

## Railroad Track Welding Certificate

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This certificate is designed to provide a concentrated program for industry-specific training in track maintenance and repairs. Upon successful completion of this program, you should have the ability to safely operate track welding equipment, perform basic and advanced welding operations, and complete specialized procedures as needed to perform the job of railway track welder.

Enrollment is subject to the approval of the BNSF Railway training director and JCCC division administrator.

(Major Code 4520; CIP Code 49.0208)

Railroad Science Program web page (<http://www.jccc.edu/academics/credit/railroad-science/>)

### 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 Railroad Track Welding Certificate from JCCC will be able to:

- Use different welding and cutting processes, with emphasis on the FCAW process. Metallurgy and the effects of heat in relationship to austenitic manganese steel
- Perform welds in a safe manner high-quality, sound thermite welds on standard rail and mismatched rail.
- Identify and produce in a safe manner high-quality welding repairs and correct welding techniques to railroad track components to include maintenance, grinding, welding and repairs of switches, track rail ends, track wheel burns, battered welds, rail transition ramp building methods.
- Properly use oxyfuel cutting (OFC), plasma arc cutting (PAC), plasma arc gouging, air carbon arc cutting (CAC-A), shielded metal arc welding (SMAW), and flux core arc welding (FCAW) equipment.

### Certificate Requirements

#### Required Courses

Code	Title	Hours
RRIT 132	Thermite Welding*	3
RRIT 136	Rail and Switch Point Repair Welding*	3
RRIT 145	Frog Welding*	3
RRIT 160	Basic Welding*	3
<b>Total Hours</b>		<b>12</b>

**Total Program Hours: 12**

\* This course has registration requirements.