

| Computer, Engineering/Manufacturing Industrial Technologies  |  |  |                      |
|--|--|--|----------------------|
| Curriculum Code: 0969<br>(Effective Fall 2018 –<br>Summer 2023)  | Computer Programmer/Analyst C.C. Pathway |  |                      |
| This certificate provides a starting point for students interested in pursuing the Computer Programmer/Analyst Associate Degree, (0113). It is designed for students who already have basic computer skills.   |  |  |                      |
| <b>For More Information</b><br>Contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number (517) 267-6406 or Academic Advising Department, Gannon Building – StarZone, telephone number (517) 483-1904. |  |  |                      |
| Semester I   | Course Title                             | Prerequisites  | Credit/Billing Hours |
| <b>Program of Study Requirements</b>   |  |  |                      |
| BUSN 118   | Introduction to Business                 | Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently) and Writing Level 4 | 3 / 3                |
| CITF 110   | Intro Computer Info Systems              | Reading Level 4 and Writing Level 4  | 3 / 3                |
| CITP 110   | Intro to Programming-Python              | Reading Level 5 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)          | 4 / 4                |
| <b>Credits</b>   |  |  | <b>10 / 10</b>       |
| Semester II  | Course Title                             | Prerequisites  | Credit/Billing Hours |
| <b>Program of Study Requirements</b>   |  |  |                      |
| CITD 120   | SQL Concepts                             | Reading Level 4 and Writing Level 4  | 2 / 2                |
| CITW 150   | Internet Literacy                        | Reading Level 5 and Writing Level 6  | 3 / 3                |
| <b>Electives - <i>Select 1</i></b>   |  |  |                      |
| CITP 150   | Intro to VB.NET Programming              | Minimum 2.0 in (CITP 110 or CPSC 230) and Reading Level 5 and Math Level 4         | 4 / 4                |
| CITP 180   | Intro to C#.NET Programming              | Minimum 2.0 in (CITP 110 or CPSC 230) and Reading Level 5 and Math Level 4         | 4 / 4                |
| CITP 190   | Intro to Programming in JAVA             | Minimum 2.0 in (CITP 110 or CPSC 230) and Reading Level 5 and Math Level 4         | 4 / 4                |
| <b>Credits</b>   |  |  | <b>9 / 9</b>         |
| <b>Total Credits</b>   |  |  | <b>19 / 19</b>       |