

SOFTWARE DEVELOPMENT

Specialization: Software Design and 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

Develop the needed skills to build and maintain software products created to customer design specifications. Learn how software packages are tested, the methods used to build software and the types of programming languages available for various applications.

IS THIS PROGRAM FOR YOU?

Ready to dive deep into the world of software development and learn about the design and creation of new applications and software packages? Then this program may be the right fit for you.

CAREER OPPORTUNITIES

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

- Scientific Software Programmer
- Software Application Developer
- Software Developer and Programmer
- Software Programmer and Analyst
- Software Systems Developer
- Mobile App Developer and Programmer

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

- Design web distributed systems
- Develop applications
- Analyze and design software systems
- Product life cycle management

SPECIALIZED

- Design and develop applications and algorithms
- Utilize advanced strategies for software development
- Program and secure mobile devices
- Utilize advance programming techniques for app development

QUICK FACTS

120
CREDIT HOURS
minimum credit hours
required for graduation

22%
GROWTH
nationally from 2019-2029
for Employment of
Software Developers¹

2 + 8
YEARS MONTHS
minimum length to graduation²

**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 are embedded within this program. So you can earn a certificate and an associate degree on the way to your bachelor's.

IoT KIT

IoT KIT

You can simulate the Internet of Things (IoT) experience wherever you are. With our IoT Kit³, you'll get hands-on experience in how IoT technologies work in the real world. Your kit will include digital devices, sensors and cloud-based tools you will use to build relevant IoT 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.

¹ <https://www.bls.gov/ooh/computer-and-information-technology/software-developers.htm>. Local growth will vary by location.

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

³ The IoT Kit is a required expense and is not complimentary.

Software Development | Software Design and Programming

ESSENTIALS

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CREDIT HOURS

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
SOCS185	Culture and Society
SOCS325	Environmental Sociology

MATHEMATICS AND NATURAL SCIENCES

MATH114	Algebra for College Students
MATH221	Statistics for Decision Making
MATH234	Discrete Math in Information Technology
PHYS204	Applied Physics with Lab

PERSONAL AND PROFESSIONAL DEVELOPMENT

CARD405	Career Development
COLL148	Critical Thinking and Problem Solving

TECH CORE

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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

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CREDIT HOURS

INFORMATION SYSTEMS AND PROGRAMMING

CEIS236	Database Systems and Programming Fundamentals
CEIS312	Introduction to Artificial Intelligence and Machine Learning
CIS170C	Programming with Lab
CIS247C	Object-Oriented Programming with Lab

APPLICATION DEVELOPMENT

CEIS295	Data Structures and Algorithms
CIS321	Structured Analysis and Design
CIS339	Object-Oriented Analysis and Design
CIS355A	Business Application Programming with Lab

CAREER PREPARATION

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

SPECIALIZED

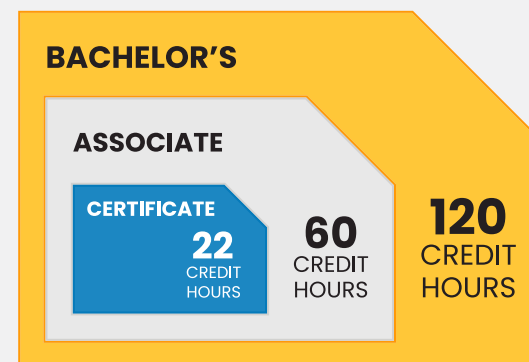
12

CREDIT HOURS

SOFTWARE DESIGN AND PROGRAMMING

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

Demonstrate Skills at Every Step



EMBEDDED PROGRAMS

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In New York, DeVry University operates as DeVry College of New York. DeVry University is accredited by The Higher Learning Commission (HLC), www.hlcommission.org. Keller Graduate School of Management is included in this accreditation. DeVry is certified to operate by the State Council of Higher Education for Virginia. Arlington Campus: 1400 Crystal Dr., Ste. 120, Arlington, VA 22202. DeVry University is authorized for operation as a postsecondary educational institution by the [Tennessee Higher Education Commission](http://www.tn.gov/thec), www.tn.gov/thec. Nashville Campus: 3343 Perimeter Hill Dr., Nashville, TN 37211. Programs, course requirements and availability vary by location. Some courses may be available online only. All students enrolled in site-based programs will be required to take some coursework online and, for some programs and locations, a substantial portion of the program may be required to be completed online. DeVry's academic catalog, available via devry.edu/catalogs, contains the most current and detailed program information, including admission, progression and graduation requirements. Information contained herein is effective as of date of publishing. ©2020 DeVry Educational Development Corp. All rights reserved. Version 12/16/20