



Bachelor's Degree Program ENGINEERING TECHNOLOGY – ELECTRONICS

Specialization: **Renewable Energy**

ABOUT THIS DEGREE PROGRAM

Electronics are the core of everything from personal communication devices to sophisticated medical equipment, to the cars and trucks we drive. The Engineering Technology – Electronics (ET-E) degree program at DeVry University can prepare you with the skills needed for designing, building and improving tomorrow's electronic products and systems. DeVry University has a long history of preparing individuals to work in the electronics industry.

As a student, you can work with the latest technologies and designs, plus test new ones, providing you with real-world insight. You can learn key troubleshooting skills and become immersed in today's engineering hardware and software technologies. You can also learn how to lead and/or be a part of a technical team.

In addition, students may take the Engineering Technology – Electronics degree program without a specialization.

The Engineering Technology – Electronics degree program is accredited by The Engineering Technology Accreditation Commission (ETAC) of the Accreditation Board for Engineering and Technology (ABET). Some courses may be taken interchangeably between onsite and online to fulfill graduation requirements. The most recent information on which programs are ETAC of ABET accredited at which locations is available in the Academic Catalog and at <http://www.devry.edu/academics/accreditation.html>.

Through our TechPath approach, we've put technology at the core of our programs in business, tech and health – including this program. Every TechPath class you take revolves around a unique learning rubric developed at DeVry. We call it People-Process-Data-Devices or P2D2. You'll gain real skills in collaboration, be able to adapt to new structures, and be comfortable working with data and a wide spectrum of tech-forward tools. P2D2 is a key component of what makes TechPath a smart, new way of getting the knowledge you need to be ready to hit the ground running in the way successful companies work today.

GENERAL EDUCATION COURSEWORK

Communication Skills

ENGL112	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

ECON410	Environmental Economics
SOCS325	Environmental Sociology

Mathematics and Analytical Methods

ECET345	Signals and Systems with Lab
MATH190	Pre-Calculus
MATH260	Applied Calculus I
MATH270	Applied Calculus II

Natural Sciences

BIOS135	Foundations in Biology and Chemistry with Lab
PHYS310	College Physics I with Lab
PHYS320	College Physics II with Lab
SCI204	Environmental Science with Lab

Personal and Professional Development

CARD405	Career Development
COLL148	Critical Thinking and Problem-Solving

CORE-DEGREE COURSEWORK

Electronic Circuits and Devices

ECET110	Electronic Circuits and Devices I with Lab
ECET210	Electronic Circuits and Devices II with Lab
ECET220	Electronic Circuits and Devices III with Lab
ECET350	Signal Processing with Lab

Digital Circuits and Microprocessors

CEIS100	Introduction to Engineering Technology and Information Sciences Digital Fundamentals with Lab
ECET105	Digital Circuits and Systems with Lab
ECET230	Digital Circuits and Systems with Lab
ECET330	Microprocessor Architecture with Lab
ECET340	Microprocessor Interfacing with Lab

Computer Programming and Networking

CIS170C	Programming with Lab
CIS247C	Object-Oriented Programming with Lab
CIS355A	Business Application Programming with Lab
ECET375	Data Communications and Networking with Lab

Senior Project Design and Development

ECET390	Product Development
ECET492L	Senior Project Development Lab I
ECET493L	Senior Project Development Lab II
ECET494L	Senior Project Development Lab III

Technology Integration

ECET299	Technology Integration I
ECET497	Technology Integration II

ACCREDITATION MATTERS

The Engineering Technology – Electronics (ET-E) degree program is accredited, by location, by The Engineering Technology Accreditation Commission of ABET (ETAC of ABET) www.abet.org. 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. To learn more visit www.abet.org.



Courses in blue are part of the DeVry Tech Path

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, contains the most current and detailed program information, including admission, progression and graduation requirements. Information contained herein is effective as of date of publishing.



Bachelor's Degree Program | Engineering Technology - Electronics SPECIALIZATION: RENEWABLE ENERGY

COLLEGE OF
ENGINEERING & INFORMATION SCIENCES

ABOUT THIS SPECIALIZATION

DeVry University's Renewable Energy specialization provides a strong engineering technology and electronics background with an emphasis on green technologies, such as wind, solar, geothermal and biomass power. As a graduate, you can be well-versed in alternative energy generation, as well as the impact of environmental science, economics and sociology on green technology.

You can also obtain the knowledge needed to understand how engineering design, planning and project management can utilize renewable sources of energy, along with the production, transmission and storage of sustainable energy sources. Our specialization in Renewable Energy can prepare you for Engineering Technology positions that are increasingly being affected by green technologies and initiatives.

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

- Electronics Technician
- Energy Engineering Technician
- Technical Project Manager
- Test Engineers and Technologists

For comprehensive consumer information, visit 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/beet-ge. For additional program information, visit devry.edu/beet.

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. 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 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. ©2017 DeVry Educational Development Corp. All rights reserved. Version 06/27/17

KNOWLEDGE AND SKILLS

CONSERVATION PRINCIPLES IN ENGINEERING AND TECHNOLOGY — Examine conservation laws of mass, energy, charge and momentum, and apply fundamental engineering concepts to problems in electrical circuits.

FUNDAMENTALS OF POWER AND ALTERNATIVE ENERGY SOURCES — Explore to power switching circuits, including simulation and construction of systems needed to convert power derived from both conventional systems and alternative energy sources such as solar and wind.

ENVIRONMENTAL SCIENCE AND SOCIAL STUDY — Learn to identify causes of environmental problems and apply practical solutions. This includes exploring cultural norms, ideologies, beliefs, and economic and gender-related factors that affect finding and providing sustainable solutions to environmental problems.

SCIENCE, TECHNOLOGY AND MANAGEMENT — Learn the science and technology behind renewable energy while considering business decisions required for investing in and managing systems using this technology. Explore renewable energies including solar technologies, fuels synthesized from biomass, hydrogen, wind and others.

ENGINEERING AND TECHNOLOGY — Gain knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures and equipment to the design and production of various goods and services.

COMPUTERS AND ELECTRONICS — Learn about circuit boards, processors, chips, electronic equipment and computer hardware and software, including applications and programming.

MAINTENANCE AND REPAIR — Service, repair, calibrate, regulate, fine-tune or test machines, devices, and equipment that operate primarily on the basis of electrical or electronic (not mechanical) principles.

ANALYZE DATA OR INFORMATION — Identify the underlying principles, reasons or facts and break down information or data into separate parts.

DESIGN — Understand the use of design techniques, tools and principles involved in the production of electronic equipment, schematics, drawings and models.

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

PROGRAM-SPECIFIC COURSEWORK

Renewable Energy

- ECET301** Conservation Principles in Engineering and Technology 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
- SUST310** Renewable Energy: Science, Technology and Management

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