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 Analyst
- 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

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

2 + 8 YEARS MORTHS
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
Bachelor's Degree Program

Computer Information Systems | Software Programming

ESSENTIALS

COMMUNICATION SKILLS
- ENGL112 Composition
- ENGL135 Advanced Composition
- ENGL216 Technical Writing
- SPC1275 Public Speaking

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

SOCIAL SCIENCES
- ENGL312 Principles of Economics
- SOCS185 Culture and Society
- SOCS325 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
- COL148 Critical Thinking and Problem-Solving

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

TECH CORE

TECH CORE
- CEIS101 Introduction to Technology and Information Systems
- CEIS106 Introduction to Operating Systems
- CEIS110 Introduction to Programming
- CEIS114 Introduction to Digital Devices
- NETW190 Fundamentals of Information Technology and Networking I
- NETW200 Fundamentals of Information Technology and Networking II
- SEC285 Fundamentals of Information Security

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

### Bachelor's Degree Program

**Computer Information Systems | Software Programming**

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