

Bachelor's Degree Program

# ELECTRONICS ENGINEERING TECHNOLOGY<sup>1</sup>

Specialization: Renewable Energy

**TECHNOLOGY** ENGINEERING TECHNOLOGY

# **ABOUT THIS DEGREE PROGRAM**

# 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

Learn how electric machines generate electricity, how power is transmitted and managed, and how a variety of renewable and sustainable energy sources work.

### Is This Program for You?

Want to pursue a career working with sustainable and renewable energy technologies? Then this program may be the right fit for you.

# **CAREER OPPORTUNITIES**

Graduates of DeVry's Electronics Engineering Technology degree program with a specialization in Renewable Energy may consider, but are not limited to, the following careers:

- Technician
- Technician
- Energy Analyst
- Energy Conservation Specialist
- Electrical Engineering Energy Monitoring Specialist
- Electronics Engineering Power and Energy Technologist
  - Power and Renewable **Energy Technologist**

# 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**

- Install and upgrade networked, computercontrolled systems
- Test and measure electronic systems
- · Troubleshoot automation and control systems
- Work with programmable logic controller as they applied to commercial, motor and industrial control

### **Specialized**

- Evaluate electric machines, power systems and power transmission
- Design and simulate power switching circuits, rectifiers, AC-DC and DC-DC converters, inverters and motor drives
- Address the science, technological, engineering and business considerations when implementing alternative and renewable energy sources
- Examine and apply conservation laws of mass, energy, charge and momentum

# **OUICK FACTS**

CREDIT HOURS

minimum credit hours required for graduation<sup>2,3</sup>

of U.S. electricity generation were from renewable energy sources in 20174

minimum length to graduation<sup>5</sup>



Engineering Accreditation Commission

### **ACCREDITATION MATTERS**

ETAC of ABET promotes technical education excellence by offering programmatic accreditation to Institutions that meet their quality standards. This is a global mark of quality that is valued by employers and professional associations within the field Engineering Technology.

The Electronics Engineering Technology and Engineering Technology – Electronics degree programs are accredited, by location, by The Engineering Technology Accreditation Commission of ABET (ETAC of ABET) www.abet.org.



#### PORTABLE IOT KIT

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



## 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.



<sup>&#</sup>x27;The online version of this program is Engineering Technology - Electronics 2133 for students enrolled at a New Jersey Location 3142 for students enrolled at a Pennsylvania location. \*Renewable Energy Explained, U.S. Energy Information Administration, Independent Statistics & Analysis, found at https://www.eia.gov/energyexplained/index.php?page=renewable\_home, updated July 10, 2018, visited on the internet October 17, 2018 Not including breaks. Assumes year-round, full-time enrollment, Additional program information may be found at https://www.devry.edu/degree-programs.html

# Electronics Engineering Technology | Renewable Energy

# ENGINEERING TECHNOLOGY

# **ESSENTIALS**

#### **Communication Skills**

ENGL1121 Composition ENGL135 Advanced Composition ENGL216 **Technical Writing** SPCH275 **Public Speaking** 

# Humanities<sup>2</sup>

LAS432 Technology, Society and Culture

ETHC232 Ethical and Legal Issues in the Professions

### **Social Sciences**

ECON312 Principles of Economics SOCS185 Culture and Society SOCS3253 **Environmental Sociology** 

## **Mathematics and Natural Sciences**

Signals and Systems with Lab ECET345 MATH114 Algebra for College Students

MATH190 Pre-Calculus MATH260 Applied Calculus I MATH270 Applied Calculus II Applied Physics with Lab PHYS204

# Personal and Professional Development

CARD405 Career Development

Critical Thinking and Problem Solving COLL148

# **TECH CORE**

Tech Core	CKEDIT HOUSE
CEIS101	Introduction to Technology and
	Information Systems
CEIS106	Introduction to Operating Systems
CEIS110	Introduction to Programming
CEIS114	Introduction to Digital Devices
NETW190	Fundamentals of Information Technology
	and Networking I
NETW200	Fundamentals of Information Technology
	and Networking II
SEC285	Fundamentals of Information Security

# What's your experience with professors?

A lot of them worked in the field. In electrical engineering and computer engineering they have the knowledge about what they are teaching. 99

- Kristian R.,

Computer Information Systems student

# **PROGRAM**

## **Automation and Electrical Systems**

ECT222	Circuit Analysis Fundamentals
ECT225	Electronic Devices and Systems

ECT284 Automation and Control Systems with Lab

# **Information Systems and Programming**

CIS170C Programming with Lab

CIS247C Object-Oriented Programming with Lab

# **Application Development**

CIS355A Business Application Programming with Lab

# **Senior Project**

CEIS392 Product, Project, and People Management

CEIS494 Senior Project I CEIS496 Senior Project II

# **Technology Career Preparation**

CEIS299 Careers and Technology CEIS499 Preparation for the Profession

# **SPECIALIZED**

# **Engineering Technology Foundations:** Sustainability and Renewable Energy

BIOS135	Foundations in Biology and Chemistry
ECET301	Conservation Principles in Engineering and
	Technology with Lab
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ECET350 Signal Processing with Lab REET300 Introduction to Alternative Energy Technologies

with Lab

Power Electronics and Alternative Energy REET420

Applications with Lab

REET425 Electric Machines and Power Systems with Lab

SCI204 Environmental Sciences with Lab

SUST310 Renewable Energy: Science, Technology

and Management



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

<sup>&</sup>lt;sup>2</sup> Students enrolled at a Pennsylvania location must take HUMN451 as part of this requirement.

<sup>&</sup>lt;sup>3</sup> Students enrolled at a Nevada location must take POLI332 in lieu of this requirement.