

# SOFTWARE DEVELOPMENT

Specialization: Big Data and Analytics



## 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

In this specialization, you'll gain big data and analytic software development skills that address the complexity of examining large and varied data sets as well as uncover hidden patterns in information. You'll understand how predictive analytic measures and machine learning tools are applied to help drive quick decision-making in industry.

### IS THIS PROGRAM FOR YOU?

Interested in a career in software development and helping business and society tackle problems requiring analysis of large volumes of data, then this program focused on big data and analytics may be a good fit for you.

## CAREER OPPORTUNITIES

Graduates of DeVry's Software Development degree program with a Specialization in Big Data and Analytics may consider, but are not limited to, the following careers:

- Data Analyst
- Database Developer
- Data Modeler
- Data Scientist
- Business Intelligence Analyst
- Database Manager
- Data Architect
- Data Warehouse Manager

## 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

- Program and manage large data systems
- Manipulate, visualize and present data, as well as create and refine data reports and dashboards.
- Apply artificial intelligence, machine learning and predictive analytic tools to data analysis and modeling are covered.
- Manage and secure data assets

## QUICK FACTS

**120**  
CREDIT HOURS  
minimum credit hours  
required for graduation

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.

SKILLS  
FOCUSED

### SKILL FOCUSED CURRICULUM

Elements of our technology curriculum help prepare you to pursue certification opportunities that can validate your knowledge and skills.

- CompTIA Cloud Essentials+
- CompTIA Linux+
- CompTIA Network+
- CompTIA Project+
- CompTIA Security+
- CompTIA DataSys+

MINIMUM COMPLETION TIME\*  
**2 years  
8 months**

OR

NORMAL COMPLETION TIME\*\*  
**4 years**

## ACCELERATE ON YOUR SCHEDULE

Choose the schedule that best fits your goals and commitments. You can earn your **Bachelor's Degree** in as little as **2 years 8 months.\***

Or, follow a normal schedule and complete your program in 4 years.\*\*

\* Minimum completion time does not include breaks and assumes 3 semesters of year-round, full-time enrollment in 12-18 credit hours a semester per 12-month period.

\*\* Normal completion time includes breaks and assumes 2 semesters of enrollment in 12-18 credit hours per semester per 12-month period.

## Software Development | Big Data and Analytics

### ESSENTIALS

**51**  
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
MATH234	Discrete Math in Information Technology
TECH204	Everyday Physics
TECH221	Data-Driven Decision-Making

#### PERSONAL AND PROFESSIONAL DEVELOPMENT

CARD405	Career Development
COLL148	Critical Thinking and Problem-Solving

*Students who complete CARD415, instead of CARD405, apply CARD415 to fulfill this requirement.*

### TECH CORE

**21**  
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
NETW212	Introduction to Cloud Computing
SEC285	Fundamentals of Information System Security

### PROGRAM

**37**  
CREDIT HOURS

#### INFORMATION SYSTEMS AND PROGRAMMING

CEIS150	Programming Objects
CEIS209	Intermediate Programming
CEIS236	Database Systems and Programming Fundamentals
CEIS295	Data Structures and Algorithms
CIS355A	Business Application Programming with Lab

#### ANALYSIS AND DESIGN

BIAM110	Introduction to Business Analytics
CIS313	AI-Driven Business Application Coding
TECH408	Applied AI for Management and Technology

#### CAREER PREPARATION

CEIS298	Introduction to Technical Project Management
CEIS499	Preparation for the Profession
MGMT404	Project Management
TECH460	Senior Project

### SPECIALIZED

**12**  
CREDIT HOURS

#### BIG DATA AND ANALYTICS

CIS303	Data Visualization and Presentation
CIS306	AI, Machine Learning and Data Science
CEIS340	Database Management
SEC302	Data Administration and Security

#### Demonstrate Skills at Every Step



#### EMBEDDED PROGRAMS

Our exclusive 3-in-1 design has our Programming Essentials and Information Technology and Networking associate degree embedded in this degree program. So you can earn a certificate and an associate degree on the way to your bachelor's degree.

\*Future programmatic changes could impact the ability to earn additional credentials en route to an eligible degree program. Refer to the academic catalog for details. The figures displayed represent the minimum credit hours required for graduation. Additional coursework may be necessary to complete program requirements.

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