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# **Heavy-Equipment Welding and Fabrication**

If you are interested in pursuing a diesel technician career with a specialty focus in welding, College of Western Idaho's (CWI) Heavy Equipment Welding and Fabrication program can help you achieve your goals. In this program, you will start your education by taking the first year of Heavy-Duty Diesel Truck Technician training. After successfully completing the first year, you will move to CWI's Welding and Metals Fabrication program and complete one year of training to earn your degree.

# Additional Advising Information

All students interested in pursuing this program must meet with an enrollment specialist prior to registration.

### **Career Information**

You will find work in many types of fields—working on equipment that ranges from rugged construction vehicles to giant earth movers, mining trucks, cranes, and pavers. These machines cost hundreds of thousands—even millions—of dollars and you will be trusted to care for and repair them.

Welding graduates are in demand locally, nationally, and internationally. Our students often find positions fabricating new products such as industrial machinery, steel structures, transportation equipment, railroad engines/cars, farm equipment, and more. Many graduates also find excellent self-employment opportunities in both urban and rural areas.

# Slideshow Image





### Skills, Traits, and Prep Classes

- Mechanical aptitude [1]
- Manual dexterity [2]
- Ability to lift heavy objects [3]
- Good physical condition [4]
- Communication skills [5]
- Problem-solving skills [6]
- Troubleshooting skills [7]
- Enjoyment of mechanical work [8]
- Sound math and spatial skills [9]
- Good hand-eye coordination [10]
- Ability to work well on a team [11]
- Precise attention to detail [12]
- Solid reading skills [13]

# What You Will Learn to Do

- Work on small and large diesel powered equipment [14]
- Diagnose and repair fuel systems, lubrication systems, cooling systems, hydraulic systems, power trains, electrical systems, and heating/ventilation/air conditioning systems [15]
- Perform many welding processes, including Shielded Metal ARC Welding (SMAW) (STICK), Gas Metal ARC

Welding (GMAW) (MIG), Flux Cored ARC Welding (FCAW), Gas Tungsten ARC Welding (GTAW) (TIG) [16]

- Perform manual, semi-automatic, and automatic oxygen-acetylene burning [17]
- Perform air carbon ARC and plasma cutting and gouging [18]
- Operate fabrication tools and equipment [19]
- Read blueprints [20]
- Utilize appropriate fabrication techniques [21]
- Maintain quality control [22]
- Identify properties of materials [23]
- Understand basic metallurgy [24]

# Testimonial

The Diesel Technology programs seek to develop students that are behaviorally mature, skilled in their discipline, academically equipped, and prepared for a world that demands lifelong learning.

Steve Rayburn, Heavy Equipment Welding and Fabrication Program Chair

You see our students do a lot of different things [after this program] because there is a broad variety of demand.

Randy Johnson, Welding and Metals Fabrication Program Chair

# Tag Dump

Heavy-Equipment Welding and Fabrication Mechanical aptitude Manual dexterity Ability to lift heavy objects Good physical condition Communication skills Problem-solving skills Troubleshooting skills Enjoyment of mechanical work Sound math and spatial skills Good hand-eye coordination Ability to work well on a team Precise attention to detail Solid reading skills Work on small and large diesel powered equipment Diagnose and repair fuel systems, lubrication systems, cooling systems, hydraulic systems, power trains, electrical systems, and heating/ventilation/air conditioning systems Perform many welding processes, including Shielded Metal ARC Welding (SMAW) (STICK), Gas Metal ARC Welding (GMAW) (MIG), Flux Cored ARC Welding (FCAW), Gas Tungsten ARC Welding (GTAW) (TIG) Perform manual, semi-automatic, and automatic oxygen-acetylene burning Perform air carbon ARC and plasma cutting and gouging Operate fabrication tools and equipment Read blueprints Utilize appropriate fabrication techniques Maintain quality control Identify properties of materials Understand basic metallurgy

# Department

Transportation

# Locations

Nampa Campus Micron Center for Professional Technical Education

# Program Department Chair / Contact

Steve Rayburn

#### Degree

Associate of Applied Science in Heavy Equipment Welding & Fabrication Advanced Technical Certificate in Heavy Equipment Welding & Fabrication

### GE - Short URL

ge/heavy-equip-fab

# Next Step Button

Apply Now [25]

# Flyer Link

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# **Request More Information - Emails**

onestop@cwidaho.cc

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