WELD 1040 Flat Shielded Metal Arc Welding

COURSE SYLLABUS
Spring Semester 2022

COURSE INFORMATION

Credit Hours/Minutes: 4/4500
Class Location: Metter High School
Class Meets: Monday-Thursday 1:40 PM – 3:10 PM
Course Reference Number (CRN): 40231

INSTRUCTOR CONTACT INFORMATION

Instructor Name: Mr. Jason McDonald
Office Location: EDC/Room 105
Office Hours: By Appointment Only
Email Address: Jason McDonald jmcdonald@southeasterntech.edu
Phone: 912-538-3180
Fax Number: 912-538-3156
Tutoring Hours: By Appointment Only

SOUTHEASTERN TECHNICAL COLLEGE'S (STC) CATALOG AND HANDBOOK

Students are responsible for all policies and procedures and all other information included in Southeastern Technical College's Catalog and Handbook (https://catalog.southeasterntech.edu/college-catalog/downloads/current.pdf).

REQUIRED TEXT

None

REQUIRED SUPPLIES & SOFTWARE

Each student should have the following: Long Sleeve Shirt or welding jacket, pair of work boots, welding helmet, gloves, safety glasses, vice grips, 4 ½" grinder, wire brush, chipping hammer and wire cutters. Please do not burn off wire on the tables, buy a pair of wire cutters. You will not be permitted to borrow from the Instructor or your fellow classmates.

Students should not share login credentials with others and should change passwords periodically to maintain security.

COURSE DESCRIPTION

WELD 1040 – This course introduces the major theory, safety practices, and techniques for shielded metal arc welding (SMAW) in the flat position. Qualification tests, flat position, are used in the evaluation of student progress toward making industrial standard welds.

MAJOR COURSE COMPETENCIES

1. Shielded Metal Arc Welding Safety and Health practices
2. Fundamental Shielded Metal Arc Welding Theory
3. Basic Electrical Principles
4. Shielded Metal Arc Welding Machines and Set Up
5. Electrode Identification and Selection
6. Materials Selection and Preparation
7. Production of Beads and Joints in the Flat Position

PREREQUISITE(S)

Program admission

COURSE OUTLINE

This course will outline Flat Shielded Metal Arc Welding Safety and Health practices, Selection and Applications of Electrodes for Flat Shielded Metal Arc Welding, Flat Shielded Metal Arc Welding Joints, Flat Shielded Metal Arc Welding Specification and 1G Pipe.

GENERAL EDUCATION CORE COMPETENCIES

Southeastern Technical College 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.

COVID-19 MASK REQUIREMENT

Regardless of vaccination status, students are highly encouraged to wear masks or face coverings while in a classroom or lab at Southeastern Technical College. Masking may be implemented in some program areas (i.e. Health Sciences and Cosmetology) where students, faculty, and clients are in close proximity and social distancing cannot be maintained. This measure is being implemented to reduce COVID-19 related health risks for everyone engaged in the educational process. Masks or face coverings must be worn over the nose and mouth, in accordance with the Centers for Disease Control and Prevention (CDC).

COVID-19 SIGNS AND SYMPTOMS

We encourage individuals to monitor for the signs and symptoms of COVID-19 prior to coming on campus.

If you have experienced the symptoms listed below or have a body temperature 100.4°F or higher, we encourage you to self-quarantine at home and contact a primary care physician's office, local urgent care facility, or health department for further direction. Please notify your instructor(s) by email and do not come on campus for any reason.

COVID-19 Key Symptoms
Fever or felt feverish
Chills

COVID-19 Key Symptoms
Shortness of breath or difficulty breathing (not attributed to any other health condition)
Fatigue
Muscle or body aches
Headache
New loss of taste or smell
Sore throat (not attributed to any other health condition)
Congestion or runny nose (not attributed to any other health condition)
Nausea or vomiting
Diarrhea
In the past 14 days, if you:
Have had close contact with or are caring for an individual diagnosed with COVD-19 at home (not in healthcare setting), please do not come on campus and contact your instructor (s).

COVID-19 SELF-REPORTING REQUIREMENT

Students, regardless of vaccination status, who test positive for COVID-19 or who have been exposed to a COVID-19 positive person, are required to self-report using https://www.southeasterntech.edu/covid-19/. Report all positive cases of COVID-19 to your instructor and Stephannie Waters, Exposure Control Coordinator, swaters@southeasterntech.edu, 912-538-3195.

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" (Failing 0-59) 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.

STUDENTS WITH DISABILITIES

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact the appropriate campus coordinator to request services.

Swainsboro Campus: Daphne Scott (dscott@southeasterntech.edu) 478-289-2274, Building 1, Room 1210.
Vidalia Campus: Helen Thomas (hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165.

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 make arrangements with the appropriate campus coordinator.

Swainsboro Campus: Daphne Scott (dscott@southeasterntech.edu) 478-289-2274, Building 1, Room 1210.
Vidalia Campus: Helen Thomas (hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165.

It is strongly encouraged that requests for consideration be made **PRIOR** to delivery and early enough in the pregnancy to ensure that all the required documentation is secured before the absence occurs. Requests made after delivery MAY NOT be accommodated. The coordinator will contact your instructor to discuss accommodations when all required documentation has been received. The instructor will then discuss a plan with you to make up missed assignments.

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" (Withdrawn) is assigned for the course(s) when the student completes the withdrawal form.

Students who are dropped from courses due to attendance after drop/add until the 65% point of the semester will receive a "W" for the course.

Important – Student-initiated withdrawals are not allowed after the 65% point. Only instructors can drop students after the 65% point for violating the attendance procedure of the course. Students who are dropped from courses due to attendance after the 65% point will receive either a "WP" (Withdrawn Passing) or "WF" (Withdrawn Failing) for the semester.

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 accessed due to the withdrawal. A grade of "W" will count in attempted hour calculations for the purpose of Financial Aid.

EXIT EXAM

None

WORK ETHICS

Work Ethics are taught in WELD 1000 Introduction to Welding Technology.

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

Any assignment can be made up with acceptable excuse approved by the instructor; any assignment not made up will result in the student receiving a zero.

ACADEMIC DISHONESTY POLICY

The Southeastern Technical College Academic Dishonesty Policy states that 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 Southeastern Technical College Catalog and 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" (Withdrawn Failing) 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

As set forth in the student catalog, Southeastern Technical College does not discriminate on the basis of race, color, creed, national or ethnic origin, sex, religion, disability, age, political affiliation or belief, genetic information, veteran status, or citizenship status (except in those special circumstances permitted or mandated by law).

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

American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer	**Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer**
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1st Street, Vidalia Office 108 Phone: 912-538-3126 Email: Helen Thomas hthomas@southeasterntech.edu	Lanie Jonas, Director of Human Resources Vidalia Campus 3001 East 1st Street, Vidalia Office 138B Phone: 912-538-3230 Email: Lanie Jonas ljonas@southeasterntech.edu

ACCESSIBILITY STATEMENT

Southeastern Technical College is committed to making course content accessible to individuals to comply with the requirements of Section 508 of the Rehabilitation Act of Americans with Disabilities Act (ADA). If you find a problem that prevents access, please contact the course instructor.

GRIEVANCE PROCEDURES

Grievance procedures can be found in the Catalog and Handbook located on Southeastern Technical College'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 Southeastern Technical College (STC) Website (www.southeasterntech.edu).

TECHNICAL COLLEGE SYSTEM OF GEORGIA (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
F	0-59

WELD 1040 Flat Shielded Metal Arc Welding

Spring Semester 2020 Lesson Plan

Key: Jan – January, Feb – February, Mar – March, Apr – April, May

Date	Chapter	Content	Assignments & Tests Due Dates	Competency Area
Jan 10	Shielded Metal Arc Welding Set Up and Electrode Selection	First day of class/Class Introduction—Syllabi, Outline, Rules, Regulations Coverage, Library Resources and tour. Shielded Metal Arc Welding Set Up and Electrode Selection	Refreshing of proper Shielded Metal Arc Welding Set Up and Electrode Selection by instructor. Shielded Metal Arc Welding Equipment and Filler Metals	1,2,3,4,5,6,7 A,B,C
11-13	1F Padded Plate 7018 Electrodes	1F Padded Plate 7018 Electrodes	1F Padded Plate 7018 Electrodes	1,2,3,4,5,6,7 A,B,C
17	HOLIDAY	HOLIDAY	HOLIDAY	NO CLASS
18-20	1F Padded Plate 6013 Electrodes	1F Padded Plate 6013 Electrodes	Instructor demonstrates welding a padded plate using 6013 electrodes. Students practicing padded plate. 1F Padded Plate 6013 Electrodes	1,2,3,4,5,6,7 A,B,C
24	Butt Joints - 1F Fillet Welds 7018 Electrodes	Butt Joints - 1F Fillet Welds 7018 Electrodes	Instructor demonstrates welding Butt Joint using 7018 Electrodes. Students practicing Butt Joints.	1,2,3,4,5,6,7 A,B,C
25-27	Butt Joints - 1F Fillet Welds 7018 Electrodes	Butt Joints - 1F Fillet Welds 7018 Electrodes	Students practicing Butt Joints.	1,2,3,4,5,6,7 A,B,C
Jan 31	Lap Joints - 1F Fillet Welds 7018 Electrodes	Lap Joints -1F Fillet Welds 7018 Electrodes	Instructor demonstrates welding Lap Joint using 7018 Electrodes. Students practicing Lap Joints.	1,2,3,4,5,6,7 A,B,C
Feb 1-3	Lap Joints - 1F Fillet Welds 7018 Electrodes	Lap Joints -1F Fillet Welds 7018 Electrodes	Students practicing Lap Joints.	1,2,3,4,5,6,7 A,B,C
7-9	Lap Joints - 1F Fillet Welds 7018	Lap Joints -1F Fillet Welds 7018 Electrodes	Students practicing Lap Joints.	1,2,3,4,5,6,7 A,B,C

Date	Chapter	Content	Assignments & Tests Due Dates	Competency Area
	Electrodes			
10,11, 14,15	No Class	Winter Break	Winter Break	No Class
16	T-Joints – 1F Fillet Welds 7018 Electrodes	T-Joints – 1F Fillet Welds 7018 Electrodes	Instructor demonstrates welding T-Joints using 7018 Electrodes. Students practicing T-Joints.	1,2,3,4,5,6,7 A,B,C
17	T-Joints – 1F Fillet Welds 7018 Electrodes	T-Joints – 1F Fillet Welds 7018 Electrodes	Students practicing T-Joints.	1,2,3,4,5,6,7 A,B,C
21-24	T-Joints – 1F Fillet Welds 7018 Electrodes	T-Joints – 1F Fillet Welds 7018 Electrodes T-Joints – 1F Fillet Welds 7018 Electrodes	Students practicing T-Joints.	1,2,3,4,5,6,7 A,B,C
Feb 28	Corner Joints – 1F Fillet Welds 7018 Electrodes	Corner Joints – 1F Fillet Welds 7018 Electrodes	Instructor demonstrates welding Corner Joint using 7018 Electrodes. Students practicing Corner Joints.	1,2,3,4,5,6,7 A,B,C
Mar 1-3	Corner Joints – 1F Fillet Welds 7018 Electrodes	Corner Joints – 1F Fillet Welds 7018 Electrodes	Students practicing Corner Joints.	1,2,3,4,5,6,7 A,B,C
7	Edge Joints – 1F Fillet Welds 7018 Electrodes	Edge Joints – 1F Fillet Welds 7018 Electrodes	Instructor demonstrates welding Edge Joint using 7018 Electrodes. Students practicing Edge Joints.	1,2,3,4,5,6,7 A,B,C
8-10	Edge Joints – 1F Fillet Welds 7018 Electrodes	Edge Joints – 1F Fillet Welds 7018 Electrodes	Students practicing Edge Joints.	1,2,3,4,5,6,7 A,B,C
14	Chain Fillet Welds 7018 Electrodes	Chain Fillet Welds 7018 Electrodes	Instructor demonstrates how to lay- out and weld Chain Fillet Welds using 7018 Electrodes. Students practicing welding and laying out chain fillet welds.	1,2,3,4,5,6,7 A,B,C
15-17	Chain Fillet Welds 7018 Electrodes	Chain Fillet Welds 7018 Electrodes	Students practicing welding and laying out chain fillet welds.	1,2,3,4,5,6,7 A,B,C
21	Staggered Fillet Welds 7018	Staggered Fillet Welds 7018 Electrodes	Instructor demonstrates how to lay- out and weld Staggered Fillet Welds using 7018	1,2,3,4,5,6,7 A,B,C

Date	Chapter	Content	Assignments & Tests Due Dates	Competency Area
	Electrodes		Electrodes. Students practicing welding and laying out staggered fillet welds.	
22-24	Staggered Fillet Welds 7018 Electrodes	Staggered Fillet Welds 7018 Electrodes	Students practicing welding and laying out staggered fillet welds.	1,2,3,4,5,6,7 A,B,C
28	1G Open Root Pipe	1G Open Root Pipe	Instructor demonstrates welding 1G Open Root Pipe, students practicing welding 1G Open Root Pipe	1,2,3,4,5,6,7 A,B,C
29-31	1G Open Root Pipe	1G Open Root Pipe	Students practicing welding 1G Open Root Pipe.	1,2,3,4,5,6,7 A,B,C
Apr 4	1F Weld All-Around Fillet Welds 7018 Electrodes	1F Weld All-Around Fillet Welds 7018 Electrodes	Instructor demonstrates 1F Weld All-Around Fillet Welds 7018 Electrodes, Students practicing welding 1F Weld All-Around.	1,2,3,4,5,6,7 A,B,C
5-7	1F Weld All-Around Fillet Welds 7018 Electrodes	1F Weld All-Around Fillet Welds 7018 Electrodes	Students practicing welding 1F Weld All-Around.	1,2,3,4,5,6,7 A,B,C
11-14	NO CLASS	SPRING BREAK	SPRING BREAK	NO CLASS
18	Double T-Joints – 1F Fillet Welds 7018 Electrodes	Double T-Joints – 1F Fillet Welds 7018 Electrodes	Instructor demonstrates Double T-Joints – 1F Fillet Welds 7018 Electrodes, Students practicing Double T-Joints.	1,2,3,4,5,6,7 A,B,C
19-21	Double T-Joints – 1F Fillet Welds 7018 Electrodes	Double T-Joints – 1F Fillet Welds 7018 Electrodes	Students practicing Double T-Joints.	1,2,3,4,5,6,7 A,B,C
25-28	Double T-Joints – 1F Fillet Welds 7018 Electrodes	Double T-Joints – 1F Fillet Welds 7018 Electrodes	Students practicing Double T-Joints.	1,2,3,4,5,6,7 A,B,C
May 2-4	Bevel Certification Plates – 1F Fillet Welds 7018 Electrodes	Bevel Certification Plates – 1F Fillet Welds 7018 Electrodes	Student performing Bevel Certification Plates	1,2,3,4,5,6,7 A,B,C
May	Semester	Semester Ends	Semester Ends	Semester Ends

Date	Chapter	Content	Assignments & Tests Due Dates	Competency Area
5	Ends			

COMPETENCY AREAS

1. Shielded Metal Arc Welding Safety and Health practices
2. Fundamental Shielded Metal Arc Welding Theory
3. Basic Electrical Principles
4. Shielded Metal Arc Welding Machines and Set Up
5. Electrode Identification and Selection
6. Materials Selection and Preparation
7. Production of Beads and Joints in the Flat Position

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.

Southeastern TECHNICAL COLLEGE

Name:	
Process:	
Position:	
Type(s) of Weld(s):	

Criteria	**Teacher Evaluation**	**Possible Points**
Appearance (Pinholes, undercut, width, height, etc.)		25
Tie Ins (Beads tied into base metal, and previous weld)		25
Uniformity (Straight beads, same width, etc.)		25
Slag Inclusions (Trapped slag as a result of poor tie ins)		25
TOTAL	0	100

Legend:

0-10 Pts. (No tie ins, excessive pinholes, trapped slag, poor uniformity)

11-19 Pts. (Mostly tied in, less than half the weld has pinholes, very little trapped slag, mostly uniform)

20-25 Pts. (Beads are tied in, no slag, no undercut, no pinholes, very uniform)

Comments: