

**Northwestern Connecticut Community College
Course Syllabus**

Course Title: Soldering and Electronics

Course #: MFG 148

Course Description

This course will cover topics in soldering, electronic components, and manufacturing of printed circuit board assemblies. Students will prepare and complete projects that utilize their acquired skills that are in accordance to the industry standards and their own technique.

A goal of this course is to describe materials, methods and acceptance criteria for soldering electronic assemblies. In addition to the information provided, this class is a combination of understanding the industry requirements and demonstrating your ability to hand solder in Through-Hole Technology (THT), Surface-Mount Technology (SMT), and Wire to Terminals. A basic overview of component identification and value interpretation.

Pre-requisite /Co-requisite: None

Outcomes:

By the end of the course, student should be able to demonstrate:

1. Ability to navigate through the IPC-A-610 manual.
2. Appropriate use of electronics vocabulary.
3. Acceptable criteria for all three classes.
4. Ability to solder Through Hole, Surface Mount, Wires and Terminals.
5. Ability to recognize standard electronic components including their markings and polarity.
6. Ability to identify and utilize tools used in the electronic assembly industry.
7. Personal safety and component safety (ESD/MSD).
8. Knowledge of PCBA production equipment and production manufacturing concepts.