

# PROGRAMMING - CERTIFICATE OF COMPLETION

(21-23 credits)

## A Suggested Plan of Study

The contents of this roadmap may vary depending on initial student placement in mathematics and English. This is only a suggested plan of study for students, and is not intended as a contract. Individual student academic plans may vary. Please contact your academic advisor to create a plan that works for you. Course availability may vary from fall to spring semester and may be subject to modification or change.

**NOTE:** Students must complete all University certificate requirements to total at least 21 credits and must achieve a cumulative grade-point average of at least 2.0. Developmental coursework will not count towards the degree requirements and/or elective credits. A grade of C- or better is required in ENGL 1110G Composition I and designated Mathematics courses.

| <b>Semester 1</b>              |   | <b>Credits</b> |
|--------------------------------|---|----------------|
| CIST 2311                      | Database Concepts and Principles                        | 3              |
| CTEC 152<br>or CIST 1261       | JAVA Programming<br>or JavaScript Web Programming       | 3              |
| Choose one from the following: |   | 3-4            |
| CSCI 1110                      | Computer Science Principles                             |                |
| BCIS 1160<br>or CIST 1611      | Windows<br>or Azure Fundamentals                        | 3              |
| CSCI 1720                      | Computer Science I                                      |                |
| CIST 1680                      | Linux Essentials  |                |
| CIST 2237                      | Android Application Development with Java<br>and Kotlin |                |
| CIST 2251                      | Python Programming II                                   |                |
| <b>Credits</b>                 |   | <b>12-13</b>   |
| <b>Semester 2</b>              |   |                |
| CIST 2210                      | Introduction to SQL (Structured Query<br>Language)      | 3              |
| CTEC 158                       | Visual Basic Programming                                | 3              |
| Choose one from the following: |   | 3-4            |
| CSCI 1110                      | Computer Science Principles                             |                |
| CSCI 1720                      | Computer Science I                                      |                |
| CIST 1680                      | Linux Essentials  |                |
| CIST 2237                      | Android Application Development with Java<br>and Kotlin |                |
| CIST 2251                      | Python Programming II                                   |                |
| BCIS 1160<br>or CIST 1611      | Windows<br>or Azure Fundamentals                        |                |
| <b>Credits</b>                 |   | <b>9-10</b>    |
| <b>Total Credits</b>           |   | <b>21-23</b>   |