

# Electronics Technology Certificate

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Electronic technology influences almost every aspect of modern life. Skilled electronics technicians are needed to support growth in this industry. Electronics technicians fabricate, test, install, operate, troubleshoot, and maintain highly technical systems such as communications systems, computers, and computer networks, industrial process control systems, avionics, biomedical electronics, and photonics systems.

This certificate is designed to prepare the student for entry into the electronics field as an apprentice electronics technician. The program provides education in the basic information and skills necessary to perform the assigned duties of an apprentice electronics technician safely and professionally.

Students will work with excellent facilities and some of the latest laboratory equipment.

Completers of the certificate will have the opportunity for employment in one of today's most challenging and exciting career fields. Certificate completers may also earn an Associate of Applied Science in Electronics (<https://catalog.jccc.edu/degrecertificates/electronicstechnology/electronics-technology-aas/>) by taking two additional semesters of Electronics Technology coursework.

(Major Code 6220; CIP Code 47.0101)

Electronics Technology Program web page (<http://www.jccc.edu/academics/credit/electronics-technology/>)

## Program Learning Outcomes

Johnson County Community College (JCCC) is committed to offering high-quality affordable programs that focus on developing knowledge and skills conducive to life-long learning. Both the General Education Student Learning Outcomes (<https://www.jccc.edu/about/leadership-governance/administration/institutional-effectiveness-branch/outcomes-assessment/learning-outcomes.html>) and Institutional Learning Outcomes (<https://www.jccc.edu/about/leadership-governance/administration/institutional-effectiveness-branch/outcomes-assessment/institutional-learning-outcomes.html>) convey JCCC's approach to programmatic outcomes. Additionally, students who successfully complete the Electronics Technology program from JCCC will be able to:

- Gather, evaluate, and communicate technical information efficiently.
- Utilize basic test equipment (multimeters, power supplies, and oscilloscopes) to characterize circuit operation and diagnose fault conditions.
- Analyze, troubleshoot, and repair electronic circuits including analog/communication, digital/microprocessor/microcontroller.
- Apply effective soldering techniques in the construction and repair of electronic equipment.
- Use appropriate development tools to input, configure, and document software for microprocessor and microcontroller-based systems; construct, document, and troubleshoot complete microprocessor/microcontroller systems.

## Certificate Requirements

### First Semester

Code	Title	Hours
COMS 155	Workplace Skills	1
ELEC 120	Introduction to Electronics	3
ELEC 125	Digital Electronics I	4
ELEC 134	DC Circuits*	4
MATH 130	Technical Mathematics I*	3
<b>Total Hours</b>		<b>15</b>

### Second Semester

Code	Title	Hours
CS 134	Programming Fundamentals	4
ELEC 160	Semiconductor Devices I*	3
ELEC 227	Digital Electronics II*	4
ELEC 234	AC Circuits*	4
MATH 131	Technical Mathematics II*	3
<b>Total Hours</b>		<b>18</b>



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**Total Program Hours: 33**

\* This course has registration requirements.