Computer Engineering Technology, A.A.S.

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The mission of the Computer Engineering Technology program is to prepare computer engineering technicians to pursue careers in the design, fabrication, and maintenance of digital systems. The program focuses on the theory and application of computer hardware and software. Students in this program study electric/electronic circuit analysis, digital circuit design and analysis, programming in multiple computer languages, microprocessor/microcontroller interfacing, digital communication, and computer systems and networks. Graduates are employed in areas such as computer hardware/software development and testing, digital systems design and testing, computer network installation and maintenance, and computer systems installation and maintenance.

Program Learning Outcomes

1. The student will demonstrate an ability to apply knowledge, techniques, skills, and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline.
2. The student will demonstrate an ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline.
3. The student will demonstrate an ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.
4. The student will demonstrate an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results.
5. The student will demonstrate an ability to function effectively as a member of a technical team.
6. The student will demonstrate an application of electric circuits, computer programming, associated software applications, analog and digital electronics, microcontrollers, operating systems, local area networks, and engineering standards to the building, testing, operation, and maintenance of computer systems and associated software systems.
7. The student will demonstrate an application of natural sciences and mathematics at or above the level of algebra and trigonometry to the building, testing, operation, and maintenance of computer systems and associated software systems.

First Semester: 15 Credits

- CENT 1310 Computer Systems and Software
- EETC 1313 DC Circuits
- ENGL 1010 English Composition I (Gen. Ed.)
- MATH 1740 Algebra and Trigonometry I
- Technical Elective [1]

Second Semester: 16 Credits

- CENT 1320 Programming for Technicians
- EETC 1331 Digital Fundamentals
- EETC 1314 AC Circuits
- MATH 1750 Algebra and Trigonometry II
- PHYS 2010 Non-Calculus Physics I (Gen. Ed.)

Third Semester: 15 Credits

- CENT 2310 Microcontroller Systems I
- CENT 2330 Digital Communication Systems
- EETC 1321 Electronics I
- ENST 1313 CAD for Electronics
- COMM 2025 Fundamentals of Communication (Gen. Ed.)

Fourth Semester: 15 Credits

- CENT 2320 Microcontroller Systems II
- CENT 2340 Computer Networks and Systems
- CITC 1320 CompTIA A+
- Humanities/Fine Arts Course Gen Ed Elective [2]
- Social/Behavioral Sciences Course Gen Ed Elective [2]

Total Program Credits: 61

This program of study is designed as a terminal degree for a specific career field.

[1] Technical Elective to be selected by the student in consultation with an advisor.

Some recommended (but not required) options are

ENTC 1114, ENTC 1124, ETEC 2302, EETC 2331, EETC 2350, MATH 1910, PHYS 2020, CENT 2391, and CENT 2399.

Please note that Technical Electives with more than 3 credit hours are acceptable.

[2] Review General Education pages and/or consult advisor for correct selection.