

# Intermediate Technical Certificate: Energy Systems Technology

(1 Year)

## Program Prerequisites:

Students must be qualified for college-level coursework in English and Math (see an advisor for details).

## Description:

Fundamental electronics, electrical, and energy systems program.

## Objective:

To prepare students as entry-level technician and maintenance assistants to meet the needs of the electrical and process industry.

Code	Title	Credits
<b>Required Courses:</b>		
ESET 0100	Engineering Technology Orientation	1
ESET 0100L	Engineering Technology Orientation Lab	1
<b>Select a minimum of sixteen (16) credits from the following courses:</b> <sup>1</sup>		16
ESET 0101	Electrical Circuits I	5
ESET 0101L	Electrical Circuits I Laboratory	5
ESET 0102	Electrical Circuits II	5
ESET 0102L	Electrical Circuits II Laboratory	5
ESET 0110	Introduction to Process Control	1
ESET 0110L	Introduction to Process Control Laboratory	1
ESET 0121	Basic Electricity and Electronics	4
ESET 0121L	Basic Electricity and Electronics Laboratory	3
ESET 0122	Electrical Systems and Motor Control Theory	3
ESET 0122L	Electrical Systems and Motor Control Theory Laboratory	1
ESET 0123	Mechanical Power Transmission	2
ESET 0123L	Mechanical Power Transmission Laboratory	1
ESET 0125	Introduction to Structural Welding	1
ESET 0126	Introduction to Mechanical Drafting and Computer Aided Design	1
ESET 0127	Mechanical Power Transmission II	2
ESET 0127L	Mechanical Power Transmission Laboratory II	2
ESET 0151	Nuclear Industry Fundamental Concepts	3
ESET 0151L	Nuclear Industry Fundamental Concepts Lab	1
ESET 0152	Nuclear Careers and Information	1
ESET 0153	Radiological Control Fundamentals	3
<b>Select a minimum of eight (8) credits from the following math courses:</b>		8

ESET 0140	Applied Technical Intermediate Algebra	5
ESET 0141	Applied Mathematics I	4
ESET 0142	Applied Mathematics II	4
MATH 1143	College Algebra	3
MATH 1144	Trigonometry	2
MATH 1147	College Algebra and Trigonometry	5
MATH 1153	Statistical Reasoning	3
MATH 1170	Calculus I	4
<b>Required General Education Courses:</b>		7
PHYS 1101 & 1101L	Elements of Physics and Elements of Physics Laboratory	4
COMM 1101	Fundamentals of Oral Communication <sup>2</sup>	3
<b>Minimum Total Credits</b>		33

<sup>1</sup> Students continuing to the AAS are advised to take the following curriculum as part of the ITC:

Electrical Engineering Technology --  
ESET 0101, ESET 0101L, ESET 0102, ESET 0102L, ESET 0141, ESET 0142

Instrumentation Engineering Technology --  
ESET 0101, ESET 0101L, ESET 0102, ESET 0102L, ESET 0110, ESET 0110L, ESET 0141, ESET 0142

Mechanical Engineering Technology --  
ESET 0121, ESET 0121L, ESET 0122, ESET 0122L, ESET 0123, ESET 0123L, ESET 0125, ESET 0126, ESET 0127, ESET 0127L, ESET 0140

Nuclear Engineering Technology --  
ESET 0121, ESET 0121L, ESET 0122, ESET 0122L, ESET 0140, ESET 0151, ESET 0151L, ESET 0152, ESET 0153

<sup>2</sup> Contributes to a General Education requirement.