

# Railroad Operations- Welding Option, A.A.S.

Maintenance of way welding involves maintenance and repair of rail and track components. The final phase of this program consists of course work provided in cooperation with the National Academy of Railroad Sciences. Selective admission to the program is based on various criteria. Interested students should meet with a JCCC counselor as early as possible.

For information visit the National Academy of Railroad Sciences (<http://www.railroadtraining.com>). Hover your cursor over the "New Careers" tab and choose from the list.

(Major Code 2850; State CIP Code 49.0208)

## First Semester

CPCA 105	Introduction to Personal Computers: Windows	1
ENGL 121	Composition I*	3
MATH 130	Technical Mathematics I*	3
PHIL 124	Logic and Critical Thinking	3
RRT 120	History of Railroading	3
Total Hours		13

## Second Semester

ENGL 123	Technical Writing I*	3
INDT 125	Industrial Safety/OSHA 30	3
PHYS 133	Applied Physics*	5
RRT 121	Railroad Technical Careers	3
Health and/or Physical Education Elective ^		1
Total Hours		15

^ Health and/or Physical Education Elective (<http://catalog.jccc.edu/fall/degreecertificates/electives/health-and-or-physical-ed-aas>)

## Third Semester

Technical/Related Elective (see below)		6
ECON 132	Survey of Economics	3
or ECON 230	Economics I	
RRT 150	Railroad Operations	3
RRT 165	Railroad Safety, Quality and Environment	3
SPD 125	Personal Communication	3
Total Hours		18

## Fourth Semester

Technical/Related Elective (see below)		3
RRIT 122	Elements of Welding*	3
RRIT 123	Basic Welding*	3
RRIT 132	Thermite Welding*	3
RRIT 136	Rail and Switch Point Repair Welding*	3
RRIT 145	Frog Welding*	3
Total Hours		18

## Technical/Related Electives

AUTO 125	Introduction to Automotive Shop Practices	3
AUTO 165	Automotive Engine Repair*	4
CET 105	Construction Methods	3
CET 129	Construction Management	3
DRAF 123	Interpreting Machine Drawings*	2

DRAF 129	Interpreting Architectural Drawings	2
HVAC 123	Electromechanical Systems	4
MFAB 124	Introduction to Welding	3
MFAB 128	Basic Machine Tool Technology	3
MFAB 140	Maintenance Repair Welding*	3
MFAB 180	Blueprint and Symbols Reading for Welders	2
MFAB 240	Metallurgy	2
RRIT 137	Structural Welding SMAW*	3
RRIT 138	Structural Welding FCAW*	3
RRIT 140	Structural Quality SMAW*	3
RRIT 141	Structural Quality GMAW*	3
RRIT 142	Structural Pipe Welding*	3
RRIT 160	Mechanical Basic Welding*	3
RRIT 162	Mechanical Welding Structural Stick*	3
RRIT 164	Mechanical Welding Structural Wire*	3
RRIT 166	Mechanical Welding Air Brake Pipe* (Prerequisite:Approval of Burlington Northern Santa Fe (BNSF) Training Director)	3
RRIT 168	Mechanical Welding Sheet Metal* (Prerequisite:Approval of Burlington Northern Santa Fe (BNSF) Training Director)	3

**Total Program Hours: 64**