Linn-Benton Community College

# BASIC ARC WELDING

**Course Number: WD4.240**

**SYLLABUS**

Instructor: Dean Dowless

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 Basic Arc Welding is a beginning career course stressing safety and equipment familiarization, with lab exercises for skill development in basic fundamentals of electric arc welding. It includes technical information lectures in related subjects.

Work ethic means that you stay and work in this class until the class is over. Your attendance record in this class will be available for future employers to see. Disappearing in class and returning later in the class period or leaving early is counted against your attendance record and is not a good strategy for success. Students with a legitimate reason for missing class such as illness can arrange with the instructor to make up the missed time on a Friday. Hobbies are not a legitimate reason for missing class. Friday make-up hours must be documented and signed off by LBCC Welding Staff in order to be counted as valid make up hours.

This is an arc welding course and not a welding projects course so projects during class time are prohibited as is working on assignments from other classes during this arc welding class time. If you fall behind in your fabrication class talk to your fabrication instructor about additional times that you can work on the fabrication assignments to catch up.

1. **Required items** (furnished by the Student)

Please refer to the attached list of Required Items. Important: Do not sell your textbooks back at the end of this Term; you will need them Fall, Winter, and Spring Term.

Notice: LBCC is not responsible for student-supplied tools or items and will not repair, replace or reimburse for broken, lost, or stolen student-supplied tools or items. *Students are strongly encour-aged not to bring valuables to class and to put their name on their tools and items.*

1. **Attendance**

 Roll will be taken at the beginning of each class and also at the end of each class after clean

 up (return to the classroom for roll call). Staff will note when students leave early for break

 or return late from break and that time will be deducted from attended class hours.

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1. **Work Ethic**

 Each student is expected to maintain a professional attitude and work ethic and good

 work habits in this class each day. Repeated texting and cell phone use during class will

 result in grade reduction without prior notification from the instructor. The instructor

 reserves the right to prohibit the use of any electronic device during class time which the

 instructor deems to be a safety concern or a distraction to the student or to others.

1. **Lectures**

 Information on welding and related subjects will be presented in classroom sessions. You

 are encouraged to take notes during these classroom sessions to study for the written tests.

1. **Homework Assignments**

 Homework Assignments are given out in class on the first day of class each week and are

 due on the Wednesday of the following week. Completing all homework assignments is

 mandatory, it is not the option of the student. Homework assignments will not be returned.

1. **Lab Exercises / Progress Card**

 Skill development (principles and techniques) is stressed through selected lab skill building

 exercises designed to prepare the student for industrial applications.

Lab Assignments are listed on a Progress Card. All Lab Assignments on the card must be

 completed by the end of the Term with a rate of C or higher. It is each student’s responsi-

 bility to keep his or her Progress Card available for class each day; students who lose their

 Progress Card must do the welds over on a new card. You will be turning the completed

 Progress Card in at the end of the Term.

1. **Grading: your final grade for this course is based on the following areas:**

 - Completion of and evaluation of skill competency on your Progress Card.

 - Attendance and professional work habits (proper use of class time).

 - Completion of all homework assignments per the instructor’s directions.

 - Written and / or Practical quizzes and / or tests.

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**8. Breaks and Clean Up**

 The break and clean up schedule for both sections of the Basic Arc Welding class

 will be posted in the IA Large Welding Classroom for convenient student reference.

 Students are expected to return from Break on time and resume their course work.

 **Extended breaks and leaving class early are also counted against attendance.**

 Clean up procedure: It is your responsibility as a student to shut down your welding

 machine and hang up leads and cables properly, and to clean up and sweep your

 welding booth, booth floor, and aisle area during clean up time at the end of class

 each day. **Failure to do this will result in a failing grade for that day.**

 Steel and consumable waste:

 Putting new unwelded pieces of steel or welding rod in the scrap is a waste of money.

 Burn welding rod stubs down to 2” length and utilize shorter rods for tacking purposes.

 **Students who choose to waste materials or consumables may be charged new price**

 **for those materials or consumables.**

 **Clean Up: 15 minutes prior to the dismissal of class:**

* **Shut down** welding equipment you are using.
* **Return** any **tools** used to proper area.
* **Return** unused **steel** to proper storage area.
* **Place** welding **pieces in the scrap container** (cool, if necessary)
* **Return** welding rods over 2 inches in length to the proper box or tray in the storage rack.
* **Sweep** off **table top** in welding booth, and place the welding stool upright on the table.
* **Sweep** the **floor** of the welding booth and the corresponding **aisle** area.
* **Put stubs and slag** in metal garbage can.
* **Clean-up** any other area in the shop that you used or did grinding during the class period.
* **If the welding machine you are using is equipped with a shielding gas cylinder,** close the cylinder valve and then properly shut down the shielding gas supply system for that machine.
* **Remove the tungsten electrode from the GTAW torch** and return it to correct tool box.
* **Place the GTAW machine foot control** back into the holder.

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**9. Safety**

 The student is responsible to follow all safety rules and shop procedures and to perform

 all tasks in a safe and conscientious manner. This includes wearing the required safety

 items (safety glasses, high top hard top boots, etc.) during the lab time.

 **NOTE:** The instructor or LBCC Welding Department Staff will verbally warn the

 student when required safety items are not being worn in the shop, or when safety

 procedures are not being followed. Upon the third verbal warning, the student may be

 withdrawn from the course by the instructor.

**Disabilities Services and Emergency Planning – Meet with Instructor Week One**

If you have emergency medical information for your instructor, need special arrangements to evacuate campus, or have a documented disability, please meet with your instructor, by appointment, no later than the first week of the term, to discuss your needs. If you have a documented disability that will impact you at college and you seek accommodations, contact the Office of Disability Services (ODS) for intake and to document your disability with LBCC. Then, each term, at least two to three weeks prior to the start of classes, submit your “Request for Accommodations” form to ODS and pickup instructor letters. ODS may be reached from any LBCC campus/center by email to or by calling 917-4789. Letter pickup is available at each LBCC campus/center.

**LBCC Comprehensive Statement of Nondiscrimination**

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws.

(for further information <http://po.linnbenton.edu/BPsandARs/> )

Required Items For This Class:

1. Tool Kit:

You will be issued a tool kit Week 1. You have already paid for this kit within your Course Fees. One pair of clear safety glasses are included in your tool kit. Addit- ional pairs are your expense. Side shields either molded-on or separate are required. Those who wear prescription glasses will need to purchase separate

slip-on side shields. Side shields are available from the LBCC Welding Department or from local welding supply stores. ***Please note that we don’t allow dark or shaded safety glasses in this program****.*

2. What Else Will I Need?

You will need a textbook available for purchase in the LBCC Bookstore. You will also need a long-sleeve button-style (not zipper-style) shirt made of 100% cotton (hickory shirts are very common in the Welding Trades). Full-length pants without cuff made of non-flammable material. High-top hard-top boots (steel toe is not required at LBCC but most employers do require steel toe). Ear plugs. Flashlight. Welders cap (fabricator type or pipeliner’s cap is fine). Notebook or folder with paper and pen for taking notes in class.

3. How Soon Will I Need It?

You will need all of the above by Monday of Week 2.

**Syllabus: Additional Information**

LBCC is committed to inclusiveness and equal access to higher education. If you have approved accommodations through the Center for Accessibility Resources (CFAR) and would like to use your accommodations in the class, please talk to your instructor as soon as possible to discuss your needs. If you believe you may need accommodations but are not yet registered with CFAR, please visit the [**CFAR Website**](https://www.linnbenton.edu/cfar) for steps on how to apply for services or call (541) 917-4789.

You should meet with your instructor during the first week of class if:

1. You have a documented disability and need accommodations.
2. Your instructor needs to know medical information about you.
3. You need special arrangements in the event of an emergency.

If you have documented your disability, remember that you must make your request for accommodations through the Center for Accessibility Resources (CFAR) [**Online Services webpage**](https://cascade.accessiblelearning.com/LBCC/) every term in order to receive accommodations. If you believe you may need accommodations but are not yet registered with CFAR, please visit the [**CFAR Website**](https://www.linnbenton.edu/cfar) for steps on how to apply for services or call **(541) 917-4789**.

**NOTE: The LBCC Welding Department is not allowed to have burn spray, burn creams, antibiotic ointments, etc., for students to use. Students may supplies those items specifically for themselves. We do have bandaids available for students to use. If you get burned or injured please notify your instructor or LBCC Welding Department personnel right away.**

### **Outcomes**

**Upon successful completion of this course, students will be able to:**

**Use welding machines safely. Set up and operate welding machines for SMAW and other processes. Recognize and name the components necessary to operate welding machines. Perform welding with commonly used mild steel electrodes and filler rods. Utilize industry-standard welding techniques and progressions. Perform welds in welding positions appropriate to the filler metal type. Produce welds in weld joint configurations applicable to the Welding Trades.**