

Associate in Applied Science

# Computer Engineering Technology

(A40160)

For more information: Program Chair 704.330.6479 or ET Division 704.330.6860



## Overview

The Computer Engineering Technology curriculum provides the skills required to install, service, and maintain computers, peripherals, networks, and microprocessor and computer controlled equipment. It includes training in both hardware and software, emphasizing operating systems concepts to provide a unified view of computer systems.



Coursework includes mathematics, physics, electronics, digital circuits and programming, with emphasis on the operation, use, and interfacing of memory and devices to the CPU.

In the second year, students have the option to choose a track, currently only the Computer Hardware track is available. The tracks are designed to guide students to curriculum paths that cover the appropriate knowledge and skills as indicated below.

### COMPUTER HARDWARE TRACK:

This track focuses on the knowledge and skills associated with the installation, maintenance, and troubleshooting of computer hardware and embedded systems. Coursework includes microprocessor, microcomputer applications, networking, internet configuration and design, operating systems, C++ programming, assembly language programming, I/O hardware interfacing, industrial applications and data acquisition using Lab-View.

The AAS degree in Computer Engineering Technology is accepted at some colleges and universities as the first two years of a 2+2 bachelor's-level engineering technology program. These students are advised to complete a second Physics class (PHY132 or PHY152) to ensure they are not considered deficient with credit hours in Physics.

For additional information, visit [www.cpcc.edu/et](http://www.cpcc.edu/et) or call the Program Chair at 704.330.6479.

Graduates should qualify for employment opportunities in electronics technology, computer service, computer networks, server maintenance, programming, and other areas requiring a knowledge of electronic and computer systems. Graduates may also qualify for certification in electronics, computers, or networks.

## Degree Awarded

The Associate in Applied Science Degree - Computer Engineering Technology is awarded by the College upon completion of this program.

## Diploma Awarded

A diploma in Computer Hardware is also awarded by the College upon Completion of the respective track.

**Note:** Students in the Computer Engineering Technology (A40160) desiring to earn an additional degree in Electrical Engineering Technology (A40180) or Electronics Engineering Technology (A40200), or an additional track under Computer Engineering Technology (A40160) must meet the specified course requirements.

The Computer Engineering Technology program at CPCC is accredited by the Technology Accreditation Commission of the Accreditation Board of Engineering and Technology (TAC of ABET), 111 Market Place, Suite 1050, Baltimore, MD 21201, 410.347.7700.

## Admission

- A high school diploma or equivalent is required. High school students preparing for an Engineering Technology program should complete courses in algebra, geometry, and advanced mathematics. Skills and proficiencies should be developed in writing, computer literacy, and science.
- CPCC placement tests are required in English and mathematics. Developmental classes in mathematics and English courses are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Many courses have prerequisites or corequisites; check the Course Descriptions section for details

## CURRICULUM (First Year—All Tracks) (Effective Fall 2010)

First Semester-Fall		Lecture	Lab	Credit
CET 111	Computer Upgrade/Repair I	2	3	3
ELC 138	DC Circuit Analysis	2	3	3
ENG 111	Expository Writing	3	0	3
MAT 121	Algebra/Trigonometry I	2	2	<u>3</u>
				12
Second Semester-Spring				
CET 211	Computer Upgrade/Repair II	2	3	3
ELC 139	AC Circuit Analysis	2	3	3
ELN 133E	Digital Electronics	3	3	4
ELN 137	Electronic Devices & Circuits	4	3	5
MAT 122	Algebra/Trigonometry II	2	2	<u>3</u>
				18
Third Semester-Summer				
COM 110	Intro. to Communications	3	0	3
ENG 114	Professional Research and Reporting	3	0	3
	Humanities/Fine Arts Elective	3	0	<u>3</u>
				9
First Three Semesters Total Credits				39

See back for information on second-year curriculum for: the: **Computer Hardware Track**

## Engineering Technologies Change your direction!

### FIRST STEP TO ENROLL:

Call CPCC Counseling at  
704.330.5013

**Consult a faculty  
advisor or college  
counselor prior to  
registration..**

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Institution.*

## **CURRICULUM** (Second Year)

### **Computer Hardware Track**

<b>Fourth Semester-Fall</b>			Lecture	Lab	Credit
CSC	134	C++ Programming	2	3	3
ELN	232	Intro. to Microprocessors	3	3	4
ELN	237	LAN (Ethernet, includes wireless)	2	3	3
PHY	131	Physics (Mechanics)	3	2	4
<b>OR</b>					
PHY	151	College Physics I	3	2	4
WEB	140	Web Development Tools	2	2	<u>3</u>
					<b>17</b>

<b>Fifth Semester-Spring</b>					
ELN	233	Microprocessor Systems	3	3	4
MAT	223	Applied Calculus	2	2	3
PCI	170	DAQ and Control (Labview)	3	3	4
		Behavioral/Social Science Elective	3	0	<u>3</u>
					<b>14</b>

**TOTAL CREDITS** **72**



CENTRAL PIEDMONT COMMUNITY COLLEGE  
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# COMPUTER ENGINEERING TECHNOLOGY

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*at*

