

# ENGINEERING TECHNOLOGY ASSOCIATE IN SCIENCE DEGREE

The Associate in Science Engineering Technology (ET) degree prepares students for careers in applying and maintaining technical systems across various industries. This program offers two specializations: Substation & Relay Technology and Advanced Manufacturing.

## Engineering Core:

The core program courses comprise the 18-credit hour Engineering Technology Support Specialist College Credit Certificate (<https://lssc-public.courseleaf.com/academic-programs/college-credit-certificate-programs/engineering-technology-support-specialist-college-credit-certificate/>), aligned with the Manufacturing Skills Standards Council (MSSC) and preparing students for the MSSC Certified Production Technician (CPT) Certification, provides a foundation in:

- Electronics
- Computer-Aided Drafting (CAD)
- Mechanical Measurement & Instrumentation
- Manufacturing Processes & Materials
- Quality Assurance
- Industrial Safety

## Substation & Relay Technology Specialization:

Prepares students for careers in electrical utilities and co-generation facilities, covering:

- Three-Phase Power Theory
- Protective Relaying
- Power Transformers
- High Voltage Breakers
- SCADA Systems
- Electrical Utility Industry
- Technical Documentation

## Advanced Manufacturing Specialization:

Focuses on technical skills for manufacturing careers and includes the 30-credit Advanced Manufacturing College Credit Certificate (<https://lssc-public.courseleaf.com/academic-programs/college-credit-certificate-programs/mechatronics-manufacturing-automation-college-credit-certificate/>), covering:

- Programmable Logic Controllers
- Electro-Mechanical Systems
- Robotics
- Motors and Controls
- Hydraulics and Pneumatics

## Academic Advising

- [advising@lssc.edu](mailto:advising@lssc.edu) 352-787-3747

## Career Development Services

- [Careers@lssc.edu](mailto:Careers@lssc.edu) 352-323-3603

## Program Contact Information

- Mr. Jeff Light, ET Program Director [Relay@lssc.edu](mailto:Relay@lssc.edu) ([relay@lssc.edu](mailto:relay@lssc.edu)) 352-435-6528
- Workforce Programs Main Office 352-435-5024

## Program Requirements

Code	Title	Hours
<b>General Education Courses</b>		
ENC 1101	College Composition I	3
Select a State Core Course from Area II: Humanities <sup>1</sup>		3
POS 2041	American National Government	3
or AMH 2020	U.S. History Since 1877	
MAC 1105	College Algebra	3
PHY 1020C	Conceptual Physics	3
<b>Engineering Technology Core</b>		
ETD 1320C	Introduction to AutoCAD	3
EET 1084C	Introduction to Electronics	3
ETM 1010C	Mechanical Measurement & Instrumentation	3
ETI 1420C	Manufacturing Processes and Materials	3
ETI 1110C	Introduction to Quality Assurance	3
ETI 1701C	Industrial Safety	3
<b>Total Hours</b>		<b>33</b>

## Specializations (Choose One Path)

Code	Title	Hours
<b>Substation and Relay Technology Specialization</b>		
ETP 1700C	Introduction to the Electrical Utility Industry	2
ETP 1138C	Electric Utility Print Reading	2
ETP 2122C	High Voltage Transformers	2
ETP 2161C	High Voltage Circuit Breakers	2
PHY 1057C	Physics for Engineering w/Lab	3
ETP 2260C	Protective Relay 1	3
ETP 2261C	Protective Relay 2	3
ETP 2270C	Substation Systems	2
ETS 2550C	SCADA Systems	3
ETP 2931C	Capstone in Protective Relay	2
<b>Total Hours</b>		<b>24</b>

Code	Title	Hours
<b>Advanced Manufacturing Specialization</b>		
ETS 1542C	Introduction to PLCs	3
ETS 1535C	Automation Process Control	3
ETS 2511C	Electro-Mechanical Systems	3
ETS 1700C	Hydraulics and Pneumatics	3
ETS 1603C	Fundamentals of Robotics and Simulation	2
ETS 2544C	Advanced PLCs	2
ETS 1540C	Industrial Applications Using PLCs and Robotics	2
ETI 1843C	Motors and Controls	2
ETI 1949	Engineering Technology Internship	1
ETI 2950C	Capstone in Manufacturing	3
<b>Total Hours</b>		<b>24</b>

Code	Title	Hours
<b>Program Elective Courses</b>		
Select one of the following courses:		3
MAT 1033	Intermediate Algebra	

MGF 1100 Introduction to Mathematical Thinking

Any EET, ETP, ETD, ETS, ETI, or ETM course not listed above.

Code	Title	Hours
<b>Total</b>		<b>60</b>

<sup>1</sup> See course options. (<https://lssc-public.courseleaf.com/academic-programs/general-education-requirements/>)

Students should make an appointment to meet with the ET Program Director to discuss the program prior to or shortly after enrolling.

Only required courses for an LSSC degree or qualifying certificate program are eligible for federal financial aid. Verify course choices and avoid charges by making an appointment with an academic advisor.

### Civic Literacy Requirement

As per the amended Florida Rule 6A-10.02413, prior to the award of a specialized associate in arts transfer degree, associate in arts, associate in science, or baccalaureate degree, LSSC students under the 2022-2023 Catalog and thereafter must demonstrate competency in civic literacy through one of the following options prior to graduation:

- successfully passing POS 2041 American National Government or AMH 2020 U.S. History Since 1877, or AMH 2010 U.S. History to 1877 (beginning Fall 2024 forward), or AMS 2010 Civil Discourse and the American Political Order and achieving a 60% or higher on the Florida Civic Literacy Exam , or
- successfully passing a prescribed assessment:
  - AP Government & Politics Test: United States (passing score of 3), or
  - AP U.S. History Test (passing score of 4), or
  - CLEP American Government (passing score of 50)
  - CLEP History of the United States I (passing score of 50)

**To verify your Civic Literacy Requirement, please visit Degree Works (<https://degreeworks.lssc.edu/>)**

Students must earn a grade of C or higher in all program core, specialization, and most general education courses in order to qualify for graduation.

For information about career options, visit [www.lssc.edu/careers](http://www.lssc.edu/careers) (<http://www.lssc.edu/careers>).

Students must complete 25% of each program's total credit hours at LSSC.