



Bachelor's Degree Program

# COMPUTER INFORMATION SYSTEMS

Specialization: **Database Management**

## 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

## GENERAL EDUCATION COURSEWORK

### Communication Skills

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

### Humanities

HUMN303	Introduction to the Humanities
ETHC445	Principles of Ethics
LAS432	Technology, Society, and Culture

### Social Sciences

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

### Mathematics and Natural Sciences

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

### Personal and Professional Development

CARD405	Career Development
COLL148	Critical Thinking and Problem-Solving

### Business

BUSN115	Introduction to Business and Technology
MGMT404	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

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

### Networking – one of:

NETW202	Introduction to Networking with Lab
NETW203	Cisco Networking Academy – Introduction to Networking with Lab

### Programming and Database Fundamentals

CIS170C	Programming with Lab
CIS247C	Object-Oriented Programming with Lab
CIS336	Introduction to Database with Lab

### Computer Information Systems Foundations

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

### Senior Project

CIS474	Computer Information Systems Senior Project I
CIS477	Computer Information Systems Senior Project II

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.



## 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 Database Management can further focus your studies to align with your personal interests and professional goals.

Databases act as the storage repositories for some of our most important information: financial transactions, health records and legal information among other things. Database administrators help to design, create, test and manage these data stores. Security is often a primary concern in relation to databases, therefore, administrators must balance information access with information protection.

DeVry University's curriculum for the Database Management specialization is founded in real-world applications and techniques. Students can learn all aspects of database creation and management, from planning to troubleshooting errors, all with an emphasis on developing solutions to manage multiple needs. As a graduate, you can be prepared to apply your new skills in any number of fields, from finance to healthcare and beyond.

Graduates of DeVry University's Computer Information Systems program with a specialization in Database Management may consider careers including, but not limited to, the following:

- Computer Programmer
- Database Administrator
- Database Analyst
- Software Developer
- Software Implementation Consultant<sup>1</sup>

<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 07/03X/17

## KNOWLEDGE AND SKILLS

**DATABASE ADMINISTRATION** — Understand a variety of database administration topics, including capacity planning, database management system (DBMS) architecture, performance tuning, backup, recovery and disaster planning, archiving, reorganization and defragmentation.

**ADVANCED DATABASE** — Study data mining and warehousing. Understand the database implications of efficient and effective transaction processing, including error handling, data validation, security, stored procedures and triggers, record locking, commit and rollback. Explore database topics such as dynamic structured query language (SQL), complex queries, reporting capability creation and performance tuning.

**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.

**SYSTEMS EVALUATION** — Identify measures or indicators of system performance and the actions needed to improve or correct performance relative to the goals of the system.

**COMPLEX PROBLEM SOLVING** — Identify complex problems and review related information to develop and evaluate options and implement solutions.

**ATTENTION TO DETAIL** — Learn to pay attention to detail and to be thorough in completing work tasks.

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

## PROGRAM-SPECIFIC COURSEWORK

### Database Management

<b>DBM405A</b>	Advanced Database with Lab
<b>DBM438</b>	Database Administration with Lab
<b>DBM449</b>	Advanced Topics in Database with Lab
<b>SEC360</b>	Data Privacy and Security

## DID YOU KNOW?

In cooperation with Microsoft®, DeVry University students benefit from a catalog of MSDN® Academic Alliance tools to support gaining hands-on experience using the technology critical to their career path. As a student enrolled in DeVry University's technology-oriented curricula, you will be able to download the software relevant to your classes at no additional cost.

