



## **WELD 1070 Overhead Shielded Metal Arc Welding**

### **COURSE SYLLABUS**

### **Fall Semester 2018**

#### **COURSE INFORMATION**

Credit Hours/Minutes: 4/4500

Class Location: Room 6107

Class Meets: Monday through Thursday 3:30 – 4:45 pm

CRN: 20221

#### **INSTRUCTOR CONTACT INFORMATION**

Instructor Name: Chris Cumbee

Email Address: [Chris Cumbee \(ccumbee@southeasterntech.edu\)](mailto:ccumbee@southeasterntech.edu)

Campus/Office Location: Swainsboro Campus Building 6 Room 6106

Office Hours: Monday through Thursday 7:00 – 8:00 am

Phone: (478) 289-2325

Tutoring Hours (if applicable): Scheduled upon request.

#### **REQUIRED TEXT**

None

#### **REQUIRED SUPPLIES & SOFTWARE**

Long sleeve shirt or welding jacket, welding helmet, clear safety glasses, welding gloves, ear plugs, chipping hammer, half round file with tang, wire brush, Vice grips, combination square, torpedo level, ball peen hammer, 12" Crescent Wrench, 12' tape measure and a 4 ½" angle grinder. You will not be permitted to borrow from the Instructor or your fellow classmates. You are required to have ALL required supplies the first day of class.

#### **COURSE DESCRIPTION**

This course introduces the major theory, safety practices, and techniques for shielded metal arc welding (SMAW) in the overhead position. Qualification tests, overhead position, are used in the evaluation of student progress toward making industrial standard welds. Topics include: Overhead SMAW safety and health practices, selection and applications of electrodes for overhead SMAW, overhead SMAW joints, overhead SMAW specification and 6G Open Root Pipe.

#### **MAJOR COURSE COMPETENCIES**

1. Overhead SMAW Safety and Health Practices
2. Selection and Applications of Electrodes
3. Overhead SMAW Joints
4. Overhead SMAW to Specification
5. 6G Open Root Pipe

## **PREREQUISITE(S)**

All required

## **COURSE OUTLINE**

This course outlines: Overhead SMAW Safety and Health practices, Selection and Applications of Electrodes for Overhead SMAW, Overhead SMAW Joints, Overhead SMAW Specification and 6G Open Root Pipe.

## **GENERAL EDUCATION CORE COMPETENCIES**

STC has identified the following general education core competencies that graduates will attain:

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.

## **STUDENT REQUIREMENTS**

Tests and assignments must be completed on the specified date. Students are also responsible for policies and procedures in the STC E-Catalog.

## **TRADITIONAL ATTENDANCE GUIDELINES**

Class attendance is a very important aspect of a student's success. Being absent from class prevents students from receiving the full benefit of a course and also interrupts the learning process. Southeastern Technical College considers both tardiness and leaving early as types of absenteeism. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is required for student success. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Instructors have the right to give unannounced quizzes/assignments. Students who miss an unannounced quiz or assignment will receive a grade of 0. Students who stop attending class, but do not formally withdraw, may receive a grade of F and face financial aid repercussions in upcoming semesters.

Instructors are responsible for determining whether missed work may be made up and the content and dates for makeup work is at the discretion of the instructor.

Students will not be withdrawn by an instructor for attendance; however, all instructors will keep records of graded assignments and student participation in course activities. The completion dates of these activities will be used to determine a student's last date of attendance in the event a student withdraws, stops attending, or receives an F in a course.

## **SPECIAL NEEDS**

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact Helen Thomas, 912-538-3126, [hthomas@southeasterntech.edu](mailto:hthomas@southeasterntech.edu), to coordinate reasonable accommodations.

## **SPECIFIC ABSENCES**

Provisions for Instructional Time missed because of documented absences due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

## **PREGNANCY**

Southeastern Technical College does not discriminate on the basis of pregnancy. However, we can offer accommodations to students who are pregnant that need special consideration to successfully complete the course. If you think you will need accommodations due to pregnancy, please advise me and make appropriate arrangements with Helen Thomas, 912-538-3126, [hthomas@southeasterntech.edu](mailto:hthomas@southeasterntech.edu).

## **WITHDRAWAL PROCEDURE**

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% point of the term in which student is enrolled (date will be posted on the school calendar) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A grade of "W" is assigned for the course(s) when the student completes the withdrawal form.

Important – Student-initiated withdrawals are not allowed after the 65% point. After the 65% point of the term in which student is enrolled, the student has earned the right to a letter grade and will receive a grade for the course. Please note: Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of 'F' being assigned.

Informing your instructor that you will not return to his/her course, does not satisfy the approved withdrawal procedure outlined above.

There is no refund for partial reduction of hours. Withdrawals may affect students' eligibility for financial aid for the current semester and in the future, so a student must also speak with a representative of the Financial Aid Office to determine any financial penalties that may be assessed due to the withdrawal. A grade of 'W' will count in attempted hour calculations for the purpose of Financial Aid.

**REMEMBER** - Informing your instructor that you will not return to his/her course does not satisfy the approved withdrawal procedure outlined above.

## **MAKEUP GUIDELINES (TESTS, QUIZZES, HOMEWORK, PROJECTS, ETC...)**

Makeup test will be given on the following class meeting date with an acceptable excuse approved by the instructor; any test not made up will result in the student receiving a zero.

## **ACADEMIC DISHONESTY POLICY**

The STC Academic Dishonesty Policy states All forms of academic dishonesty, including but not limited to cheating on tests, plagiarism, collusion, and falsification of information, will call for discipline. The policy can also be found in the STC Catalog and Student Handbook.

## **PROCEDURE FOR ACADEMIC MISCONDUCT**

The procedure for dealing with academic misconduct and dishonesty is as follows:

### **1. First Offense**

Student will be assigned a grade of "0" for the test or assignment. Instructor keeps a record in course/program files and notes as first offense. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus. The Registrar will input the incident into Banner for tracking purposes.

### **2. Second Offense**

Student is given a grade of "WF" for the course in which offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of second offense. The Registrar will input the incident into Banner for tracking purposes.

### **3. Third Offense**

Student is given a grade of "WF" for the course in which the offense occurs. The instructor will notify

the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of third offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period of time. The Registrar will input the incident into Banner for tracking purposes.

## STATEMENT OF NON-DISCRIMINATION

The Technical College System of Georgia and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, sex, religion, disability, age, political affiliation or belief, genetic information, disabled veteran, veteran of the Vietnam Era, spouse of military member or citizenship status (except in those special circumstances permitted or mandated by law). This school is in compliance with Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, or national origin; with the provisions of Title IX of the Educational Amendments of 1972, which prohibits discrimination on the basis of gender; with the provisions of Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of handicap; and with the American with Disabilities Act (ADA).

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

ADA/Section 504 - Equity- Title IX (Students) - OCR Compliance Officer	Title VI - Title IX (Employees) - EEOC Officer
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 108 Phone: 912-538-3126 <a href="mailto:hthomas@southeasterntech.edu">hthomas@southeasterntech.edu</a>	Blythe Wilcox, Director of Human Resources Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 138B Phone: 912-538-3147 <a href="mailto:bwilcox@southeasterntech.edu">bwilcox@southeasterntech.edu</a>

## GRIEVANCE PROCEDURES

Grievance procedures can be found in the Catalog and Handbook located on STC's website.

## ACCESS TO TECHNOLOGY

Students can now access Blackboard, Remote Lab Access, Student Email, Library Databases (Galileo), and BannerWeb via the mySTC portal or by clicking the Current Students link on the [STC website](#).

## TCSG GUARANTEE/WARRANTY STATEMENT

*The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.*

## GRADING POLICY

Assessment/Assignment	Percentage
Hands On Assignments	100%

## GRADING SCALE

Letter Grade	Range
A	90-100
B	80-89
C	70-79
D	60-69

Letter Grade	Range
F	0-59

# WELD 1070 Overhead Shielded Metal Arc Welding

## Fall Semester 2018 Lesson Plan

<b>Date</b>	<b>Chapter</b>	<b>Content</b>	<b>Assignments &amp; Tests Due Dates</b>	<b>Competency Area</b>
8/13/2018	SMAW Set Up and Electrode Selection	First day of class/Class Introduction—Syllabi, Outline, Rules, Regulations Coverage, Library Resources and tour. SMAW Set Up and Electrode Selection	Refreshing of proper SMAW Set Up and Electrode Selection by instructor. SMAW Equipment and Filler Metals	1,2,3,4,5 A,B,C
8/14/2018	4F Padded Plate	4F Padded Plate 7018 Electrodes	Instructor demonstrates welding a padded plate using 7018 electrodes. Students practicing padded plate.	1,2,3,4,5 A,B,C
8/15/2018	4F Padded Plate	4F Padded Plate 7018 Electrodes	4F Padded Plate 7018 Electrodes	1,2,3,4,5 A,B,C
8/16/2018	4F Padded Plate	4F Padded Plate 7018 Electrodes	4F Padded Plate 7018 Electrodes	1,2,3,4,5 A,B,C
8/20/2018	4F Padded Plate	4F Padded Plate 6010 Electrodes	Instructor demonstrates welding a padded plate using 6010 electrodes. Students practicing padded plate.	1,2,3,4,5 A,B,C
8/21/2018	4F Padded Plate	4F Padded Plate 6010 Electrodes	4F Padded Plate 6010 Electrodes	1,2,3,4,5 A,B,C
8/22/2018	4F Padded Plate	4F Padded Plate 6010 Electrodes	4F Padded Plate 6010 Electrodes. Padded Plates due for grade.	1,2,3,4,5 A,B,C
8/23/2018	Butt Joints -4F Fillet Welds	Butt Joints - 4F Fillet Welds 7018 Electrodes	Instructor demonstrates welding Butt Joint using 7018 Electrodes. Students practicing Butt Joints.	1,2,3,4,5 A,B,C
8/27/2018	Butt Joints -4F Fillet Welds	Butt Joints - 4F Fillet Welds 7018 Electrodes	Students practicing Butt Joints. Butt Joints due for grade.	1,2,3,4,5 A,B,C
8/28/2018	Lap Joints -4F Fillet Welds	Lap Joints -4F Fillet Welds 7018 Electrodes	Instructor demonstrates welding Lap Joint using 7018 Electrodes. Students practicing Lap Joints.	1,2,3,4,5 A,B,C
8/29/2018	Lap Joints -4F Fillet Welds	Lap Joints -4F Fillet Welds 7018 Electrodes	Students practicing Lap Joints. Lap Joint due for grade.	1,2,3,4,5 A,B,C
8/30/2018	T-Joints – 4F Fillet Welds	T-Joints – 4F Fillet Welds 7018 Electrodes	Instructor demonstrates welding T-Joints using 7018 Electrodes. Students practicing T-Joints.	1,2,3,4,5 A,B,C
9/3/2018	Holiday	No Class	Holiday	No Class

<b>Date</b>	<b>Chapter</b>	<b>Content</b>	<b>Assignments &amp; Tests Due Dates</b>	<b>Competency Area</b>
9/4/2018	T-Joints – 4F Fillet Welds	T-Joints – 4F Fillet Welds7018 Electrodes	Students practicing T-Joints.	1,2,3,4,5 A,B,C
9/5/2018	T-Joints – 4F Fillet Welds	T-Joints – 4F Fillet Welds7018 Electrodes	Students practicing T-Joints.	1,2,3,4,5 A,B,C
9/6/2018	T-Joints – 4F Fillet Welds	T-Joints – 4F Fillet Welds7018 Electrodes	Students practicing T-Joints.	1,2,3,4,5 A,B,C
9/10/2018	T-Joints – 4F Fillet Welds	T-Joints – 4F Fillet Welds7018 Electrodes	Students practicing T-Joints.	1,2,3,4,5 A,B,C
9/11/2018	T-Joints – 4F Fillet Welds	T-Joints – 4F Fillet Welds7018 Electrodes	Students practicing T-Joints.	1,2,3,4,5 A,B,C
9/12/2018	T-Joints – 4F Fillet Welds	T-Joints – 4F Fillet Welds7018 Electrodes	Students practicing T-Joints.	1,2,3,4,5 A,B,C
9/13/2018	T-Joints – 4F Fillet Welds	T-Joints – 4F Fillet Welds7018 Electrodes	Students practicing T-Joints.	1,2,3,4,5 A,B,C
9/17/2018	T-Joints – 4F Fillet Welds	T-Joints – 4F Fillet Welds7018 Electrodes	Students practicing T-Joints.	1,2,3,4,5 A,B,C
9/18/2018	T-Joints – 4F Fillet Welds	T-Joints – 4F Fillet Welds7018 Electrodes	Students practicing T-Joints.	1,2,3,4,5 A,B,C
9/19/2018	T-Joints – 4F Fillet Welds	T-Joints – 4F Fillet Welds7018 Electrodes	Students practicing T-Joints. T-Joint due for grade.	1,2,3,4,5 A,B,C
9/20/2018	Corner Joints – 4F Fillet Welds	Corner Joints – 4F Fillet Welds 7018 Electrodes	Instructor demonstrates welding Corner Joint using 7018 Electrodes. Students practicing Corner Joints.	1,2,3,4,5 A,B,C
9/24/2018	Corner Joints – 4F Fillet Welds	Corner Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Corner Joints.	1,2,3,4,5 A,B,C
9/25/2018	Corner Joints – 4F Fillet Welds	Corner Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Corner Joints.	1,2,3,4,5 A,B,C
9/26/2018	Corner Joints – 4F Fillet Welds	Corner Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Corner Joints.	1,2,3,4,5 A,B,C
9/27/2018	Corner Joints –	Corner Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Corner Joints.	1,2,3,4,5 A,B,C

<b>Date</b>	<b>Chapter</b>	<b>Content</b>	<b>Assignments &amp; Tests Due Dates</b>	<b>Competency Area</b>
	4F Fillet Welds			
10/1/2018	Corner Joints – 4F Fillet Welds	Corner Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Corner Joints.	1,2,3,4,5 A,B,C
10/2/2018	Corner Joints – 4F Fillet Welds	Corner Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Corner Joints.	1,2,3,4,5 A,B,C
10/3/2018	Corner Joints – 4F Fillet Welds	Corner Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Corner Joints. Corner Joint due for grade.	1,2,3,4,5 A,B,C
10/4/2018	Edge Joints – 4F Fillet Welds	Edge Joints – 4F Fillet Welds 7018 Electrodes	Instructor demonstrates welding Edge Joint using 7018 Electrodes. Students practicing Edge Joints.	1,2,3,4,5 A,B,C
10/8/2018	Edge Joints – 4F Fillet Welds	Edge Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Edge Joints.	1,2,3,4,5 A,B,C
10/9/2018	Edge Joints – 4F Fillet Welds	Edge Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Edge Joints.	1,2,3,4,5 A,B,C
10/10/2018	Edge Joints – 4F Fillet Welds	Edge Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Edge Joints.	1,2,3,4,5 A,B,C
10/11/2018	Edge Joints – 4F Fillet Welds	Edge Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Edge Joints.	1,2,3,4,5 A,B,C
10/15/2018	Edge Joints – 4F Fillet Welds	Edge Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Edge Joints.	1,2,3,4,5 A,B,C
10/16/2018	Edge Joints – 4F Fillet Welds	Edge Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Edge Joints.	1,2,3,4,5 A,B,C
10/17/2018	Edge Joints – 4F Fillet Welds	Edge Joints – 4F Fillet Welds 7018 Electrodes	Students practicing Edge Joints. Edge Weld due for grade.	1,2,3,4,5 A,B,C
10/18/2018	Chain Fillet	Chain Fillet Welds 7018 Electrodes	Instructor demonstrates how to lay-out and weld Chain Fillet Welds using	1,2,3,4,5 A,B,C



<b>Date</b>	<b>Chapter</b>	<b>Content</b>	<b>Assignments &amp; Tests Due Dates</b>	<b>Competency Area</b>
	Welds		7018 Electrodes. Students practicing welding and laying out chain fillet welds.	
10/22/2018	Chain Fillet Welds	Chain Fillet Welds 7018 Electrodes	Students practicing welding and laying out chain fillet welds.	1,2,3,4,5 A,B,C
10/23/2018	Chain Fillet Welds	Chain Fillet Welds 7018 Electrodes	Students practicing welding and laying out chain fillet welds.	1,2,3,4,5 A,B,C
10/24/2018	Chain Fillet Welds	Chain Fillet Welds 7018 Electrodes	Students practicing welding and laying out chain fillet welds.	1,2,3,4,5 A,B,C
10/25/2018	Chain Fillet Welds	Chain Fillet Welds 7018 Electrodes	Students practicing welding and laying out chain fillet welds.	1,2,3,4,5 A,B,C
10/29/2018	Chain Fillet Welds	Chain Fillet Welds 7018 Electrodes	Students practicing welding and laying out chain fillet welds.	1,2,3,4,5 A,B,C
10/30/2018	Chain Fillet Welds	Chain Fillet Welds 7018 Electrodes	Students practicing welding and laying out chain fillet welds.	1,2,3,4,5 A,B,C
10/31/2018	Weld All Around	Weld All Around Assembly welded in the overhead position with 7018 electrodes.	Instructor demonstrates welding of the Weld All Around assignment. Students practicing welding Weld All Around Assignment	1,2,3,4,5 A,B,C
11/1/2018	Weld All Around	Weld All Around Assembly welded in the overhead position with 7018 electrodes.	Students practicing welding Weld All Around assignment.	1,2,3,4,5 A,B,C
11/5/2018	Weld All Around	Weld All Around Assembly welded in the overhead position with 7018 electrodes.	Students practicing welding Weld All Around assignment.	1,2,3,4,5 A,B,C
11/6/2018	Weld All Around	Weld All Around Assembly welded in the overhead position with 7018 electrodes.	Students practicing welding Weld All Around assignment.	1,2,3,4,5 A,B,C
11/7/2018	Weld All Around	Weld All Around Assembly welded in the overhead position with 7018 electrodes.	Students practicing welding Weld All Around assignment.	1,2,3,4,5 A,B,C
11/8/2018	Weld All Around	Weld All Around Assembly welded in the overhead position with 7018 electrodes.	Students practicing welding Weld All Around assignment.	1,2,3,4,5 A,B,C
11/12/2018	Weld All Around	Weld All Around Assembly welded in the overhead position with 7018 electrodes.	Students practicing welding Weld All Around assignment.	1,2,3,4,5 A,B,C
11/13/2018	Weld All Around	Weld All Around Assembly welded in the overhead position with 7018 electrodes.	Students practicing welding Weld All Around assignment.	1,2,3,4,5 A,B,C
11/14/2018	Weld All Around	Weld All Around Assembly welded in the overhead position with 7018 electrodes.	Students practicing welding Weld All Around assignment. Weld All Around assignment due for grade.	1,2,3,4,5 A,B,C

<b>Date</b>	<b>Chapter</b>	<b>Content</b>	<b>Assignments &amp; Tests Due Dates</b>	<b>Competency Area</b>
11/15/2018	6G Open Root Pipe	6G Open Root Pipe	Instructor demonstrates welding 6G Open Root Pipe, students practicing welding 6G Open Root Pipe	1,2,3,4,5 A,B,C
11/19/2018	6G Open Root Pipe	6G Open Root Pipe	Students practicing welding 6G Open Root Pipe.	1,2,3,4,5 A,B,C
11/20/2018	6G Open Root Pipe	6G Open Root Pipe	Students practicing welding 6G Open Root Pipe.	1,2,3,4,5 A,B,C
11/21/2018	Holiday	No Class	Holiday	No Class
11/22/2018	Holiday	No Class	Holiday	No Class
11/26/2018	6G Open Root Pipe	6G Open Root Pipe	Students practicing welding 6G Open Root Pipe.	1,2,3,4,5 A,B,C
11/27/2018	6G Open Root Pipe	6G Open Root Pipe	Students practicing welding 6G Open Root Pipe.	1,2,3,4,5 A,B,C
11/28/2018	6G Open Root Pipe	6G Open Root Pipe	Students practicing welding 6G Open Root Pipe.	1,2,3,4,5 A,B,C
11/29/2018	6G Open Root Pipe	6G Open Root Pipe	Students practicing welding 6G Open Root Pipe.	1,2,3,4,5 A,B,C
12/3/2018	6G Open Root Pipe	6G Open Root Pipe	Students practicing welding 6G Open Root Pipe. 6G pipe weld due for grade.	1,2,3,4,5 A,B,C

**Competency Areas:**

1. Overhead SMAW Safety Practices and Health Practices
2. Selection and Applications of Electrodes for Overhead SMAW
3. Overhead SMAW Joints
4. Overhead SMAW to Specification
5. 6G Open Root Pipe (6010-Root, 7018 – Fillers)

**General Core Educational Competencies**

- a) The ability to utilize standard written English.
- b) The ability to solve practical mathematical problems.
- c) The ability to read, analyze, and interpret information.