

SYLLABUS

WLDG 1428
Introduction to Shielded Metal Arc Welding

WELDING
BRAZOSPORT COLLEGE
LAKE JACKSON TEXAS

PREPARED BY: Jay Barr DATE: August 25, 2016
INSTRUCTOR

RECOMMENDED BY: _____ DATE: _____
DIVISION CHAIRMAN

RECOMMENDED BY: _____ DATE: _____
DEAN

The Brazosport College District shall not discriminate against, or exclude from participation in any benefits or activities either on the staff or in the student body, any person on the grounds of sex, race, color, religion, national origin, age, or handicap.

Brazosport College
500 College Dr.
Lake Jackson, Texas 77566

WLDG 1428

Introduction to Shielded Metal Arc Welding

COURSE DESCRIPTION:

An introduction to the shielded metal arc welding process. Emphasis placed on power sources, electrode selection, oxy-fuel cutting, and various joint designs. Instruction provided in SMAW fillet welds in various positions. (4 SCH, 2 lectures, 8 labs)

TEXT AND REFERENCES:

NCCER Level 1

COURSE GOALS:

Select electrodes and amperage settings for various thicknesses of materials and welding positions; define principles of arc welding; explain electrode classifications; perform SMAW operations in various positions using selected electrodes and different joint designs.

Set up Oxyfuel equipment. Light and adjust an Oxyfuel torch. Shut down Oxyfuel cutting equipment. Disassemble Oxyfuel equipment. Change empty cylinders. Cut shapes from various thickness of steel, emphasizing: straight line, square shape, piercing, bevel, and slot. Perform washing. Perform gouging. Mechanically bevel the edge of a mild steel plate 1/4-inch to 3/4-inch thick at 22 ½ degrees (or 30 degrees, depending on the equipment available). Thermally prepare a bevel. Set up a SMAW machine for welding. Set up welding equipment. Strike an arc. Make stringer, weave, & overlapping beads using E6010 & E7018 electrodes. Make fillet welds using E6010 and E7018 in the specified position: Horizontal (2F), Vertical (3F), Overhead (4F).

STUDENTS WITH DISABILITIES

BC is committed to providing equal education opportunities to every student. BC offers services for individuals with special needs and capabilities including counseling, tutoring, equipment, and software to assist students with special needs. Please contact Special Populations Counselor, 979-230-3236 for further information.

COURSE EVALUATION

Student grades will be assigned according to the following criteria:

LABS 50%

UNIT TESTS 20%

Attendance 20%

Final 10%

Grades of A through F will be assigned according to the chart below:

100-90 = A

89-80 = B

79-70 = C

69-60 = D

59-0 = F

ATTENDANCE AND WITHDRAWAL POLICIES

CLASS WORK:

Students are responsible for all class work assigned during any absence. Do not ask if you missed anything. If we had a class you missed something. The instructor will accept work without penalty, when, in his judgment an absence could not be avoided.

ABSENCES:

Students may be dropped if they miss more than 20% of the classes before the drop date. Tardiness and leaving early will count as part of an absence

STUDENT WILL BE DROPPED:

CELL PHONES in the class room or in welding lab will no longer be allowed.

COURSE SCHEDULE

UNITS TEST

MODULE

29101-09 WELDING SAFETY

29102-09 OXYFUEL CUTTING

29105-09 BASE METAL PREPARATION

29107-09 SMAW – EQUIPMENT AND SET-UP

29108-09 SHIELDED METAL ARC ELECTRODES

29109-09 SMAW – BEADS AND FILLET WELDS

UNIT LAB ASSIGNMENT:

Surface weld on plate (E6010 + E7018 Electrodes)

Flat, Horizontal, Vertical, and Overhead

Tee welds (Fillet)

Flat (1F), Vertical (3F), and Overhead (4F)

ACADEMIC HONESTY

Brazosport College assumes that students eligible to perform on the college level are familiar with the ordinary rules governing proper conduct including academic honesty. The principle of academic honesty is that all work presented by you is yours alone. Academic dishonesty including, but not limited to, cheating, plagiarism, and collusion shall be treated appropriately. Please refer to the Brazosport College Student Guide for more information. This is available online at <http://www.brazosport.edu>. Click on the CATALOGS AND SCHEDULES link under STUDENTS.

Academic dishonesty violates both the policies of this course and the Student Code of Conduct. In this class, any occurrence of academic dishonesty will be referred to the Dean of Student Services for prompt adjudication, and will, at a minimum, result in 0 for that assignment in this course. Sanctions may be imposed beyond your grade in this course by the Dean of Student Services.

CLASS: **WLDG 1428 INTRODUCTION TO SHIELDED METAL ARC
WELDING**

Class Time: _____

Instructor: _____

Phone: _____

Required equipment Welding 1428:

Welding hood with hard hat

Cotton welding cap

Leather welding gloves appropriate for welding process

Clear safety Glasses (not shaded)

Leather work type shoes or boots

Long sleeve cotton shirt

Channel lock type pliers

Leather sleeves

2) 4" C-clamps

BRAZOSPORT WELDING TECHNOLOGY SAEFTY RULES AND PRACTICES

Safety cannot be overly stressed, especially in the Welding Facility. The lab is very congested and each student will have to do his /her part by abiding by all safety rules set forth for the welding Facility.

1. Clear safety glasses and Ear Plugs will be worn in the welding lab at all times.
2. Safety glasses with face shield must be worn when grinding or welding hood with flip lens.
3. Wear the proper clothes for welding. **100%** Cotton type clothing is considered the best, using long sleeves. High top shoes or boots are the safest to use. Raveled or torn clothing is a fire hazard. T-shirts as outside clothing will **NOT** be worn.
4. Never use a piece of welding or cutting equipment until you have been orientated in the safety and proper use. Always use proper cutting lens #5,6,7.
5. Check all grinding blades for chips or cracks before grinding.
6. Check welding helmets regularly for cracked lens or leaks, use #10,11,12 lens only!
7. Never handle hot metal with gloves. Use channel lock pliers.
8. Be sure all metal is secured in the welding booths.
9. **No horseplay !Allowed at any time!**
10. No Butane (Bic) Lighters Allowed in Welding Shop!
11. No Cells Phone or Headsets are allowed in Welding Booth or Classrooms!
12. **4.5” Grinders Must have Guards at all times! Do not put Ground cables & Welding Stinger together! Electrical hazard!**

Each company will have their own safety program and a set of rules & Procedures that govern each particular job or phase of work, and the safest rules will be carried out. Your life and the lives of others depend on safety in the lab and on the job. **Do it safely or Don't do it at all! Safety is Number #1 !**

I have read and understand all safety rules and will abide by all the rules set forth.

Name

REGISTRATION AND RELEASE FORM



Important: Type or print legibly. Any inaccuracies on this form may be reflected on student and instructor transcripts and training records.

Sponsor Name: ABC TX Gulf Coast Chapter

Check One: Student: ☒ Instructor: ☐

Name: _____

Social Security # _____

Job Title: _____

Company Name: _____

Company Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

I hereby authorize the NCCER Registry Department to verify information in my training records to Sponsor Representatives upon request. I release and hold harmless the National Center for Construction Education and Research for this verification process.

Signature: _____ Date: _____

*OPTIONAL

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

*NOTE: To be entered in NCCER's National Training Registry, you must complete this Registration and Release Form. This form must either be forwarded by your Sponsor to NCCER's Registry Department, or the Sponsor may choose to maintain the Release Forms locally and provide the Registry with written notification of Trainees or Instructors, including their names and social security numbers. This written notification must include the signature of the Sponsor Representative or other authorized Officer of the Sponsors.

Return to: NCCER – Accreditation Department
P.O. Box 141104 • Gainesville FL 32614-1104 • 352-334-0911 • Fax 352-334-0932
3600 NW 43rd St. • Blg. G • Gainesville FL 32606

Acknowledgement of NCCER Policy and Award of Certification

After successful completion of a written assessment or performance verification, an individual's qualifications are tracked through NCCER's National Registry. This national registry allows organizations and companies to track the qualifications of their craft professionals and/or check the qualifications of possible new hires. The National Registry also assists craft professionals by maintaining their records in a secure database. In order to maintain this personal information, permission must be obtained from the student.

Please read the following statements regarding NCCER registry policies and sign at the bottom of this form.

- 1) I understand that any information that is needed to allow my credentials to be posted in the National NCCER Registry is **voluntary**. However, if I do not allow my testing information and/or personal identification information to be released, my credentials will NOT be registered in the national registry.
- 2) I understand that the \$25 charge payable to NCCER is used to purchase an NCCER wallet card. An NCCER wallet card is not representation of certification but rather proof that the card holder has been entered into NCCER's National Registry. The fee, payable to Merit Shop training, Inc., is for non-ABC member companies.
- 3) I understand that it is the student's responsibility to pick up the NCCER card from the ABC offices. Cards will not be delivered via the instructor or mail. The ABC office is located at 1400 North Velasco Blvd., Building C107, Freeport, TX.
- 4) My signature verifies that I have read and understand the statements made in this Acknowledgement.

NAME

DATE

Instructor: _____ Course: _____

Complete this section only if you do not want your information released to the NCCER Registry:

I, _____ do not wish to have my information released to the NCCER National Registry. I understand that my credentials will NOT be registered in the national registry.

SIGNATURE

DATE

Syllabus Acknowledgement Form

Date:

To: Jay Barr, Course Instructor

Class: WLDG 1428

Acknowledgement of Syllabus and Policies for WLDG 1428

By attaching my signature to this document, I hereby acknowledge that I have read the syllabus and the rules. Furthermore, by attaching my signature below I agree with the following statements:

- I fully understand the policies stated in this syllabus.
- I will abide by all laboratory safety rules.
- I will abide by the dress code for safety reasons.
- I will bring the needed materials to my class as I was instructed by my instructor.
- I accept and acknowledge that failure to abide by these policies may have significant academic consequences for which I am solely responsible.

Student Signature: _____

Student Name (printed): _____

Student Identification Number: _____

Date: _____

