

**Degree:** Certificate Sub-Baccalaureate **College:** Science, Technology, and Business

**Certificate:** Programming Essentials

Certificate Code: PRES

## Credits Required: 12

## **Sub-Baccalaureate Certificate Requirements**

## **Required Courses:** (12 Credits)

☐ Or CMIS 1200 Problem Solving and Programming Construct ☐ Or CMIS 1200 Application Programming I
<ul> <li>□ CMAC 1240 Computer Programming I</li> <li>□ Or CMSC 1240 Computer Programming I</li> <li>□ Or CMIS 2200 Application Programming II</li> </ul>
<ul> <li>☐ CMAC 2040 Object Oriented Programming</li> <li>☐ Or CMSC 2040 Object Oriented Programming</li> </ul>
☐ CMAC 3040 Data Structures ☐ Or CMSC 3040 Data Structures

Available to any major except CMAC, CMIS, CMSC.