



Wayne County Community College District

COURSE SYLLABUS

EE 105 Electronic Fabrication & Design

CREDIT HOURS: 2.00

CONTACT HOURS: 45.00

COURSE DESCRIPTION:

An introduction to electronic fabrication and design techniques. It includes circuit drafting, PCB design and etching, assembly, soldering and use of hand tools. Students are required to build circuits assigned by the instructor.

PREREQUISITES: EE 102

EXPECTED COMPETENCIES:

Upon completion of this course, the student will be familiar with:

- Identify all electronic components needed for the projects.
- Differentiate between the various methods of circuit manufacture.
- Draw a PCB layout for a given schematic.
- Use various electronic drafting techniques.
- Use soldering, desoldering and various hand tools used by electronic technicians.
- Draw a circuit mask on a copper clad board.
- Etch PCB boards in a pre-approved etching solution.
- Drill holes in a PCB board and mount the devices according to a given schematic.
- Solder electronic components on PCB boards and check for continuity using a multimeter.
- Test electronic circuits and troubleshoot when necessary.

ASSESSMENT METHODS:

Student performance may be assessed by examination, quizzes, case studies, oral conversation, group discussion, oral presentations. The instructor reserves the option to employ one or more of these assessment methods during the course.

GRADING SCALE:

90%-100% = A
80%-89.9% = B
70%-79.9% = C
60%-69.9% = D
<60% = E