



Bachelor's Degree Program

# COMPUTER INFORMATION SYSTEMS

Specialization: **Web Development and Administration**

## ABOUT THIS DEGREE PROGRAM

If you love technology, then you're one of the lucky ones: you can build the skills you need to do what you love in a variety of industries. And the Computer Information Systems program at DeVry University is a great place to start.

In our Computer Information Systems program, you can learn programming languages like C++, C# and Java, giving you the hands-on experience and skills for a career in the technology field. You can learn to write programs, update and expand existing programs, debug programs, and create and test code in an industry standard integrated development environment. Best of all, you can learn by doing: developing, coding, implementing, and testing software and computer programs for a variety of real-world applications.

DeVry's Computer Information Systems degree program allows you to select a specialization that will focus your education on your specific personal and professional goals, including:

- Computer Forensics
- Cyber Security Programming
- Database Management
- Information Systems Security
- Software Programming
- Web Development and Administration
- Web Game Programming

Through our TechPath approach, we've put technology at the core of our programs in business, tech and health – including this program. Every TechPath class you take revolves around a unique learning rubric developed at DeVry. We call it People-Process-Data-Devices or P2D2. You'll gain real skills in collaboration, be able to adapt to new structures, and be comfortable working with data and a wide spectrum of tech-forward tools. P2D2 is a key component of what makes TechPath a smart, new way of getting the knowledge you need to be ready to hit the ground running in the way successful companies work today.

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](http://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.

## GENERAL EDUCATION COURSEWORK

### Communication Skills

<b>ENGL112<sup>1</sup></b>	Composition
<b>ENGL135</b>	Advanced Composition
<b>ENGL216</b>	Technical Writing
<b>SPCH275</b>	Public Speaking

### Humanities

<b>HUMN303</b>	Introduction to the Humanities
<b>ETHC445</b>	Principles of Ethics
<b>LAS432</b>	Technology, Society, and Culture

### Social Sciences

<b>ECON312</b>	Principles of Economics
<b>SOCS185</b>	Culture and Society
<b>SOCS325<sup>2</sup></b>	Environmental Sociology

### Mathematics and Natural Sciences

<b>MATH114</b>	Algebra for College Students
<b>MATH221</b>	Statistics for Decision-Making
<b>SCI228<sup>3</sup></b>	Nutrition, Health and Wellness with Lab

### Personal and Professional Development

<b>CARD405</b>	Career Development
<b>COLL148</b>	Critical Thinking and Problem-Solving

### Business

<b>BUSN115</b>	Introduction to Business and Technology
<b>MGMT404</b>	Project Management

<sup>1</sup>Students enrolled at a New Jersey location take ENGL108 in lieu of this course.

<sup>2</sup>Students enrolled at a Nevada location must take POLI332 in lieu of this requirement.

<sup>3</sup>Students enrolled at a New Jersey location may take SCI200 to fulfill this requirement.

## CORE-DEGREE COURSEWORK

### Computer Systems Concepts

<b>CEIS100</b>	Introduction to Engineering Technology and Information Sciences
<b>CIS115</b>	Logic and Design
<b>CIS206</b>	Architecture and Operating Systems with Lab
<b>SEC280</b>	Principles of Information Systems Security

### Networking – one of:

<b>NETW202</b>	Introduction to Networking with Lab
<b>NETW203</b>	Cisco Networking Academy – Introduction to Networking with Lab

### Programming and Database Fundamentals

<b>CIS170C</b>	Programming with Lab
<b>CIS247C</b>	Object-Oriented Programming with Lab
<b>CIS336</b>	Introduction to Database with Lab

### Computer Information Systems Foundations

<b>ACCT301</b>	Essentials of Accounting
<b>CIS321</b>	Structured Analysis and Design
<b>CIS339</b>	Object-Oriented Analysis and Design
<b>CIS355A</b>	Business Application Programming with Lab
<b>CIS363B</b>	Web Interface Design with Lab
<b>CIS407A</b>	Web Application Development with Lab

### Senior Project

<b>CIS474</b>	Computer Information Systems Senior Project I
<b>CIS477</b>	Computer Information Systems Senior Project II

Courses in blue are part of the DeVry Tech Path

Listed above are sets of CIS courses, ending in A, B, or C that differ principally in the language/platform used to explore course concepts.



# SPECIALIZATION: WEB DEVELOPMENT AND ADMINISTRATION

## ABOUT THIS SPECIALIZATION

DeVry University's bachelor's degree program in Computer Information Systems can prepare you with a solid foundation in technical software and programming skills. Our specialization in Web Development and Administration can further focus your studies to align with your personal interests and professional goals.

Web developers work on the technical structure, as well as the design of websites. They create wireframes and site architectures based on user needs and use or write software to support the site's functions. Web developers build applications for all types of websites allowing users to compare and contrast information.

Our Web Development and Administration specialization can help you strengthen your planning, problem-solving, organization and programming skills. As a student, you can learn about specialized site functions including e-commerce, ratings and reviews, connecting with social networks, and more. You can study how to uncover user needs in order to create logical navigation systems. As a graduate, you may work on either front-end operations (those that the user can see) or back-end functionality (those that support the operations of the site) or both.

Graduates of DeVry University's Computer Information Systems degree program with a specialization in Web Development and Administration may consider careers including, but not limited to, the following:

- Applications Manager<sup>1</sup>
- Front-end and Back-end Developer
- Web Designer
- Web Master<sup>1</sup>
- Web Application Developer

<sup>1</sup>Employment in this occupation may require years of relevant experience.

For comprehensive consumer information, visit [devry.edu/studentconsumerinfo](http://devry.edu/studentconsumerinfo). Important information about the education debt, earnings and completion rates of students who attended this program can be found at [devry.edu/bcis-ge](http://devry.edu/bcis-ge). For additional program information, visit [devry.edu/bcis](http://devry.edu/bcis).

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](http://www.hlcommission.org). DeVry is certified to operate by the State Council of Higher Education for Virginia. Arlington Campus – 2450 Crystal Dr., Arlington, VA 22202. DeVry University is authorized for operation by the THEC, [www.tn.gov/thecc](http://www.tn.gov/thecc) Nashville Campus - 3343 Perimeter Hill Dr., Nashville, TN 37211. To report unresolved complaints to the Illinois Board of Higher Education, visit their webpage at <http://complaints.ibhe.org/> or by mail to the Illinois Board of Higher Education, 1 N. Old State Capitol Plaza, Suite 333, Springfield, IL 62701-1377. Program availability varies by location. ©2016 DeVry Educational Development Corp. All rights reserved. Version 07/03/17

## KNOWLEDGE AND SKILLS

**E-COMMERCE** — Gain knowledge of a broad spectrum of e-commerce principles, models and practices. Explore Internet marketing, retailing, payment and order fulfillment. Learn about various e-commerce models such as business-to-business (B2B) and consumer-to-consumer (C2C).

**WEB ARCHITECTURE** — Study web architecture and connectivity. Understand Internet protocols such as transmission control protocol/Internet protocol (TCP/IP), domain name server (DNS), simple mail transfer protocol (SMTP), hypertext transfer protocol (HTTP) and file transfer protocol (FTP). Dissect the design of an Internet or corporate intranet infrastructure to meet specific needs.

**ADVANCED WEB APPLICATION DEVELOPMENT** — Gain knowledge of the basics of design, coding and scripting, as well as database connectivity for web-based applications

**WEB DEVELOPMENT** — Design, build or maintain websites, using authoring or scripting languages, content creation tools, management tools and digital media.

**DATABASE INFRASTRUCTURE** — Learn to establish the database and infrastructure of a site.

**WEB SECURITY** — Incorporate security measures to safeguard sites and end users' privacy.

**INNOVATION** — Implement creativity and alternative thinking to develop new ideas and solutions to work-related problems.

**LOGIC AND DESIGN** — Gain knowledge of the basics of programming logic, as well as algorithm design and development, including constants, variables, expressions, arrays, files and control structures for sequential, iterative and decision processing. Design and document program specifications using tools such as flowcharts, structure charts and pseudocode.

**STRUCTURED ANALYSIS AND DESIGN** — Explore the systems analysis and design process using information systems methodologies and techniques to analyze business activities and solve problems. Identify, define and document business problems, and then develop information system models to solve them.

**INTERACTING WITH COMPUTERS** — Use computers and computer systems to program hardware, write software, set up functions, enter data or process information.

## PROGRAM-SPECIFIC COURSEWORK

### Web Development and Administration

- SEC370** Web Security
- WEB320** Principles of E-Commerce
- WEB375** Web Architecture with Lab
- WEB460** Advanced Web Application Development with Lab

## DID YOU KNOW?

DeVry University and Adobe® Systems Incorporated have partnered to bring the Computer Information Systems degree program with a specialization in Web Development and Administration, innovative learning via Adobe's industry-leading design and interactive media software applications. DeVry University's partnership with Adobe® Systems Incorporated provides anytime/anywhere accessibility to these software programs, because the power of creativity is more than 9 to 5!

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