

DIGITAL SYSTEMS TECHNOLOGY (CERTIFICATE T0438)

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

Technology and Health Division Certificate T0438

In addition to courses in electronics fundamentals, the Digital Systems Technology certificate encompasses advanced coursework in computer and digital systems circuitry, including microcontrollers and microprocessors. This advanced certificate is one of three available for students who do not complete all second-year systems courses at once, or who complete them one at a time. A.S. degree recipients are automatically eligible to receive, without further examination, a 3rd Class Technician License from the National Association of Radio and Telecommunications Engineers (N.A.R.T.E.), while students completing certificate programs are automatically eligible for the N.A.R.T.E. 4th Class Technician License.

Required Courses

Course Prefix	Course Name	Units
ELEC 11	Technical Applications in Microcomputers	3
ELEC 12	Computer Simulation and Troubleshooting	2
ELEC 50A	Electronic Circuits - Direct Current (DC)	4
ELEC 50B	Electronic Circuits (AC)	4
ELEC 51	Semiconductor Devices and Circuits	4
ELEC 56	Digital Electronics	4
ELEC 61	Electronic Assembly and Fabrication	3
ELEC 74	Microcontroller Systems	4
TECH 60	Customer Relations for the Technician	2
Total Units		30

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

Guided Pathways of Study Suggested Course Sequence (<https://www.mtsac.edu/guided-pathways/pathway-results.html?pthwyvar=T0438&desc=Digital+Systems+Technology%2C+Certificate+T0438>)

Program Learning Outcomes

Upon successful completion of this program, a student will:

- be able to employ polar and/or rectangular notation to determine the magnitude and phase shift of an unknown circuit parameter (voltage, current, impedance, and/or power).
- demonstrate proper use of electronic test equipment and associate measurement results with circuit behaviors in the laboratory.
- quantitatively determine unknown electrical parameters from given or measured values and use these results to assess or troubleshoot faults in circuit and system operation.
- communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.
- in advanced courses, connect concepts learned in introductory courses to more general principles applicable in the employment context.