

MECHATRONICS AND MANUFACTURING AUTOMATION COLLEGE CREDIT CERTIFICATE

The Mechatronics and Manufacturing Automation College Credit Certificate program equips students with broad skills for working in automated environments. They'll gain hands-on experience in hydraulics, pneumatics, PLCs, and automation. The program also covers core engineering technology concepts like electronics, maintenance, technical documentation, and quality assurance. This combination prepares students for various technical careers that utilize automation and robotics. This certificate is upward compatible with the Engineering Technology AS degree Advanced Manufacturing Specialization.

Engineering Core:

This core comprises the 18-credit hour 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

Mechatronics Core:

The Mechatronics core focuses on technical skills for manufacturing careers covering:

- Programmable Logic Controllers
- Automation Process Control
- Electro-Mechanical Systems
- Hydraulics and Pneumatics

A minimum grade of "C" or better must be achieved in all professional core courses.

Academic Advising

- advising@lssc.edu 352-787-3747

Career Development Services

- Careers@lssc.edu 352-323-3603

Program Contact Information

Relay@lssc.edu (relay@lssc.edu) 352-323-3635

Course	Title	Hours
First Semester		
MTB 1329	Applied Mathematical Concepts for Engineering Technology	3
ETI 1084C		3
ETI 1420C	Manufacturing Processes and Materials	3
ETI 1110C	Introduction to Quality Assurance	3
Hours		12
Second Semester		
ETM 1010C	Mechanical Measurement & Instrumentation	3

ETI 1701C	Industrial Safety	3
ETD 1320C	Introduction to AutoCAD	3
Hours		9
Third Semester		
ETS 1542C	Introduction to PLCs	3
ETS 1700C	Hydraulics and Pneumatics	3
ETI 1843C	Motors and Controls	3
Hours		9
Fourth Semester		
ETS 1535C	Automation Process Control	3
ETS 1540C	Industrial Applications Using PLCs and Robotics	3
ETM 2401C	Mechanical Devices and Systems	3
Hours		9
Total Hours		39

Code	Title	Hours
Engineering Tech Core		
EET 1084C	Introduction to Electronics	3
ETD 1320C	Introduction to AutoCAD	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
Mechatronics Core		
ETS 1542C	Introduction to PLCs	3
ETS 1535C	Automation Process Control	3
ETS 2511C	Electro-Mechanical Systems	3
ETS 1700C	Hydraulics and Pneumatics	3
Total Hours		30

When beginning this program, students are advised to make an appointment for advising with the Program Manager or designated instructor.

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.

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

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