

Withlacoochee Technical College

Industrial Machinery and Controls Technician Program

Course Syllabus 2022-2023

Withlacoochee Technical College

Instructor

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Room 302

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352-726-2430 ext. 4355

Class Hours

7:30 am to 3:00 pm, Monday through Friday

Program Description

The program focuses on fundamental, practical training in electrical and electronic controls, pneumatic, hydraulic, and mechanical systems. These systems are utilized throughout a wide variety of industries. The fundamental skills learned in the program will provide the student with the skills necessary to enter the manufacturing, logistics and process control fields.

The program is 1,200 hours in length and is divided into three Occupational Completion Points (OCPs).

- OCP A - Industrial Machinery and Controls Assistant, 300 hours
- OCP B - Industrial Machinery and Controls Associate, 300 hours
- OCP C - Industrial Machinery and Controls Technician I, 300 hours
- OCP D - Industrial Machinery and Controls Technician II, 300 hours

State Curriculum Frameworks

Explore the Florida State Curriculum Frameworks for [Industrial Machinery and Controls Technician Program](#)

Course Aims and Outcomes

Upon completion of the program the student will have the fundamental industry standard knowledge in:

- Safety awareness and risk assessment
- Electrical fundamentals
- Meter knowledge
- Motor controls
- Measurement and sensors
- Types of controls and control loops
- Process control devices
- Pneumatic, hydraulic, and mechanical fundamentals
- Analytical and problem-solving skills

The students can earn three industry recognized certifications through Supply Chain Automation Training and Assessment (CTSCA) and the Manufacturing Skills Standards Council (MSSC):

- Certification in Equipment Maintenance (CTSCA-EM)
- Certification in Equipment Repair (CTSCA-ER)
- Certification in Network Repair (CTSCA-NR)

Course Requirements

The program is designed to prepare students for entry into the industry. Therefore, expectations have been established to train the student in conduct for attaining and maintaining employment that is expected throughout their careers. These are:

Class Attendance and Participation Policy

The student is expected to:

- Arrive to class on time and prepared to learn
- Participate in all classroom and shop activities
- Follow all safety rules. Violation of safety rules will cause the student to forfeit their opportunity to attend the class.
- Work well with classmates, instructor, and other personnel

If the student is unable to attend class, they must inform the instructor by one of the contact methods listed above. If the student is habitually tardy or absent, they will forfeit their opportunity to attend the class.

Cellphones may only be used on breaks and in an emergency.

Dress Code

Full cover, closed toe shoes such as work boots or sneakers are appropriate footwear. No flip-flops or Croc-type shoes are permitted. Full cover shirt (no tank tops), long pants such as jeans, Dickies, Duluth, or Carhart are recommended. No shorts are permitted. Safety eyewear is required in the shop area.

Housekeeping

Students are expected to clean up the area they are working in at the end of the day including safe storage of tools, trainers, and materials. De-energize trainers, and equipment. Air, water and hydraulic supplies must be appropriately shut off. Clean work bench and floor and clean other equipment and materials as required.

Discipline

Refer to the WTC Student handbook for discipline information. Program specific rules and expectations will be discussed in class.

Grading Procedures

Students are graded on the following:

Activities	Percent of Total Grade
Classwork such as assignments, quizzes, and exams	30%
Practical such as performance of tasks, hands-on activities, demonstration of knowledge, explaining systems operations, utilizing trainers, and troubleshooting	40%
Employability and professionalism skills such as attendance, housekeeping, teamwork, and conduct	30%

Grading Scale

Grade Percentage	Letter Grade
90 – 100%	A
80 – 89%	B
70 – 79%	C
60 – 69%	D
Below 60%	F

Academic Integrity

Each student in this course is expected to abide by Citrus County School District and Withlacoochee Technical College policies regarding academic integrity. All work submitted by a student in this course will be the student's own work.

Industry Requirements

Since the industry requires employees to work on equipment which could expose the employee and equipment to varying degrees of hazards, many employers require that their employees maintain a drug free lifestyle. The industry and many employers may also require a valid driver license and good driving record to secure and keep employment.

Physical Requirements

Students should be able to lift and carry the industry standard 50lbs., work from ladders up to 12 feet, be able to work in confined spaces and have normal hand eye coordination.

Remote Learning

This program is taught face-to-face on campus, however, there may be times when remote learning is necessary. During such times, students need access to an Internet connection and sufficient technology to access the program's online learning modules.

Learning Activities

The students will learn industry skills using trainers, sensors, and industry standard devices. Learning will reflect real world experience.