



**Division of Extended Learning
Correctional Education Department**
<https://www.hccs.edu/continuing-education/>

**WLDG 1028: Introduction to Shielded Metal Arc Welding |
Lecture/Lab | 11088**

Quarter I | 5 Weeks | October 6, 2020 – November 9, 2020
ONLINE

Continuing Education Units (CEU): 15.0 | Course Contact Hours: 150

Instructor Contact Information

Instructor: Samuel Sutton
Office: 713-921-8733
HCC Email: samuel.sutton@hccs.edu

Office Phone: 713-921-8738
Office Hours : Refer to virtual office
Office Location: 4627 Crites St. 77011

*This is the normal office location; due to COVID 19, this location is currently closed.

Please feel free to contact me concerning any problems that you are experiencing in this course. Your performance in my class is very important to me. I am available to hear your concerns and just to discuss course topics.

Instructor's Preferred Method of Contact
samuel.sutton@hccs.edu

What's Exciting About This Course

Is learning to weld something that has always been of interest to you? Did you know according to the U.S. Bureau of Labor statistics the need for welders is expected to grow by 26% by 2020. Nearly half of U.S. industries report difficulties locating skilled welders. This course will help you acquire the skills these industries are searching for to be productive in the welding industry.

My Personal Welcome

Welcome to Introduction to Shielded Metal Arc Welding -I'm delighted that you have chosen this course. I will present the information in the most exciting way I know, so that you can grasp the concepts and apply them now and hopefully throughout your career. As we work through lecture, hands on activities, and information that may challenge you, I am available to support you. My goal is for you to walk out of the course with the basic skills to weld. So please visit with me whenever you have a question.

Prerequisites and/or Co-Requisites

The student must be willing to learn.

Eagle Online Canvas Learning Management System

This section of WELD 1028 will not utilize the Eagle Online Canvas Learning Management System. Eagle Online Canvas (<https://eagleonline.hccs.edu>)

HCC Online Information and Policies

Eagle Online Canvas (<https://eagleonline.hccs.edu>)

Scoring Rubrics, Sample Assignments, etc.

This is not applicable to this course.

Instructional Materials

Textbook Information

The textbook listed below is **required** for this course.

"NCCER Welding Fifth Edition Level 1 Trainee Guide" by Pearson

Note: Open educational resources based on the Textbook listed above are used in this class.

Temporary Free Access to E-Book

This is not applicable to this course.

Other Instructional Resources

Publisher's Digital Workbook

This is not applicable to this course.

Tutoring

Refer to information in Canvas.

Libraries

This is not applicable to this course.

Supplementary Instruction

This is not applicable to this course.

Course Overview

An introduction to the shielded metal arc welding process. Emphasis placed on power sources, electrode selection, and various joint designs.

Core Curriculum Objectives (CCOs)

The core objectives are competencies and skills important to all students. Instruction in the core objectives described below is woven into the core curriculum. Houston Community College System has specified that the course address the following core objectives:

- **Critical Thinking:** Students will demonstrate the ability to engage in inquiry and analysis, evaluation and synthesis of information, and creative thinking.
- **Communication Skills:** Students will demonstrate effective development, interpretation and expression of ideas through written, oral, and visual communication.
- **Quantitative and Empirical Literacy:** Students will demonstrate the ability to draw conclusions based on the systematic analysis of topics using observation, experiment, and/or numerical skills.
- **Social Responsibility:** Students will demonstrate cultural self-awareness, intercultural competency, civil knowledge, and the ability to engage effectively in regional, national, and global communities.
- **Teamwork:** Students will demonstrate the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.
- **Personal Responsibility:** Students will demonstrate the ability to connect choices, actions and consequences to ethical decision-making.

Program Student Learning Outcomes (PSLOs)

Students will:

- Receive quality workforce training, thereby, offering the opportunity to become viable and productive citizens within the community.
- Gain the necessary skills to reduce recidivism through workforce training.
- Acquire educational pathways that lead to the completion of a certificate and/or Associate Degree.
- Acquire learning experiences designed to address academic and vocational competency and promote positive change for all students.

Course Student Learning Outcomes (CSLOs)

Upon completion of WLDG 1028, the student will be able to:

1. Select electrodes and amperage setting for various thicknesses of materials and welding positions
2. Define principles of arc welding
3. Explain electrode classifications
4. Perform SMAW operations in various positions using selected electrodes and different joint designs

Learning Objectives

- 1.1 Identify and learn various types of electrodes
- 1.2 Explain SMAW welding current
- 1.3 Describe and understand SMAW electrodes

- 2.1 Explain SMAW machines
- 2.2 Identify different welding machine amperage settings
- 2.3 Discuss SMAW equipment safety
- 2.4 Discuss SMAW equipment setup and startup

- 3.1 Explain the different types of stick rods and their application.
- 3.2 Explain electrode selection and care

- 4.1 Identify various thickness of weld materials
- 4.2 Identify the different types of welding positions
- 4.3 Understand the methods of striking an arc
- 4.4 Understand joint designs

Student Success

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the textbook, articles, and other reading material
- Attending class in person
- Completing assignments
- Participating in class activities

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as your guide.

Instructor and Student Responsibilities

As your Instructor, it is my responsibility to:

- Assure that the course outcomes are taught
- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Provide the course outline and class calendar which will include a description of any special projects or assignments

As a student, it is your responsibility to:

- Complying with the rules and regulations of Houston Community College
- Attend and participate in classes and be prepared for class
- Complete the assigned work in a timely manner with attention to quality of work

- Communicate in a careful and respectful manner with instructors, peers, and other staff members
- Take an active role in learning by recognizing that you are accountable for your success in the classroom
- Complete course with a 70% passing score
- Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](https://www.hccs.edu/resources-for/current-students/student-handbook)
<https://www.hccs.edu/resources-for/current-students/student-handbook>

Assignments, Exams, and Activities

Written Assignment

Quizzes: Students are required to complete quizzes in class. Upon enrollment you will have a Safety Quiz and a SMAW stick rod quiz.

Exams

Students are required to take a midterm test during class time after 3 weeks of enrollment. This will cover Module 8 29108 SMAW Electrodes.

In-Class Activities

Students will be required to observe videos and do work sheets.

Final Exam

Students are required to take a Final Exam . Final that will cover Modules 29107, 29108, and 29109 SMAW Electrodes.

Grading Formula

This course is nonacademic. You will not receive semester hours as credit for the course nor will you receive a letter grade upon completion. You will either pass the course (COM) or not pass (INCOMPLETE). To determine completion of the course, the instructor will assign a number grade for all exams, assignments, lab activities, exams, papers, etc. **The student must average 70% for the lecture portion of the course and 90% for the student laboratory portion to receive a grade of pass (complete)**

W (Withdrawn) is given if student does not complete the course is given in non-credit and continuing education course. The grade **COM (completed)** does not affect GPA.

INSTRUCTOR GRADING CRITERIA

Quizzes	25% of your final grade
Participation	75% of your final grade
Total	100% (for a grade of completion)

HCC Grading Scale can be found on this site under Academic Information:
<http://www.hccs.edu/resources-for/current-students/student-handbook/>

Course Calendar

Week	AGENDA / ASSIGNMENTS Assignments are due by dates indicated unless prior approval has been obtained
1	<p><i>*After reading and completing Week 1 assignments, the student will be able to:</i></p> <ul style="list-style-type: none"> • Explain SMAW machines • Identify different welding machine amperage settings • Discuss SMAW equipment safety • Discuss SMAW equipment setup and startup • Demonstrate understanding by passing a quiz and/or a test
2	<p><i>*After reading and completing Week 2 assignments, the student will be able to:</i></p> <ul style="list-style-type: none"> • Identify and learn various types of electrodes • Explain SMAW welding current • Describe and understand SMAW electrodes • Demonstrate understanding by passing a quiz and/or a test
3	<p><i>*After reading and completing Week 3 assignments, the student will be able to:</i></p> <ul style="list-style-type: none"> • Explain the different types of stick rods and their application • Explain electrode selection and care • Demonstrate understanding by passing a quiz and/or a test
4	<p><i>*After reading and completing Week 4 assignments, the student will be able to:</i></p> <ul style="list-style-type: none"> • Identify various thickness of weld materials • Identify the different types of welding positions • Understand the methods of striking an arc • Demonstrate understanding by passing a quiz and/or a test
5	<p><i>*After reading and completing Week 5 assignments, the student will be able to:</i></p> <ul style="list-style-type: none"> • Compare and select the correct type of welding process for a given metal • Demonstrate understanding by passing a quiz and/or a test

Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

Instructor's Practices and Procedures

Missed Assignments

A student is responsible for completing all missed assignments in a timely manner upon returning to class. Missed assignments are required to be completed prior to the end of the course.

Academic Integrity

A student who is academically dishonest is, by definition, not showing that the coursework has been learned, and that student is claiming an advantage not available to other students. The instructor is responsible for measuring each student's individual achievements and also for ensuring that all students compete on a level playing field. Thus, in our system, the instructor has teaching, grading, and enforcement roles. You are expected to be familiar with the University's Policy on Academic Honesty, found in the catalog. What that means is: If you are charged with an offense, pleading ignorance of the rules will not help you. Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Penalties and/or disciplinary proceedings may be initiated by College System officials against a student accused of scholastic dishonesty. "Scholastic dishonesty": includes, but is not limited to, cheating on a test, plagiarism, and collusion. Scholastic Dishonesty will result in a referral to the Dean of Student Services. See the link below for details

Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

<http://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>

Attendance Procedures

Regular and punctual attendance is required at lecture and laboratory session. Class roll will be taken. 80% attendance is required to receive continuing education units (CEUs).

Student Conduct

As your instructor and as a student in this class, it is our shared responsibility to develop and maintain a positive learning environment for everyone. Your instructor takes this responsibility very seriously and will inform members of the class if their behavior makes it difficult for him/her to carry out this task. As a fellow learner, you are asked to respect the learning needs of your classmates and assist your instructor achieve this critical goal.

Instructor's Course-Specific Information (As Needed)

Dress Code: N/A

SPECIAL STUDENT LABORATORY REQUIREMENTS: N/A

- A. It is the responsibility of the student to prepare for each lecture/laboratory session. Laboratory exercises must be read prior to attending the laboratory period to provide the student with the basic understanding of what will be expected of him/her during the laboratory session.
- B. Each student is responsible for his/her own work and for the cleaning up of his or her workstation.
- C. All accidents are to be reported immediately to the laboratory instructor.

Electronic Devices

This is not applicable to this course.

HCC Policies

Here's the link to the HCC Student Handbook <http://www.hccs.edu/resources-for/current-students/student-handbook/> In it you will find information about the following:

Academic Information	Incomplete Grades
Academic Support	International Student Services
Attendance, Repeating Courses, and Withdrawal	Health Awareness
Career Planning and Job Search	Libraries/Bookstore
Childcare	Police Services & Campus Safety
disAbility Support Services	Student Life at HCC
Electronic Devices	Student Rights and Responsibilities
Equal Educational Opportunity	Student Services
Financial Aid TV (FATV)	Testing
General Student Complaints	Transfer Planning
Grade of FX	Veteran Services

Correctional Education Program and Instructional Evaluation

The Correctional Education Program and Instructional Evaluation will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term

EGLS3

The EGLS3 (Evaluation for Greater Learning Student Survey System) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term.

EGLS3 surveys are only available for the Fall and Spring semesters. EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

<http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>

Office of Institutional Equity

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (<http://www.hccs.edu/departments/institutional-equity/>)

disAbility Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <http://www.hccs.edu/support-services/disability-services/>

Title IX

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross
 Director EEO/Compliance
 Office of Institutional Equity & Diversity
 3100 Main
 (713) 718-8271
 Houston, TX 77266-7517 or Institutional.Equity@hccs.edu
<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/>

Office of the Dean of Students

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>

Department Chair Contact Information

Diane Lambert
diane.lambert@hccs.edu