Laurel Ridge Community College Workforce Solutions

Welding Program

March 26, 2026

Welcome to the Welding Program at Laurel Ridge Community College!

Please review this welding program handbook, the Laurel Ridge Student Handbook and Student Codes of Conduct, and the high-risk class handbook. This information is found at Laurel Ridge Community College Handbook.

Student Learning Objectives / Course Outline

This course is tailored for individuals who are new to welding as well as those seeking to refine their existing skills. Our Welding Program adheres to American Welding Society (AWS) standards and equips students to pursue AWS Certification. It provides the foundation needed for entry-level positions and helps open doors to employment opportunities. Many companies may require you to complete their certification process as part of the application, demonstrating your proficiency in welding. Classes in the Laurel Ridge welding program expose students to the testing process.

Class Descriptions:

SMAW

This class will focus on shielded metal arc welding, commonly referred to as stick welding. Guided by industry expert instructors, students will receive comprehensive training and will learn to perform fillet welds in horizontal (2F), vertical (3F), and overhead (4F) positions. Students will learn basic skills including welding and grinding safety protocols, causes and cures for welding defects, and welding procedures. Using newly acquired skills, students will attempt the D1.1 SMAW plate welder qualification exam aligned with the American Welding Society (AWS). Supplies and testing are included in the tuition for this class. Proper attire, including closed toe boots or shoes, and long pants are required.

FCAW

This class will focus on flux core arc welding, commonly referred to as flux welding. Guided by industry expert instructors, students will receive comprehensive training and will learn proper welding techniques using .045 wire in various positions. Other topics covered include equipment set-up, proper adjustment, and safe use of other welding equipment including grinders. Using newly acquired skills; students will attempt the D1.1 FCAW plate welder qualification exam aligned with the American Welding Society (AWS). Supplies and testing are included in the tuition for this class. Proper attire, including closed toe boots or shoes, and long pants, is required.

GMAW

This class will focus on gas metal arc welding, commonly known as MIG welding. Learning with carbon steel and .045 wire, students will learn from industry professionals proper welding techniques and disciplines. MIG welding will be practiced using three positions, flat (1G), horizontal (2G), and vertical (3G). An emphasis will be placed on welding and grinding safety, welding defects (causes and cures), and welding personal protective equipment. Using newly acquired skills, students will attempt AWS qualification exams. Supplies and testing are included in the tuition for this class. Proper attire, including closed toe boots or shoes, and long pants, is required.

GTAW

This class will focus on gas tungsten arc welding, commonly known as TIG welding. Students will learn on carbon steel gas tungsten arc welding in flat and horizontal positions. Proper use of welding equipment and machinery, grinding, safe machine set up and adjustment, and general safe practices will be the focus as students are taught welding techniques by industry professionals. Using newly acquired skills, students will attempt AWS qualification exams. Supplies and testing are included in the tuition for this class. Proper attire, including closed toe boots or shoes, and long pants, is required.

Student Essential Performance Standards

Students are expected to successfully complete course requirements that prepare them to perform vital job functions as welders. These essential skills include:

- **Control Precision**: The ability to quickly and repeatedly adjust machine or vehicle controls to exact positions.
- **Near Vision**: The ability to detect details at close range (within a few feet).
- **Manual Dexterity**: The capacity to swiftly move one or both hands, alone or in coordination with the arm, to grasp, manipulate, or assemble objects.
- **Problem Sensitivity**: The ability to identify when something is wrong or likely to go wrong—this does not involve solving the issue but rather recognizing its presence.
- **Arm-Hand Steadiness**: The skill to maintain steadiness in the hand and arm while moving or holding them in one position.
- **Oral Comprehension**: The ability to understand spoken information and ideas through words and sentences.
- **Static Strength**: The physical capability to exert maximum muscle force to lift, push, pull, or carry objects.
- **Trunk Strength**: The ability to use abdominal and lower back muscles to provide continuous support without fatigue.
- **Reading Comprehension**: The capacity to interpret and understand written material.

Students should be able to read/comprehend at a minimum of a 10th grade reading level to be successful in this program.

> **Any student who thinks he/she does not possess one or more of these functions should contact the disability services provider at the campus. Provisions for accommodations will be made in compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. For more information, please go to Laurel Ridge Community College Office of Accommodations and Disability Services .**

Enrollment Requirements

Must be 18 years old*, complete registration paperwork, understand FastForward grant stipulations, and make payment in full to Laurel Ridge Community College.

Contact Information
The instructor will provide contact information on the first day of class.

Books, Supplies, Exams

Most supplies for the Laurel Ridge Community College welding program are provided by the school. The same textbook and lab workbook are used across all four classes in the program. Textbooks must be returned at the end of each class, while lab workbooks are kept by students for future use in other welding courses. **If a lab workbook is lost, students are responsible for the replacement cost.**

Leather gloves, helmets, and safety glasses are shared among all students. If you prefer using your own personal supplies, you are more than welcome—and encouraged—to bring them to each class.

Course Structure and Grading System

Welding classes focus 75% on skill-based learning, with approximately 25% of the time dedicated to lectures and bookwork. Students are expected to participate actively in class discussions, complete written homework assignments, and allocate 2-3 hours per week to reading. Final grades are determined by attendance and successfully passing the relevant AWS welding test

Attendance Policy

Students are expected to be present, punctual, and prepared to participate in all regularly scheduled classes. This is a demanding program where consistent attendance is critical for success. Research shows that tardiness or failure to show up is one of the top reasons people are terminated from jobs. Workforce Solutions is committed to fostering learning opportunities and professional habits that empower individuals, organizations, and communities. By adhering to this policy, students will build strong attendance practices that are essential for success in the workplace.

Key Points:

- **Tardiness:** Arriving more than 15 minutes late or leaving class early will be recorded as an absence.
- **Emergencies/Illness:** If an emergency or illness prevents attendance, students must inform the instructor before class.
- **Saturday Classes:** Missing a Saturday class counts as two absences since it covers the equivalent of two sessions.
- **Absence Limit:** Missing more than six classes will result in dismissal from the program, and an unsuccessful mark for the class.

Students are encouraged to save their absences for genuine emergencies or illnesses, as there is no distinction between "excused" and "unexcused" absences. Use your absences wisely.

Grounds for Dismissal from the Program

Students may be dismissed for reasons including, but not limited to:

- **Disrupting class** (only one warning will be issued).
- **Excessive absences or tardiness.**
- **Improper use or damage to equipment** after receiving proper instructions; intentional damage may result in repair costs.
- **Stealing.**

Additional Notes: Dismissed students will not receive refunds and may be required to repay one-third of class costs if Fast Forward Funding was used. Students can appeal the decision through the college's grievance process.

Certifications and Qualifications and Exam Information

AWS Certification vs. AWS Qualification

The primary difference between an AWS Certification and an AWS Qualification lies in the location of the test.

- **Certification**: Awarded when a student completes a weld test assessed by a Certified Welding Inspector (CWI) at an AWS-certified testing facility.
- **Qualification**: Awarded when a student completes the same weld test, assessed by an AWS-approved CWI, at a facility that is not AWS-certified.

Both tests are identical, performed by AWS-certified inspectors, and hold equivalent value for most employers. Certifications and qualifications are valid for six months from the issue date.

Laurel Ridge Community College Welding Program Students at Laurel Ridge Community College earn AWS Qualifications, with testing conducted by an AWS-certified inspector.

- Testing begins as early as 6-8 weeks into the class for advanced students.
- All students will test at least once before the course ends.
- Students may test up to three times, focusing on specific welding processes and possibly testing in different positions.

Cancelled Classes/Emergency Alerts

If an instructor cancels a class, students will be notified via email or phone as soon as Workforce Solutions is informed. Ensure your contact information is up to date to receive timely notifications. Note that cancellations are not always campus-wide; check notices for specific details.

Laurel Ridge Community College uses **Laurel Ridge Alert** to communicate major emergencies, weather-related cancellations, and other urgent messages. Sign up to stay informed:

- Sign up for Laurel Ridge Alert
- Text “Laurelalert” to 226787.

Cell Phone/Electronics Policy

Cell phones must not be used during class. This includes phone calls, texting, and social media apps. Phones should remain silent (not vibrate).

Students may bring laptops or tablets for class-related activities only but keep devices away from welding booths or lab spaces to avoid damage from metal shavings.

Dress Code:

What to Wear:

- Long pants (jeans or cargo pants preferred).
- 100% cotton shirts (long sleeve or t-shirt based on weather).
- Leather shoes over the ankle (6” minimum); high tops (8”) and steel-toe boots are preferred.
- Hair ties if needed.

Note: Clothing worn during class may be damaged—avoid wearing items you don’t want ruined.

What NOT to Wear:

- Shorts.
- Tennis shoes or flip-flops.
- Flammable or meltable materials (e.g., nylon, flannel, synthetic fabrics).
- Frayed or cuffed pants.

Smoking

Smoking is only permitted in designated areas on campus.

See Something, Say Something

If you have concerns about another student, potential safety issues, or disruptions to the learning environment, please submit a report through Laurel Ridge See Something, Say Something.

Community Resources

Need extra support during your course? Explore resources available on the community resources page on the college website, including food and financial assistance, mental health support, and more. Don't hesitate to reach out if you need help.

This document is subject to change based on the needs of the program.

Welding Class Safety Guidelines

1. **Personal Protective Equipment (PPE):**
    - Always wear a welding helmet with the appropriate shade lens.
    - Use safety glasses or goggles under the helmet for additional eye protection.
    - Wear flame-resistant gloves and a welding jacket or apron.
    - Ensure long pants and leather, over-the-ankle boots (preferably steel-toe) are worn.
    - Use ear protection in noisy environments.
2. **Proper Attire:**
    - Avoid synthetic or flammable materials (e.g., nylon, polyester).
    - Do not wear frayed or cuffed clothing that could catch sparks.
    - Tie back long hair and remove dangling jewelry.
3. **Work Area Safety:**
    - Keep the workspace clean and free of flammable materials (e.g., paper, rags, chemicals).
    - Ensure proper ventilation to avoid inhaling fumes and gases.
    - Use welding curtains or shields to protect others from arc flashes.
4. **Equipment Safety:**
    - Inspect all equipment (welding machines, cables, torches) for damage before use.
    - Ensure proper grounding of welding machines.
    - Use tools and equipment only as instructed.
    - Turn off and unplug equipment when not in use.
5. **Fire Safety:**
    - Keep a fire extinguisher nearby and know how to use it.
    - Be aware of fire hazards and maintain a safe distance from flammable objects.
    - Never weld near combustible materials or in areas with explosive gases.
6. **Electrical Safety:**
    - Avoid contact with live electrical parts.
    - Wear dry, insulated gloves when handling electrical equipment.
    - Do not weld in wet or damp conditions.
7. **Fume and Gas Safety:**
    - Use exhaust systems or fume extractors to remove harmful fumes.
    - Avoid welding in confined spaces without proper ventilation.
    - Be aware of the risks of toxic gases and use respirators if necessary.
8. **Arc Flash Protection:**

- Never look directly at the welding arc without proper eye protection.
- Ensure others in the area are shielded from the arc.

9. **Safe Handling of Materials:**
   - Use proper lifting techniques when handling heavy materials.
   - Secure workpieces firmly before welding.
10. **Emergency Preparedness:**
    - Know the location of fire extinguishers, first aid kits, and emergency exits.
    - Report any injuries or unsafe conditions immediately.
    - Familiarize yourself with emergency procedures.
11. **Behavior in the Lab:**
    - Stay focused and avoid distractions while welding.
    - Do not engage in horseplay or unsafe behavior.
    - Follow all instructor guidelines and ask questions if unsure.

Clean up starts at least 30 minutes before the end of the class. This is mandatory for everyone.

*** If materials end up missing, students may be held responsible for paying for the replacement**

Acknowledgment of Program and College Policies

I acknowledge that I have read, understand, and agree to follow the requirements outlined in the **Welding Program Student's Handbook**.

I also confirm that I have read, understand, and agree to adhere to the general policies of the College as stated in the *College Catalog*.

I understand it is my responsibility to seek clarification from the instructor in a proactive and professional manner if I have any questions or need further guidance regarding the course requirements as I progress through the Laurel Ridge welding program.

Date: _____

Student's Printed Name:_____

Student's Signature: _____