

*Critical Reading* _____

| | | Credits | |
|---|---|---|---|
| Select one of the following: | | 0-3 | _____ |
| CRE101 | College Critical Reading and Critical Thinking | | _____ |

| | | Credits | |
|---|---|---|---|
| | Or equivalent as indicated by assessment | | _____ |

*Mathematics* _____

| | | Credits | |
|---|---|---|---|
| Select one of the following: | | 3-6 | _____ |
| MAT150 | College Algebra/Functions | | _____ |
| MAT151 | College Algebra/Functions | | _____ |
| MAT152 | College Algebra/Functions | | _____ |
| MAT155 | College Algebra/Functions with Review | | _____ |
| MAT156 | College Algebra/Functions with Review | | _____ |

**Distribution** _____

*Humanities, Arts and Design* _____

| | Credits | |
|---|---|---|
| Any approved general education course(s) from the Humanities, Arts and Design (HU) area | 3 | _____ |

*Social and Behavioral Sciences* _____

| | | Credits | |
|---|---|---|---|
| Select one of the following: | | 3 | _____ |
| ECN211 | Macroeconomic Principles | | _____ |
| ECN212 | Microeconomic Principles | | _____ |
| SBU200 | Society and Business | | _____ |

*Natural Sciences* _____

| | Credits | |
|---|---|---|
| Any approved general education course(s) in the Natural Sciences (Quantitative) (SQ) area or the Natural Sciences (General) (SG) area. | 4 | _____ |

| **Total Credits** | **62-71** | _____ |
|---|---|---|

[1] Students interested in pursuing an iOS Certificate of Completion (CCL) are recommended to take CIS150AB Object-Oriented Programming Fundamentals

See https://www.cgc.edu/CourseDescriptions for current course description information.