BACHELOR'S DEGREE PROGRAM | TECH - ENGINEERING TECHNOLOGY

# **ENGINEERING TECHNOLOGY -ELECTRONICS**

Specialization: Renewable Energy

## **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

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 Engineering Technology -Electronics degree program with a specialization in Renewable Energy may consider, but are not limited to, the following careers:

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

## 139 CREDIT HOURS minimum credit hours

of U.S. electricity generation were from renewable energy sources in 2018 required for graduation

YEARS minimum length to graduation<sup>2</sup>



### **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 Engineering Technology field.

The Engineering Technology – Electronics degree program is accredited by The Engineering Technology Accreditation Commission of ABET (ETAC of ABET) www.abet.org.

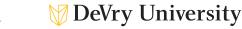
### **PORTABLE IOT KIT** IOT KIT

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.



### Bachelor's Degree Program

## Engineering Technology - Electronics | Renewable Energy

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## **ESSENTIALS**

COMMUNICATION SKILLS		CREDIT HOURS
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	NE

### **SOCIAL SCIENCES**

ECON312	Principles of Economics
SOCS185	Culture and Society
SOCS325	Environmental Sociology

### MATHEMATICS AND NATURAL SCIENCES

ECET345	Signals and Systems with Lab
MATH114	Algebra for College Students
MATH190	Pre-Calculus
MATH221	Statistics for Decision-Making
MATH265	Applied Calculus
PHYS204	Applied Physics with Lab

### PERSONAL AND PROFESSIONAL DEVELOPMENT

CARD405	Career Development
COLL148	Critical Thinking and Problem-Solving

TECH CORE 21	
TECH CORE	CREDIT HOURS
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

### PROGRAM

#### CREDIT HOURS **AUTOMATION AND ELECTRONIC 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
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### 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**

### 30 CREDIT HOURS

30

### **RENEWABLE ENERGY ENGINEERING TECHNOLOGY**

BIOS135	Foundations in Biology and Chemistry
ECET301	Conservation Principles in Engineering and Technology with Lab
ECET350	Signal Processing with Lab
REET300	Introduction to Alternative Energy Technologies with Lab
REET420	Power Electronics and Alternative Energy Applications with Lab
REET425	Electric Machines and Power Systems with Lab
SCI204	Environmental Science with Lab
SUST310	Renewable Energy: Science, Technology and Management

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