

# ENGINEERING TECHNOLOGY

## Specialization: Machine Learning and Design Techniques



### ABOUT THIS PROGRAM

#### IS THIS PROGRAM FOR YOU?

If you are interested in understanding how machine learning models can help inform process improvements, then this may be the right program for you.

#### A PROGRAM TO FUEL YOUR FUTURE

Explore how systems are designed and ways to improve existing processes leveraging machine learning when you pursue this specialization. Students will utilize computer design tools to create three dimensional models and explore process improvements. This includes developing, testing and training machine learning models to apply linear regression for making predictions.

#### CAREER OPPORTUNITIES

Graduates of DeVry's Engineering Technology associate degree program with a specialization in Machine Learning and Design Techniques may consider, but are not limited to, the following careers:

- Electrical and Electronic Engineering Technologists and Technicians
- Engineering Prototyping and Fabrication Tech Support Specialist
- Engineering CAD Technician
- Manufacturing Engineering Technician

### WHAT YOU'LL LEARN

#### ESSENTIALS

- Communicate methods and findings
- Collaborate in a dynamic work environment
- Solve complex problems
- Analyze numerical data
- Apply appropriate technologies

#### TECH CORE

- Produce, secure, operate and troubleshoot a small enterprise network
- Network, secure and deploy digital devices and sensors into the Internet of Things 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 and analyze circuits ensuring proper construction, voltage and currents
- Understand the essential components of control systems designs and how to apply ladder logic to debug or maintain applications

#### SPECIALIZED

- Utilize data and analysis techniques to solve problems and drive decisions
- Leverage computer-aided design (CAD) software to facilitate the generation, modification and optimization of system design
- Explore and apply process improvement methodologies to evaluate and enhance the performance of systems
- Solve technical problems using an algorithmic approach and basic programming and coding methods

### QUICK FACTS

**64**  
CREDIT HOURS  
minimum credit hours  
required for graduation

**21**  
COURSES

**1 + 4**  
YEAR MONTHS  
minimum length to graduation<sup>1</sup>

**TWO  
IN  
ONE**

#### EMBEDDED PROGRAM

DeVry offers a unique 2-in-1 design that allows our Information Technology (IT) Essentials certificate program to be embedded within the Associate in Engineering Technology degree program, giving you the chance to earn your certificate on the way to your associate degree.

**SKILLS  
FOCUSED**

#### CERTIFICATION EXAM ALIGNED CURRICULUM

Experience elements of our technology curriculum focused on real-world industry standards and prepare for certification opportunities that help validate your knowledge and skills.

- CompTIA A+
- CompTIA Network+
- CompTIA Security+
- PCEP Certified Entry-Level Python Programmer
- CompTIA ITF+
- CompTIA Cloud+
- CompTIA Linux+
- Autodesk Certified User

**DIVERSITY,  
EQUITY &  
INCLUSION**

#### BE AN ACTIVE PART OF AN INCLUSIVE FUTURE

Customize your curriculum by choosing Diversity, Equity and Inclusion (DE&I) course alternates for your Communication Skills, Humanities and Social Science courses. These options highlight relevant topics to help empower you to promote an inclusive workplace.

<sup>1</sup>Not including breaks. Assumes year-round, full-time enrollment. Additional program information may be found at <https://www.devry.edu/online-programs.html>.

# Engineering Technology – Machine Learning and Design Techniques

## ESSENTIALS

**26**  
CREDIT HOURS

### COMMUNICATION SKILLS

ENGL112 Composition

*Select one*

SPCH275 Public Speaking

SPCH276 Intercultural Communication ☼

### HUMANITIES

*Select one*

ETHC232 Ethical and Legal Issues in the Professions

ETHC334 Diversity, Equity and Inclusion in the Workplace ☼

### SOCIAL SCIENCES

SOCS185 Culture and Society ☼

### MATHEMATICS AND NATURAL SCIENCES

MATH114 Algebra for College Students

PHYS204 Applied Physics with Lab

### PERSONAL AND PROFESSIONAL DEVELOPMENT

CARD205 Career Development

COLL148 Critical Thinking and Problem-Solving

☼ This icon indicates Diversity, Equity & Inclusion Courses

## 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

NETW211 Fundamentals of Cloud Computing

SEC285 Fundamentals of Information System Security

## PROGRAM

**7**  
CREDIT HOURS

### AUTOMATION AND ELECTRONIC SYSTEMS

ECT226 Electronic Device and System Foundations

ECT286 Automation and Controls

### CAREER PREPARATION

CEIS299 Careers and Technology

## SPECIALIZED

**10**  
CREDIT HOURS

### MACHINE LEARNING AND DESIGN TECHNIQUES

MATH221 Statistics for Decision Making

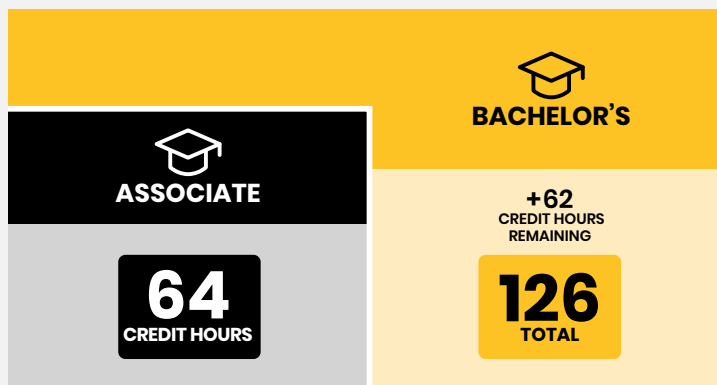
*Select two*

CEIS308 Systems and Computer Aided Design

CEIS310 Process Improvement with Machine Learning

CEIS312 Introduction to Artificial Intelligence and Machine Learning

### Earn a credential at every step.



### HOW DO CREDENTIALS STACK?

This Associate in Engineering Technology with a specialization in Machine Learning and Design Techniques can serve as a steppingstone to our Engineering Technology bachelor's degree. If you choose to continue on with your education, all credits apply to this credential. Build your confidence – and your resume – when you start your journey at DeVry.\*

\*The figures displayed represent the minimum credit hours required for graduation. At the time of application to the next credential level, an evaluation of qualifying transfer credit will occur and the most beneficial outcome will be applied.

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