



# Computer Information Technology

## Internet of Things

### An Associate of Applied Science Degree Program

#### PROGRAM DESCRIPTION

The primary objective of the Internet of Things concentration (IoT) is to prepare individuals for employment in the field of computer science as an entry-level IoT technician. With the acquired skills and knowledge gained, the student will learn how to implement sensors, microcontrollers, with cloud-based storage, learn how to program embedded devices with serious consideration on security. Students will also develop strong critical-thinking skills and will learn by doing within a hands-on lab environment.

#### APPLICATION PROCEDURE

A student desiring to pursue an Associate of Applied Science degree in Computer Information Technology - Concentration: Internet of Things must:

1. Submit the Northeast State Application for Admission to the Office of Admissions and Records.
2. Indicate Computer Information Technology - Concentration: Internet of Things as the desired major on the Northeast State application form.
3. See a faculty advisor from the Computer Information Technology program prior to registering for classes and obtain faculty approval to register.

#### TYPICAL PROGRAM OF STUDY

Course No.	Course Title	Credit
<u>FALL</u>		
CITC 1302	Introduction to Networking	3
EDUC 1030	College and Lifelong Learning	3
ENGL 1010	English Composition I	3
INFS 1010	Computer Applications	3
MATH 1530	Introductory Statistics	3
<u>SPRING</u>		
CITC 1300	Beginning HTML and CSS	3
CITC 1301	Introduction to Programming and Logic	3
CITC 1303	Database Concepts	3
CITC 1341	Introduction to the Internet of Things	3
Elective	Communication (an approved elective from the general education core)	3
<u>FALL</u>		
CITC 1332	UNIX/Linux Operating System	3
CITC 2345	Cloud Computing	3
CITC 2357	Security of the Internet of Things	3
ECON 2100	Principles of Macroeconomics	3
HUM 2350	Technology in Society	3
<u>SPRING</u>		
CISP 2410	Assembly and Computer Organization	4
CITC 2326	Network Security	3
CITC 2343	Programming Embedded Systems	3
CITC 2390	CIT Capstone	3
PHYS 1030	Survey of Physics	4
or		
PSCI 1010	Principles of Physical Science	4
<b>Total Credit</b>		<b>62</b>

Additional courses may be required to overcome deficiencies in English, mathematics, and reading.

## TYPICAL JOB OPPORTUNITIES

Computer Programmer: Modifies programs, creates application reports, and develops new applications using Visual Basic, Java, Python, or other software programs.

Software Maintenance Specialist: Maintains software applications using standard programming languages or modules.

Information Retention Manager: Manages the acquisition and retention of data in existing software applications and databases.

## PROGRAM COMPETENCIES

The graduate is competent to:

1. Apply basic business principles, math concepts, and computational skills to business and technical problems common to computer science.
2. Demonstrate standard written and spoken English, and professional conduct to effectively communicate and succeed in a business/computer setting.
3. Select and use industry and subject specific software and hardware.
4. Apply problem-solving skills appropriate for employment in a computer and information science specialty.
5. Develop, implement, troubleshoot, and operate networks, desktop and web applications, object oriented programs and scripts, and IT security as required by a computer and information science specialty.
6. Upon completion of the program, all students will demonstrate critical thinking skills for inquiry and analysis, assimilation of facts and knowledge, and problem solving.
7. Express potential to work effectively in a team environment, exhibiting qualities of professionalism, leadership, and ethical decision-making.

## FOR FURTHER INFORMATION CONTACT:

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Average Starting Salary\*  
\$49,540

### \*Source:

Bureau of Labor Statistics, Occupational Employment Statistics Survey; Tennessee Department of Labor and Workforce Development, Labor Market Information

Northeast State Community College is part of the Tennessee Board of Regents system, Tennessee's largest higher education system, governing 40 post-secondary educational institutions with over 200 teaching locations. The TBR system includes 13 two-year colleges, 27 colleges of applied technology, and TN eCampus, providing programs to students across the state, country, and world.

Northeast State Community College does not discriminate on the basis of race, color, religion, creed, ethnic or national origin, sex, disability, age status as a protected veteran or any other class protected by Federal or State laws and regulations and by Tennessee Board of Regents policies with respect to employment, programs, and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Linda W. Calvert, Vice President for Administration & Grant Development, AffAct@NortheastState.edu, P.O. Box 246, Blountville, TN 37617-0246, 423.323.0222.

Northeast State Community College's policy on nondiscrimination can be found at <https://apps.northeast-state.edu/ie/policymanual/pol.asp?p=254>.

Northeast State Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award the associate degree. Questions about the accreditation of Northeast State may be directed in writing to the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, by calling (404) 679-4500, or by using information available on SACSCOC's website ([www.sacscoc.org](http://www.sacscoc.org)).