

# COMPUTER INFORMATION SYSTEMS

Specialization: Software Programming



## ABOUT THIS DEGREE PROGRAM

### TECH CORE A FOUNDATION IN TECHNOLOGY

This program is anchored with Tech Core, curriculum designed to help you build a foundation of interdisciplinary skills you'll need for today's Internet of Things (IoT) economy. You'll learn relevant skills in operating systems, programming, hardware, connectivity and security – giving you a hands-on foundation in engineering technology, information technology and software and information systems.

### A PROGRAM TO FUEL YOUR FUTURE

Learn protocols and techniques necessary to program, document, test and debug applications and software packages. You'll learn to understand the process of how software is conceived, specified and designed for an end user.

### IS THIS PROGRAM FOR YOU?

Want to pursue a career in computer information systems and interested in the development of code and business programs? Then this program may be the right fit for you.

## CAREER OPPORTUNITIES

Graduates of DeVry's Computer Information Systems degree program with a specialization in Software Programming may consider, but are not limited to, the following careers:

- Computer Systems Analysts
- Computer Programmer
- Front-end and Back-end Developer
- Software Consultant
- Software Developer

## WHAT YOU'LL LEARN

### ESSENTIALS

- Communicate methods and findings
- Collaborate in dynamic work environments
- Solve complex problems
- Analyze numerical data
- Apply appropriate technologies

### TECH CORE

- Produce, secure, operate and troubleshoot small enterprise networks
- Network, secure and deploy digital devices and sensors into the IoT ecosystem
- Solve technical problems using an algorithmic approach and basic programming and coding methods
- Install and configure operating systems using command line interface (CLI)

### PROGRAM

- Use advanced programming techniques
- Develop applications
- Understand network types and designs
- Deploy cryptographic and hacking methodologies

### SPECIALIZED

- Retrieve, organize and present data utilizing algorithms
- Integrate software engineering practices
- Design applications for various platforms
- Deploy advanced programming techniques

## QUICK FACTS

**124**  
CREDIT HOURS  
minimum credit hours required for graduation<sup>1</sup>

**2 + 8**  
YEARS MONTHS  
minimum length to graduation<sup>2</sup>

**THREE  
IN  
ONE**

### 3-IN-1

Earn two extra credentials with our unique 3-in-1 design. All courses in our Programming Essentials Certificate and Information Technology & Networking associate degree with a specialization in Information Systems and Programming are embedded within this program. So you can earn a certificate and an associate degree on the way to your bachelor's.

**IoT  
PROJECTS**

### WORK WITH IOT TECHNOLOGIES & SYSTEMS

Immerse yourself in the Internet of Things (IoT) world and obtain hands-on experience with IoT, cloud, software and security technologies and systems.

**UP TO \$300**

### CERTIFICATION EXAM REIMBURSEMENT

We reimburse qualified students up to \$300 for the cost of one industry certification exam attempt across a wide range of fields.

**DIVERSITY,  
EQUITY &  
INCLUSION**

### BE AN ACTIVE PART OF AN INCLUSIVE FUTURE

Customize your curriculum by choosing Diversity, Equity and Inclusion (DE&I) course alternates for your Communication Skills, Humanities and Social Science courses. These options highlight relevant topics to help empower you to promote an inclusive workplace.

<sup>1</sup> 127 for students enrolled at a Pennsylvania location

<sup>2</sup> Not including breaks. Assumes year-round, full-time enrollment. Additional program information may be found at <https://www.devry.edu/online-programs.html>.

# Computer Information Systems | Software Programming

## ESSENTIALS

47

CREDIT HOURS

### COMMUNICATION SKILLS<sup>1</sup>

ENGL112 <sup>2</sup>	Composition
ENGL135	Advanced Composition
ENGL216	Technical Writing

#### Select one

SPCH275	Public Speaking
SPCH276	Intercultural Communication ☼

### HUMANITIES<sup>3,4</sup>

LAS432	Technology, Society, and Culture ☼
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#### Select one

ETHC232	Ethical and Legal Issues in the Professions
ETHC334	Diversity, Equity and Inclusion in the Workplace ☼

### SOCIAL SCIENCES

ECON312	Principles of Economics
SOCS185	Culture and Society ☼

#### Select one

SOCS325 <sup>5</sup>	Environmental Sociology
SOCS350	Cultural Diversity in the Professions ☼

### MATHEMATICS AND NATURAL SCIENCES

MATH114	Algebra for College Students
MATH221	Statistics for Decision-Making
PHYS204	Applied Physics with Lab

### PERSONAL AND PROFESSIONAL DEVELOPMENT

CARD405	Career Development
COLL148	Critical Thinking and Problem Solving

☼ This icon indicates Diversity, Equity & Inclusion Courses

<sup>1</sup>14 for students enrolled at a New Jersey location.

<sup>2</sup>Students enrolled at a New Jersey location take ENGL108 in lieu of this course.

<sup>3</sup>Students enrolled at a Pennsylvania location must take HUMN451 as part of this requirement.

<sup>4</sup>9 for students enrolled at a Pennsylvania location.

<sup>5</sup>Students enrolled at a Nevada location must take POLI332 in lieu of this requirement.

## TECH CORE

21

CREDIT HOURS

### TECH CORE

CEIS101	Introduction to Technology and Information Systems
CEIS106	Introduction to Operating Systems
CEIS110	Introduction to Programming
CEIS114	Introduction to Digital Devices
NETW191	Fundamentals of Information Technology and Networking
NETW211	Fundamentals of Cloud Computing
SEC285	Fundamentals of Information Security

## PROGRAM

41

CREDIT HOURS

### INFORMATION SYSTEMS AND PROGRAMMING

CEIS150	Programming with Objects
CEIS209	Intermediate Programming
CEIS236	Database Systems and Programming Fundamentals
CEIS312	Introduction to Artificial Intelligence and Machine Learning
CIS355A	Business Application Programming with Lab

### INFORMATION TECHNOLOGY AND NETWORKING

NETW320	Converged Networks with Lab
SEC310	Principles and Theory of Security Management
SEC311	Ethical Hacking
SEC321	Network Security Testing with Lab

### CAREER PREPARATION

CEIS299	Careers and Technology
CEIS499	Preparation for the Profession
MGMT404	Project Management
TECH460	Senior Project

## SPECIALIZED

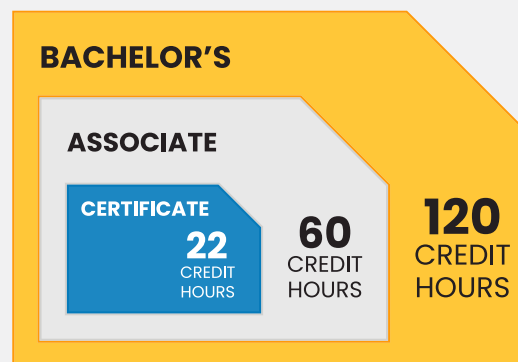
15

CREDIT HOURS

### SOFTWARE PROGRAMMING

CEIS200	Software Engineering I
CEIS295	Data Structures and Algorithms
CEIS320	Introduction to Mobile Device Programming
CEIS400	Software Engineering II
CEIS420	Programming Languages and Advanced Techniques

### Demonstrate Skills at Every Step



### EMBEDDED PROGRAMS

Our unique 3-in-1 design allows you to earn an additional two credentials. All courses in our Programming Essentials certificate and Information Technology and Networking associate degree are embedded within this program. So you can earn a certificate and an associate degree on the way to your bachelor's degree.

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