

ELECTRONIC ASSEMBLY AND FABRICATION

Certificate of Completion #24162

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.

Program Learning Outcomes

- Students will design, fabricate, and populate a through-hole circuit board.

Review [Student Learning Outcomes \(SLOs\)](#) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC EL10	Introduction to Mechatronics	
VOC EL50A	Electronic Circuits - Direct Current (DC)	
VOC EL50B	Electronic Circuits (AC)	
VOC EL61	Electronic Assembly and Fabrication	
VOC EL62	Advanced Surface Mount Assembly and Rework	

Back to Vocational Programs (<http://catalog.mtsac.edu/programs/noncredit-programs/programsaz/vocational-programs/>)