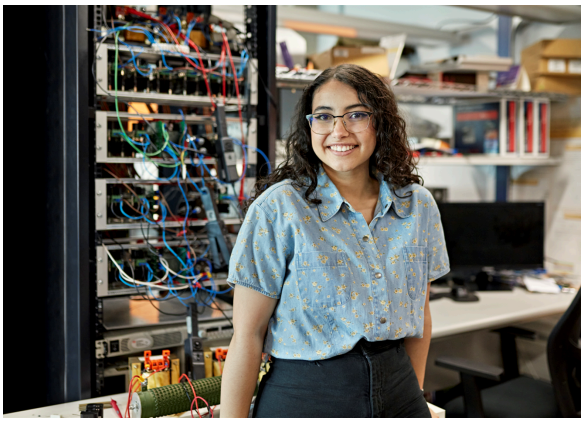
Computer Engineering Technology

Degree Type
Associate of Science

This program is not currently accepting new students.

Check out **NHTI's IT – Software Development Program**!



NHTI's Computer Engineering Technology degree program offers a combination of computer science, engineering theory, and hands-on skills in labs with state-of-the-art equipment. Class and lab size are kept small to foster student interaction with faculty. The majority of program courses are taught by full-time faculty with advanced degrees as well as significant and relevant industry experience.

Do you have questions? Contact Dennis Tappin at dtappin@ccsnh.edu.

Career Information

Graduates are prepared for careers in software development and computer engineering and can choose to pursue a bachelor's degree in either computer science or computer engineering. Graduates can enter into the following professions:

- Software developer
- Full-stack developer
- .NET developer
- IoT developer
- Cloud computing engineer
- Software control system engineer
- Bios/driver developer
- Mobile application designer or developer
- Microprocessor/embedded system programmer
- System verification engineer
- Software quality assurance
- Data communications software developer

Admission Requirements

Applicants are required to have at least three years of college preparatory math (Algebra I, Algebra II, and Geometry) with minimum grades of C or higher in at least two of the three college preparatory math courses. It is also recommended applicants have satisfactorily completed high school courses in Chemistry and Physics.

Curriculum

First Year

Fall Semester

Item #	Title	Lecture Hours	Lab Hours	Credits
CPET107C	Introduction to Programming with C++	2	3	3
ELET101C	Circuit Analysis I	3	3	4
ELET115C	Digital Fundamentals	2	3	3
ENGL101C	English Composition	4	0	4
MATH124C	College Algebra	4	0	4
	Subtotal Credits	**15**	**9**	**18**

Spring Semester

Item #	Title	Lecture Hours	Lab Hours	Credits
CPET125C	Data Structures	2	3	3
ELET144C	Embedded Microsystems	3	3	4
	ENGL 120C/COMM 120C or COMM 125C/ ENGL 125C	3	0	3
MATH140C	Precalculus	4	0	4
	PHYS 133C or PHYS 231C	3	2	4
	Subtotal Credits	**15**	**8-9**	**18**

Second Year

Fall Semester

Item #	Title	Lecture Hours	Lab Hours	Credits
CPET240C	Programming for Windows Operating Systems	3	3	4
CPET260C	Computer Real-Time Interfacing	3	3	4
CPET301C	Computer Project Definition	1	0	1
MATH205C	Calculus I	4	0	4
	PHYS 135C or PHYS 232C	3	2	4
	Social Science elective	3	0	3
	Subtotal Credits	**17**	**8-9**	**20**

Spring Semester

Item #	Title	Lecture Hours	Lab Hours	Credits
CPET215C	Integrated Circuits and Interfacing	3	3	4
CPET222C	Data Communications and internetworking	3	3	4
CPET252C	Networking and Internet Technologies	3	3	4
CPET303C	Computer Project	1	4	3
	Humanities/Fine Arts/Language elective	3	0	3-4
	Subtotal Credits	**13-14**	**13**	**18-19**
	Total Credits		74-75	

Additional Information

Accreditation

This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Capstone Project

Students in this program complete a capstone project during their final semester. A variety of industry partners provide students with a real-world project on site at the company's facility. Students work with industry professionals as they take their project from the definition phase into development and through to completion. This hands-on experience strengthens their ability to apply engineering theory to the development of practical solutions to real-world software development and engineering problems. Prospective employers see this as a distinguishing feature of NHTI's computer engineering technology program.

Curriculum Notes

- Students planning to pursue 4-year degrees should consider taking Calculus-based Physics and discuss this option with their academic advisors. To meet the requirements, students may need to alter their course sequence; contact your academic advisor for assistance.
- Students are required to complete at least one of the following math courses: MATH 205C, MATH 206C, MATH 208C, or MATH 210C. MATH 206C is strongly recommended for students that plan to pursue a bachelor's degree.
- To fulfill the program degree requirements and to meet the prerequisite requirement of subsequent major field courses, students are required to earn a grade of C- or higher in each major field course and in each math and physics course.
- For students with a need for a reduced course load, a 3-year version of this program is available. Contact the department chair for details.

Program Learning Outcomes

Graduates are able to:

- Demonstrate proficiency in multiple programming environments and multiple programming languages using object-oriented and procedural programming techniques to create and debug sophisticated software applications for different operating systems and runtime frameworks.
- Apply practical knowledge of math and physics to electric circuits and data communications.
- Read a schematic, set up and use measurement equipment, accurately measure a waveform, and compare measured results of a waveform with theoretical results calculated from a schematic.
- Demonstrate discipline-specific project management and teamwork skills.
- Critically analyze problem statements, decompose a problem into subproblems, and develop solutions.
- Demonstrate initiative in developing solutions to computer engineering problems using documentation and research.
- Gain knowledge of social, technical, and professional ethics required in a professional environment, including a respect for diversity.
- Participate in a professional work environment to produce work that meets industry standard specifications and learning skills necessary to complete assignments.