



# Gas Metal Arc Welding / WELD 1090 COURSE SYLLABUS Fall Semester 2016

Semester: Fall 2016  
Course Title: Gas Metal Arc Welding  
Course Number: WELD 1090  
Credit Hours/ Minutes: 4 /4500  
Class Location: Room # 416  
Class Meets: Mon., Weds. 6:10 – 9:30 p.m.  
CRN: 20218

Instructor: Mr. Michael Crumpler  
Office Hours: Tues., Thurs. 1-2:30 p.m.  
Office Location: Room 417 Main Building  
Email Address: mcrumpler@southeasterntech.edu  
Phone: 912-538-3257  
Fax Number: 912-538-3156  
Tutoring Hours: Tues., Thurs. 1-2:30 p.m.

**REQUIRED TEXT:** None

**REQUIRED SUPPLIES:** Long sleeve shirt or welding jacket, welding helmet, clear safety glasses, welding gloves, ear plugs, wire brush, wire cutters, Vice grips, 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.**

**PRE-REQUISITES:** All Required, WELD 1000 Introduction to Welding Technology

**CO-REQUISITES:** None

**COURSE DESCRIPTION:** WELD 1090 – Gas Metal Arc Welding provides knowledge of theory, safety practices, equipment and techniques required for successful gas metal arc welding. Qualification tests, **all positions**, are used in the evaluation of student progress toward making industrial standard welds. Topics include: GMAW safety and health practices; GMAW theory; machines, and set up: transfer modes; wire selection; shielded gas selection; and GMAW joints in all positions.

**MAJOR COURSE COMPETENCIES:**

1. GMAW Safety and Health Practices
2. GMAW Theory, Machines, and Set Up
3. Transfer Modes
4. Wire Selection
5. Shielded Gas Selection
6. GMAW Joints in All Positions

**COURSE OUTLINE:**

GMAW Safety and Health Practices; GMAW Theory; Machines, and Set Up: Transfer Modes; Wire Selection; Shielded Gas Selection; and GMAW Joints in All Positions.

**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.
4. The ability to utilize basic computer skills.

**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.

**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.

**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. **For each unexcused absence, one grade point will be deducted from your overall GPA.**

**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).

**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.

**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.

If you fall behind on any assignments or cannot produce a visually acceptable weldment, a due date will be given. If on the given due date, you are still unable to produce a visually acceptable weldment, you will receive a zero for that assignment.

**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:

##### **--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.

##### **--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.

##### **--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 second 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:** Southeastern Technical College does not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, disabled veteran, veteran of Vietnam Era 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).

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

**ACCESS TO TECHNOLOGY:** Students can now access Angel, 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 at [www.southeasterntech.edu](http://www.southeasterntech.edu).

**\*Instructor reserves the right to change the syllabus and/or lesson plan as necessary.\***

**GRADING POLICY**

Welding Assignments 100%

**GRADING SCALE**

A: 90-100  
 B: 80-89  
 C: 70-79  
 D: 60-69  
 F: 0-59

**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.*

<b>WELD 1090—GAS METAL ARC WELDING Fall Semester 2016 Lesson Schedule</b>				
Date	Chapter / Lesson	Content	Assignments Tests	*Competency Area
Aug 15	GMAW Set Up and Electrode Selection	First day of class/Class Introduction—Syllabi, Outline, Rules, Regulations Coverage, Library Resources and tour. GMAW Set Up and Electrode Selection	Refreshing of proper GMAW Set Up and Electrode Selection by instructor. Demonstration given of GMAW of Padded Plate; students practicing GMAW of Padded plate.	A,B,D,1,2,3,4,5,6
17	Surfacing, Padded Plate	Surfacing, Padded Plate	Students practicing welding a padded plate.	1,2,3,4,A,C
22	Surfacing, Padded Plate	Surfacing, Padded Plate	Students practicing welding a padded plate.	1,2,3,4,A,C
24	Surfacing, Padded Plate	Surfacing, Padded Plate	Students practicing welding a padded plate.	1,2,3,4,A,C
29	Surfacing, Padded Plate	Surfacing, Padded Plate	Students practicing welding a padded plate.	1,2,3,4,A,C
31	Surfacing, Padded Plate	Surfacing, Padded Plate	Students practicing welding a padded plate.	1,2,3,4,A,C
Sept 5	HOLIDAY	NO CLASS	NO CLASS	HOLIDAY
7	Surfacing, Padded Plate	Surfacing, Padded Plate	Students practicing welding a padded plate.	1,2,3,4,A,C
12	Tee Joints, Multi-Pass Fillet Welds	Tee Joints, Multi-Pass Fillet Welds	Demonstration given by instructor on how to fit up and weld a Tee Joint using multi-pass fillet welds, students practicing making multipass fillet welds on Tee Joints.	1,2,3,4,A,C
14	Tee Joints, Multi-Pass Fillet Welds	Tee Joints, Multi-Pass Fillet Welds	Students practicing making multipass fillet welds on Tee Joints.	1,2,3,4,A,C
19	Tee Joints, Multi-Pass Fillet Welds	Tee Joints, Multi-Pass Fillet Welds	Students practicing making multipass fillet welds on Tee Joints.	1,2,3,4,A,C
21	Tee Joints, Multi-Pass Fillet Welds	Tee Joints, Multi-Pass Fillet Welds	Students practicing making multipass fillet welds on Tee Joints.	1,2,3,4,A,C
26	Tee Joints, Multi-Pass Fillet Welds	Tee Joints, Multi-Pass Fillet Welds	Students practicing making multipass fillet welds on Tee Joints.	1,2,3,4,A,C

28	Corner Joint	Corner Joint	Demonstration given by instructor on how to fit up and weld a corner joint using multi-pass fillet welds. Students practicing welding corner joints using multi-pass fillet welds.	1,2,3,4,A,C
Oct 3	Corner Joint	Corner Joint	Students practicing welding corner joints using multi-pass fillet welds.	1,2,3,4,A,C
5	Corner Joint	Corner Joint	Students practicing welding corner joints using multi-pass fillet welds.	1,2,3,4,A,C
10	Lap Joint	Lap Joint	Demonstration given by instructor on how to fit up and weld a lap joint using multi-pass fillet welds. Students practicing welding lap joints using multi-pass fillet welds.	1,2,3,4,A,C
12	Lap Joint	Lap Joint	Students practicing welding lap joints using multi-pass fillet welds.	1,2,3,4,A,C
17	Lap Joint	Lap Joint	Students practicing welding lap joints using multi-pass fillet welds.	1,2,3,4,A,C
19	Square Butt Joint	Square Butt Joint	Demonstration given by instructor on how to properly weld a square butt joint. Students practicing welding square butt joints.	1,2,3,4,A,C
24	Square Butt Joint	Square Butt Joint	Students practicing welding square butt joints.	1,2,3,4,A,C
26	Edge Joint	Edge Joints	Demonstration given by instructor on how to properly weld an edge joint. Students practicing welding edge joints.	1,2,3,4,A,C
31	Edge Joint	Edge Joints	Students practicing welding edge joints.	1,2,3,4,A,C
NOV 2	Weld All Around	Weld All Around	Demonstration given by instructor as to how to successfully fit up and weld a weld all around using ½ multi-pass fillet welds. Students practicing weld all around.	1,2,3,4,A,C
7	Weld All Around	Weld All Around	Students practicing weld all around.	1,2,3,4,A,C
9	Weld All Around	Weld All Around	Students practicing weld all around.	1,2,3,4,A,C
14	Weld All Around	Weld All Around	Students practicing weld all around.	1,2,3,4,A,C
16	Beveled Plate for Welder Certification	Beveled Plate for Welder Certification	Demonstration given by instructor on how to successfully weld a beveled plate for welder certification. Students practicing on beveled plate.	1,2,3,4,A,C
21	Beveled Plate for Welder Certification	Beveled Plate for Welder Certification	Students practicing on beveled plate.	1,2,3,4,A,C
23	HOLIDAY	NO CLASS	NO CLASS	HOLIDAY
28	Beveled Plate for Welder Certification	Beveled Plate for Welder Certification	Students practicing on beveled plate.	1,2,3,4,A,C
30	Beveled Plate for Welder Certification	Beveled Plate for Welder Certification	Students practicing on beveled plate.	1,2,3,4,A,C

**Competency Areas:**

1. GMAW Safety Practices and Health Practices
2. GMAW Theory, Machines and Set Up
3. Transfer Modes

4. Wire Selection
5. Shielded Gas Selection
6. GMAW Joints in All Positions

**General Education 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.