

ENERGY TECHNOLOGY (ENRG)

IvyTech.edu/energy-technology

OVERVIEW



Energy Technology students participate in a wide variety of hands-on learning activities including; designing, installing, and maintaining wind turbines, solar systems, battery systems, solar thermal systems, renewable energy HVAC systems, electrical infrastructure, raceways, generation systems, energy monitoring, home automation, energy audits, etc. Students will learn and apply their training at the Craig Porter Energy Center Laboratory, the most versatile and sophisticated renewable energy training facility in Indiana.

ENERGY TECHNOLOGY

ASSOCIATE OF APPLIED SCIENCE

(60 credit hours = 4 semesters)

The Associate of Applied Science degree program prepares students for careers, career changes and career advancement. Students who enroll in the Energy Technology Associates of Applied Science degree program must complete one of the following Technical Certificates prior to earning the AAS.

ENERGY TECHNOLOGY

TECHNICAL CERTIFICATES

Renewable Energy Technology

(34 credit hours = 1-2 semesters)

Industrial Wind Energy Technology

(34 credit hours = 2 semesters)

PATHWAY EXAMPLE

Energy Technology Students generally choose to earn the Renewable Energy TC, the Industrial Wind Energy TC, and the Energy Technology AAS, which includes several certifications. This pathway can be finished in as little as 3 semesters or 15-20 classes.

CAREERS IN THIS FIELD

- Energy Auditor
- Solar Technician
- HVAC Technician
- Industrial Maintenance
- Wind Turbine Technician
- Electrician
- Electric Lineman
- Project Engineers/Managers
- Power Plant/System Operator
- Energy Management Analyst

The Energy Technology program provides high skilled training for the following careers: Industrial Wind Turbine Technician, Solar Photovoltaic Technician, Solar Thermal Technician, Industrial Electrician, Green Electrician, Construction Electrician, Electric Lineman, Substation Technician, Project Engineer, Project Manager, Electrical Engineer, Industrial Maintenance Technician, Energy Auditor, Energy Management Analyst, Grid System Operator, Power Plant Operations/Management, Wind Farm Operations/Management, etc. The opportunities are growing and endless.

EARN MORE AND IMPROVE YOUR SKILLS

If you want a good-paying job, you need to invest in your education. With an associate degree from Ivy Tech Community College, you'll earn an average of \$8,000 more each year than you would with just a high school diploma. Over the course of your career, this has a tremendous impact on your earning power—a difference of up to \$400,000. As a result, you'll have the chance to explore opportunities that are well worth the time you'll spend in class. Get started today. Call 888-IVY-LINE or visit ivytech.edu/new-students.

FOR MORE INFORMATION:

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The Association of
Technology,
Management and
Applied Engineering



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School of Advanced Manufacturing, Engineering and Applied Sciences

765.269.5229



IVY TECH
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Ivy Tech Community College-Lafayette

ENERGY TECHNOLOGY

2021-2022

THE FOLLOWING REGIONAL SUGGESTED SEQUENCE INCLUDES ALL COURSE REQUIREMENTS FOR THIS DEGREE. YOU MUST CONSULT WITH AN ACADEMIC ADVISOR TO DETERMINE WHICH ELECTIVES BEST MEET YOUR CAREER GOALS.

ASSOCIATE OF APPLIED SCIENCE - ENERGY TECHNOLOGY

Course #	Title	Credit Hours
General Education Core		
COMM 104	Workplace Communications	3
ENGL 111	English Composition	3
MATH 122	Applied Technical Mathematics	3
XXXX XXX	Humanities/Social & Behavioral Sciences Elective	3
Choose One Of The Following Courses		
CHEM 111	Chemistry I	4
-or-		
PHYS 100	Introductory Physics	4
-or-		
SCIN 100	Earth Science	4
-or-		
SCIN 101	Science of Alternative Energy Generation	4
Requirement Total : 16		
Other Institutional Requirements		
HVAC 279	Green Awareness Capstone	1
IVYT 111	Student Success	1
Requirement Total : 2		
Professional/Technical Core		
INDT 203	Machine Maintenance and Installation	3
XXXX XXX	Energy Technology Statewide Elective	12
Requirement Total : 15		
TC specific Technical Courses		
Complete one of the following Technical Certificates:		
XXXX XXX	Natural Gas Technology Technical Certificate	
XXXX XXX	Power Plant Technology Technical Certificate	
XXXX XXX	Electric Line Technology Technical Certificate	
XXXX XXX	Wind Technology Technical Certificate	
XXXX XXX	Renewable Energy Technology Technical Certificate	
Requirement Total : 27		
Total Credit Hours : 60		

ENERGY TECHNOLOGY 2021-2022 STATEWIDE ELECTIVE LIST

ACCT 101	Financial Accounting	3
BUSN 101	Introduction to Business	3
ENRG 1XX	Energy Technology Statewide Electives	
ENRG 2XX	Energy Technology Statewide Electives	
HVAC 100	Introduction to HVAC Technology	3
HVAC 200	Home Automation & Smart Grid	3
HVAC 203	Heat Loss and Gain Calculation	3
HVAC 210	Energy Auditing	3
INDT 1XX	Industrial Technology Statewide Elective	
INDT 2XX	Industrial Technology Statewide Elective	
MKTG 101	Principles of Marketing	3
NGAS 1XX	Natural Gas Statewide Electives	
NGAS 2XX	Natural Gas Statewide Electives	
PPTC 1XX	Power Plant Statewide electives	
PPTC 2XX	Power Plant Statewide electives	
SUST 1XX	Sustainable Energy Statewide Electives	
SUST 2XX	Sustainable Energy Statewide Electives	

TECHNICAL CERTIFICATE INDUSTRIAL WIND TECHNOLOGY

Course #	Title	Credit Hours
General Education Core		
MATH 122	Applied Technical Mathematics	3
Requirement Total : 3		
Other Institutional Requirements		
IVYT 111	Student Success	1
Requirement Total : 1		
Professional/Technical Core		
ENRG 100	Energy Industries Fundamentals	3
ENRG 112	Electrical Power Distribution	3
INDT 103	Motors and Motor Controls	3
INDT 113	Basic Electricity	3
INDT 125	Industrial Wiring Principles	3
SUST 101	Wind Power	3
SUST 111	Wind Turbine Mechanical Systems I	3
SUST 211	Wind Turbine Mechanical Systems II	3
XXXX XXX	Statewide Elective	3
Choose ONE of the following:		
XXXX XXX	Statewide Elective	3
-or-		
COMM 104	Workplace Communication	3
Requirement Total : 30		
Total Credit Hours : 34		

TECHNICAL CERTIFICATE RENEWABLE ENERGY TECHNOLOGY

Course #	Title	Credit Hours
General Education Core		
MATH 122	Applied Technical Mathematics	3
Requirement Total : 3		
Other Institutional Requirements		
IVYT 111	Student Success	1
Requirement Total : 1		
Professional/Technical Core		
XXXX XXX	Statewide Elective	3
ENRG 100	Energy Industries Fundamentals	3
ENRG 111	Smart Grid Home Integration	3
Choose ONE of the following:		
ENRG 107	Transmission and Distribution of Electric Power	3
-or-		
ENRG 112	Electrical Power Distribution	3
ENRG 202	Photovoltaic System Installation	3
INDT 113	Basic Electricity	3
INDT 125	Industrial Wiring Principles	3
SUST 101	Wind Power	3
SUST 102	Introduction to Solar PV, Solar Thermal, and Geothermal Technology	3
Choose ONE of the following:		
XXXX XXX	Statewide Elective	3
-or-		
COMM 104	Workplace Communication	3
Requirement Total : 30		
Total Credit Hours : 34		

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