

# Locomotive Car Repair Technician LCR1

## Type

Technical Certificate of Credit

Diagnose, adjust, repair, or overhaul railroad cars. Students will become familiar with the rail industry; knowledge of locomotives (EMD and GE) and locomotive air brake systems; Department of Transportation and FRA rules and OSHA regulations; fundamental concepts and operations of locomotive mechanical systems. Students will be proficient with safety practices, equipment, and techniques necessary for metal heating and cutting principles; cutting torches and apparatus; metal heating techniques; metal cutting techniques; manual and automatic oxyfuel cutting techniques; oxyfuel pipe cutting; reading welding and related blueprints and sketches; shielded metal arc welding (SMAW) in flat positions; horizontal SMAW safety and health practices; selection and applications of electrodes, selection and applications for horizontal SMAW; horizontal SMAW joints; techniques required for shielded metal arc welding (SMAW) in the vertical position; selection and applications of electrodes for vertical SMAW, vertical SMAW joints, and vertical SMAW to specification; overhead SMAW safety techniques required for successful flux cored arc welding (FCAW); machine set up and operation; shielded gas and selection; and FCAW joints in all positions.

## Required Courses

Item #	Title	Credits
ELCR 2140	Mechanical Devices	2
RRTC 1010	Introduction to the Railroad Industry	4
WELD 1010	Oxyfuel and Plasma Cutting	4
WELD 1050	Horizontal Shielded Metal Arc Welding	4
WELD 1070	Overhead Shield Metal Arc Welding	4
Minimum Credit Hours for Graduation		18