

**EFFECTIVE 2024 FALL: THIS PROGRAM IS IN TEACH-OUT STATUS.  
NO NEW STUDENTS WILL BE ENROLLED 2024 FALL OR AFTER.  
CURRENT STUDENTS MUST COMPLETE THE PROGRAM BY 2026 SPRING.  
LAST SEMESTER THESE CLASSES WILL BE OFFERED WILL BE 2026 SPRING.**

## **COMPUTER ENGINEERING TECHNICIAN**

### **Computer Engineering Technology (A40160)**

#### **ENGINEERING AND TECHNOLOGY PATHWAYS**

These curriculums are designed to prepare students through the study and application of principles from mathematics, natural sciences, and technology and applied processes based on these subject areas.

Course work includes mathematics, natural sciences, and engineering sciences and technology.

Graduates should qualify to obtain occupations such as technical service providers, materials and technologies testing services, process improvement technicians, engineering technicians, construction technicians and managers, industrial and technology managers, or research technicians.

#### **PROGRAM DESCRIPTION**

A course of study that prepares the students to use basic engineering principles and technical skills for installing, servicing, and maintaining computers, peripherals, networks, and microprocessor and computer controlled equipment. Includes instruction in mathematics, computer electronics and programming, prototype development and testing, systems installation and testing, solid state and microminiature circuitry, peripheral equipment, and report preparation. Graduates should qualify for employment opportunities in electronics technology, computer service, computer networks, server maintenance, programming, and other areas requiring knowledge of electronic and computer systems. Graduates may also qualify for certification in electronics, computers, or networks.

#### **COURSE REQUIREMENTS**

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

|                                     |     |                                     |  | <b>Work/</b> |            |                 |               |
|-------------------------------------|-----|-------------------------------------|--|--------------|------------|-----------------|---------------|
|                                     |     |                                     |  | <b>Class</b> | <b>Lab</b> | <b>Clinical</b> | <b>Credit</b> |
| <b>A. General Education Courses</b> |     |                                     |  |              |            |                 |               |
| 1. Required Courses                 |     |                                     |  |              |            |                 |               |
| ENG                                 | 111 | Writing and Inquiry                 |  | 3            | 0          | 0               | 3             |
| COM                                 | 231 | Public Speaking                     |  | 3            | 0          | 0               | 3             |
| or                                  |     |                                     |  |              |            |                 |               |
| ENG                                 | 112 | Writing/Research in the Disciplines |  | 3            | 0          | 0               | 3             |
| MAT                                 | 171 | Precalculus Algebra                 |  | 3            | 2          | 0               | 4             |

|                                      |   |   |   |   |
|--------------------------------------|---|---|---|---|
| Humanities/Fine Arts Elective*       | 3 | 0 | 0 | 3 |
| Social/Behavioral Sciences Elective* | 3 | 0 | 0 | 3 |

## B. Major Courses

### 1. Core Courses

*To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.*

|     |     |                                 |   |   |   |   |
|-----|-----|---------------------------------|---|---|---|---|
| CSC | 153 | C# Programming                  | 2 | 3 | 0 | 3 |
| CTS | 120 | Hardware/Software Support       | 2 | 3 | 0 | 3 |
| CTS | 220 | Advanced Hard/Software Support  | 2 | 3 | 0 | 3 |
| ELC | 131 | Circuit Analysis I              | 3 | 3 | 0 | 4 |
| ELN | 131 | Analog Electronics I            | 3 | 3 | 0 | 4 |
| ELN | 133 | Digital Electronics             | 3 | 3 | 0 | 4 |
| ELN | 232 | Introduction to Microprocessors | 3 | 3 | 0 | 4 |

## C. Other Major Courses

|     |     |                                     |   |   |    |   |
|-----|-----|-------------------------------------|---|---|----|---|
| ATR | 112 | Intro to Automation                 | 2 | 3 | 0  | 3 |
| CIS | 115 | Introduction to Programming & Logic | 2 | 3 | 0  | 3 |
| DFT | 151 | CAD I                               | 2 | 3 | 0  | 3 |
| EGR | 285 | Design Project                      | 0 | 4 | 0  | 2 |
| or  |     |                                     |   |   |    |   |
| WBL | 111 | Work-Based Learning I               | 0 | 0 | 10 | 1 |
| and |     |                                     |   |   |    |   |
| WBL | 115 | Work-Based Learning Seminar I       | 1 | 0 | 0  | 1 |
| ELN | 260 | Prog Logic Controllers              | 3 | 3 | 0  | 4 |
| MAT | 172 | Precalculus Trigonometry            | 3 | 2 | 0  | 4 |
| NET | 125 | Introduction to Networks            | 1 | 4 | 0  | 3 |
| NOS | 120 | Linux/Unix Single User              | 2 | 2 | 0  | 3 |

## D. Other Required Courses

|     |     |                          |   |   |   |   |
|-----|-----|--------------------------|---|---|---|---|
| ACA | 122 | College Transfer Success | 0 | 2 | 0 | 1 |
|-----|-----|--------------------------|---|---|---|---|

### Total Credit Hours

**67**

\*Approved Electives are listed on the page before the Course Descriptions.

## SEMESTER SCHEDULE COMPUTER ENGINEERING TECHNOLOGY (DAY)

|                            |     |                                     | Work/ |     |          |        |
|----------------------------|-----|-------------------------------------|-------|-----|----------|--------|
|                            |     |                                     | Class | Lab | Clinical | Credit |
| First Year – Fall Semester |     |                                     |       |     |          |        |
| ACA                        | 122 | College Transfer Success            | 0     | 2   | 0        | 1      |
| CIS                        | 115 | Introduction to Programming & Logic | 2     | 3   | 0        | 3      |
| CTS                        | 120 | Hardware/Software Support           | 2     | 3   | 0        | 3      |
| ELC                        | 131 | Circuit Analysis I                  | 3     | 3   | 0        | 4      |
| ENG                        | 111 | Writing and Inquiry                 | 3     | 0   | 0        | 3      |
| MAT                        | 171 | Precalculus Algebra                 | 3     | 2   | 0        | 4      |
|                            |     |                                     | 13    | 13  | 0        | 18     |

| First Year – Spring Semester  |     |                                      |     |    |      |    |
|-------------------------------|-----|--------------------------------------|-----|----|------|----|
| CTS                           | 220 | Advanced Hard/Software Support       | 2   | 3  | 0    | 3  |
| COM                           | 231 | Public Speaking                      | 3   | 0  | 0    | 3  |
| or                            |     |                                      |     |    |      |    |
| ENG                           | 112 | Writing/Research in the Disciplines  | 3   | 0  | 0    | 3  |
| ELN                           | 131 | Analog Electronics I                 | 3   | 3  | 0    | 4  |
| ELN                           | 133 | Digital Electronics                  | 3   | 3  | 0    | 4  |
| MAT                           | 172 | Precalculus Trigonometry             | 3   | 2  | 0    | 4  |
|                               |     |                                      | 14  | 11 | 0    | 18 |
| Second Year – Fall Semester   |     |                                      |     |    |      |    |
| DFT                           | 151 | CAD I                                | 2   | 3  | 0    | 3  |
| ELN                           | 232 | Introduction to Microprocessors      | 3   | 3  | 0    | 4  |
| ELN                           | 260 | Prog Logic Controllers               | 3   | 3  | 0    | 4  |
| NOS                           | 120 | Linux/Unix Single User               | 2   | 2  | 0    | 3  |
|                               |     | Social/Behavioral Sciences Elective* | 3   | 0  | 0    | 3  |
|                               |     |                                      | 13  | 11 | 0    | 17 |
| Second Year – Spring Semester |     |                                      |     |    |      |    |
| ATR                           | 112 | Intro to Automation                  | 2   | 3  | 0    | 3  |
| CSC                           | 153 | C# Programming                       | 2   | 3  | 0    | 3  |
| EGR                           | 285 | Design Project                       | 0   | 4  | 0    | 2  |
| or                            |     |                                      |     |    |      |    |
| WBL                           | 111 | Work-Based Learning I                | 0   | 0  | 10   | 1  |
| and                           |     |                                      |     |    |      |    |
| WBL                           | 115 | Work-Based Learning Seminar I        | 1   | 0  | 0    | 1  |
| NET                           | 125 | Introduction to Networks             | 1   | 4  | 0    | 3  |
|                               |     | Humanities/Fine Arts Elective*       | 3   | 0  | 0    | 3  |
|                               |     |                                      | 8-9 | 14 | 0-10 | 14 |

**Total Credit Hours**

**67**

\*Approved Electives are listed on the page before the Course Descriptions.

**COMPUTER ENGINEERING TECHNOLOGY (CERTIFICATE) (C40160)  
COURSE REQUIREMENTS**

|     |     |                                     | Work/ |     |          |        |
|-----|-----|-------------------------------------|-------|-----|----------|--------|
|     |     |                                     | Class | Lab | Clinical | Credit |
| CIS | 115 | Introduction to Programming & Logic | 2     | 3   | 0        | 3      |
| CTS | 120 | Hardware/Software Support           | 2     | 3   | 0        | 3      |
| ELC | 131 | Circuit Analysis I                  | 3     | 3   | 0        | 4      |
| ELN | 131 | Analog Electronics I                | 3     | 3   | 0        | 4      |
| ELN | 133 | Digital Electronics                 | 3     | 3   | 0        | 4      |

**Total Credit Hours**

**18**