

ELECTRONIC ASSEMBLY AND FABRICATION (CERTIFICATE E0929)

Technology and Health Division Certificate E0929

The Electronic Assembly and Fabrication Certificate is intended to prepare students to enter the electronics field as assembly and fabrication technicians. The program provides a series of courses to meet the needs of industry in assembly, soldering/de-soldering skills, and fabrication for both through-hole and surface mount devices (SMD). Included are skills for various types of cabling and connections.

Electronic fundamentals (test instruments, basic electrical measurements, color-codes, schematic symbols, device outlines, etc.) are provided in the introductory courses. Complete surface mount technology (SMT) skills are taught with a culmination in the IPC7711/IPC7721 rework and repair of electronic assemblies certification. Recertification is required every two years. ELEC 63 is a prep course for the recertification.

Required Courses

| Course Prefix | Course Name | Units |
|--------------------|--|-----------|
| ELEC 10 | Introduction to Mechatronics | 2 |
| ELEC 50A | Electronic Circuits - Direct Current (DC) | 4 |
| ELEC 50B | Electronic Circuits (AC) | 4 |
| ELEC 61 | Electronic Assembly and Fabrication | 3 |
| ELEC 62 | Advanced Surface Mount Assembly and Rework | 2 |
| Total Units | | 15 |

Electronics and Computer Technology Website (<http://www.mtsac.edu/electronics/>)

Program Learning Outcomes

Upon successful completion of this course, a student will be able to:

- design, fabricate, and populate a through-hole circuit board.
- communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.