ABOUT THIS DEGREE PROGRAM

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 Developers
• Software Consultant
• Software Developers

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

32% GROWTH
nationally from 2018-2028 for Employment of Information Security Analysts

2 + 8 YEARS minimum length to graduation

2-IN-1
Earn an extra credential with our unique 2-in-1 design. All courses in our Information Technology & Networking Associate degree are embedded within this program. So you can earn an associate degree on the way to your bachelor’s.

PORTABLE IoT KIT
You can simulate the Internet of Things (IoT) experience wherever you are. With our portable IoT Kit, you’ll get hands-on experience in how IoT technologies work in the real world. Your kit will include digital devices, sensors and other tools you will use to build relevant IoT systems.

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.

1 127 for students enrolled at a Pennsylvania location
2 https://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm Data reflects a national projected percentage change in employment from 2018-2028 and may not reflect local economic conditions.
3 Not including breaks. Assumes year-round, full-time enrollment. Additional program information may be found at https://www.devry.edu/degree-programs.html

DeVry University
Bachelor's Degree Program

Computer Information Systems | Software Programming

ESSENTIALS

COMMUNICATION SKILLS
ENGL112 Composition
ENGL135 Advanced Composition
ENGL216 Technical Writing
SPCH275 Public Speaking

HUMANITIES
ETHC232 Ethical and Legal Issues in the Professions
LAS432 Technology, Society, and Culture

SOCIAL SCIENCES
ECON312 Principles of Economics
SOSC185 Culture and Society
SOSC325 Environmental Sociology

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

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

INFORMATION SYSTEMS AND PROGRAMMING
CEIS236 Database Systems and Programming Fundamentals
CIS170C Programming with Lab
CIS247C Object-Oriented Programming with Lab

APPLICATION DEVELOPMENT
CIS355A Business Application Programming with Lab

NETWORK SYSTEMS ADMINISTRATION
NETW260 Intermediate Information Technology and Networking I
NETW270 Intermediate Information Technology and Networking II

INFORMATION TECHNOLOGY AND NETWORKING
CEIS210 Introduction to Cryptographic Methods
CEIS312 Introduction to Artificial Intelligence and Machine Learning
SEC311 Ethical Hacking
SEC321 Network Security Testing with Lab

SENIOR PROJECT
CEIS392 Product, Project, and People Management
CEIS494 Senior Project I
CEIS496 Senior Project II

TECHNOLOGY CAREER PREPARATION
CEIS299 Careers and Technology
CEIS499 Preparation for the Profession

SPECIALIZED

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

EMBEDDED PROGRAMS
Interested in earning your Software Developer degree? Our unique 3-in-1 design allows you to earn an additional two credentials. All courses in our Information Technology (IT) 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.

DEMONSTRATE SKILLS AT EVERY STEP