Intro To Welding Technology/WELD1000
COURSE SYLLABUS
Fall Semester 2015

Semester: Fall 2015
Course Title: Intro to Welding Technology

Course Number: WELD 1000
Credit Hours/ Minutes: 3 / 3000
Class Location: Room # 6107
Class Meets: T/R 9:00 – 11:15
CRN: 20115

Instructor: Chris Cumbee
Office Hours: M/T/W/R 7:00- 8:00 am

Office Location: Bldg. 6 / Room 6106
Email Address: ccumbee@southeasterntech.edu
Phone: 478-289-2325

REQUIRED TEXT: Welding Principles and Applications 7th Edition, By Larry Jeffus ISBN: 1-1110-3917-8

REQUIRED SUPPLIES & SOFTWARE: Spiral notebook, pen, highlighter, welding helmet, safety glasses and welding gloves.

COURSE DESCRIPTION: Introduction to Welding Technology provides an introduction to welding technology with an emphasis on basic welding laboratory principles and operating techniques.

MAJOR COURSE COMPETENCIES: Topics include: industrial safety and health practices, hand tool and power machine use, measurement, laboratory operating procedures, welding power sources, welding career potentials, and introduction to welding codes and standards.

COURSE OUTLINE: Industrial Safety and Health Practices; Hand Tool and Power Machine use; Measurement; Laboratory Operating procedures; Welding Power sources; Welding Career potentials; and Introduction to Welding Codes and Standards.

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.

All students pursuing a degree, a diploma, or a Technical Certificate of Credit with a General Education component will be required to pass the General Education Competency Exams prior to graduation.

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.

WORK ETHICS: The Technical College System of Georgia instructs and evaluates students on work ethics in all programs of study. Ten work ethics traits have been identified and defined as essential for student success: appearance, attendance, attitude, character, communication, cooperation, organizational skills, productivity, respect, and teamwork. Students will be required to take a work ethics exam as marked in the lesson plan. A grade of 70 or better is required to

complete the work ethics requirements for this class.

STC ATTENDANCE POLICY: 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.

SPECIAL NEEDS: Students with documented special needs may be provided with an individualized Instructional Plan with specifications for scheduled instructional time. It is the student's responsibility to inform the Special Needs Specialist as students and instructors are required to have documented evidence prior to receiving or allowing special accommodations. See the STC Catalog and Student Handbook, Student Affairs section for further information regarding special needs.

SPECIAL NEEDS ADDENDUM: Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact Jan Brantley, Room 1208 Swainsboro Campus, 478-289-2274, or Helen Thomas, Room 108 Vidalia Campus, 912-538-3126, to coordinate reasonable accommodations.

MAKEUP GUIDELINES (Tests, quizzes, homework, projects, etc…): Makeup test will be given on the following class meeting date; 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:

--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).

ACCESS TO TECHNOLOGY: For information regarding Angel, the Information Delivery System (IDS), Student Owl Mail, and BannerWeb, please see the IT Department link on STC's website at http://www.southeasterntech.edu.

GRADING POLICY
Written Tests 95%
Work Ethics 5%

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.*

WELD 1000 Intro To Welding Technology Fall SEMESTER 2015 LESSON PLAN				
Date	**Chap / Less**	**Content**	**Assignments & Tests Due**	**Comp Area**
Aug. 18	Introduction to Welding Technology Power Point	First day of class/Class Introduction—Syllabus, Outline, Rules, Regulations Coverage, Library Resources and tour Welding acronyms and terminology	Discuss and define welding acronyms:	1,2,A,B,C
20	Chapter 1 Intro. To Welding	Welding defined, Uses of Welding, Welding Processes, Occupations, Careers	Quiz on Welding Acronyms.	1,4,6A,B,C
25	Chapter 1 Intro. To Welding	Welding defined, Uses of Welding, Welding Processes, Occupations, Careers	Class Discussion	1,4,6A,B,C
27	Chapter 2 Safety	Welding Safety: Burns, MSDS, Work Clothing, Fire Protection, Storing and Handling Gas Cylinders, Welding Equipment.	Instructor will show students the locations of the First Aid Kits, Fire Extinguishers, Manifold System, Welding Gases	1,2,4,5A,B,C
Sep. 1	Chapter 2 Safety	Welding Safety: Burns, MSDS, Work Clothing, Fire Protection, Storing and Handling Gas Cylinders, Welding Equipment.	Instructor will show students the locations of the First Aid Kits, Fire Extinguishers, Manifold System, Welding Gases	1,2,4,5A,B,C
3	Chapter 2 Safety	Welding Safety: Burns, MSDS, Work Clothing, Fire Protection, Storing and Handling Gas Cylinders, Welding Equipment.	Instructor will show students the locations of the First Aid Kits, Fire Extinguishers, Manifold System, Welding Gases	1,2,4,5A,B,C
8	Chapter 3 SMAW	Shielded Metal Arc Welding Equipment, Safety, Operation and Set Up, Duty Cycle, Welding Cables, Electrode Holders	Demonstration of SMAW given by instructor. Test on Chapters 1, 2	1,2,4,5,7,A,B,C
10	Chapter 4 SMAW of Plate	SMAW of Plate, Current Settings, Electrode Size, Arc Length, Stringer Beads, Electrode Manipulation, Butt, Tee, Corner, Lap and Edge Joints.	Students in lab practicing SMAW welding techniques	1,2,4,5,7,A,B,C
15	Chapter 5 SMAW of Pipe	SMAW of Pipe, Preparation and Fit Up, 1G, 2G, 5G and 6G welding positions.	Demonstration will be given by instructor on SMAW of pipe. Test on Chapters 3, 4.	1,2,4,5,A,B,C
17	Chapter 7 Flame Cutting	Flame Cutting, Metals, Eye Protection, Oxyfuel Cutting, Set Up, Hand Cutting, Layout	Demonstration will be given by instructor on OFC and brazing. Students will practice OFC set up and hand cutting techniques.	1,2,4,5,7,A,B,C
22	Chapter 7 Flame Cutting	Flame Cutting, Metals, Eye Protection, Oxyfuel Cutting, Set Up, Hand Cutting, Layout	Students will practice OFC set up and hand cutting techniques.	1,2,4,5,7,A,B,C
24	Chapter 7 Flame Cutting	Oxyfuel Cutting – Pipe Cutting, Track Torch	Demonstration given by instructor using an Oxyfuel Pipe Beveler and Track Torch.	1,2,4,7,A,B,C
29	Chapter 10 Gas Metal Arc Welding	Gas Metal Arc Welding Equipment, Set Up and Operation, Metal Transfer, Filler Metal Specifications, Deposition Rates	Demonstration will be given by instructor using the GMAW process.	1,2,4,5,7,A,B,C,D
Oct. 1	Chapter 11 Gas Metal Arc Welding	GMAW, Flow Rates, Electrode Extension, Gun Angle, Shielding Gas, Modes of Transfer	Students will be in lab practicing GMAW. Test on Chapters 10 & 11	1,2,4,5,A,B,C
6	Chapters 12, 13 FCAW	Fillet Welds, Groove Welds	Demonstration using the FCAW process to be given by instructor, students practicing FCAW.	1,2,4,5,7,A,B,C
8	Chapters 12, 13 FCAW	Fillet Welds, Groove Welds	Demonstration using the FCAW process to be given by instructor, students practicing FCAW. Test on Ch. 12 & 13	1,2,4,5,7,A,B,C
13	Chapters 15, 16, 17 Gas Tungsten Arc Welding	Gas Tungsten Arc Welding Equipment, Operation and Set Up, Tungsten, Shielding Gases, Tungsten Shaping, Remote Controls	Demonstration using the GTAW process to be given by instructor, students practicing GTAW.	1,2,4,5,A,B,C

15	Chapters 15, 16, 17 Gas Tungsten Arc Welding	GTAW Equipment, Operation and Set Up, Tungsten, Shielding Gases, Tungsten Shaping, Remote Controls	Demonstration using the GTAW process to be given by instructor, students practicing GTAW. Test on CH. 15, 16, & 17	1,2,4,5,A,B,C
20	Chapter 18 Welding Joint Design, Welding Symbols	Welding Joint Design, Five Basic Weldments, Welding Symbols, Shop Math	Lecture, Review of Shop Math and basic mathematical problem solving, joint design and welding symbols.	1,2,3,4,5,A,B,C
22	Chapter 19 Welding Cost, Codes, Standards	Welding Cost, Codes, Standards, Specifications, Structural and Pipe Welding	Lecture, Students in lab practicing welding processes.	1,2,4,5,7,A,B,C
27	Chapter 19 Welding Cost, Codes, Standards	Welding Cost, Codes, Standards, Specifications, Structural and Pipe Welding	Lecture, Students in lab practicing welding processes.	1,2,4,5,7,A,B,C
29	Chapter 20 Testing and Inspection of Welds	Quality Control, Defects, Discontinuities, Destructive and Non-Destructive Testing	Instructor will demonstrate Visual Inspection and Destructive testing using the Guided Bend Test.	1,2,4,5,A,B,C
Nov. 3	Chapter 20 Testing and Inspection of Welds	Quality Control, Defects, Discontinuities, Destructive and Non-Destructive Testing	Instructor will demonstrate Visual Inspection and Destructive testing using the Guided Bend Test.	1,2,4,5,A,B,C
5	Chapter 21 Welder Certification	Welder Qualification and Welder Certification, Welding Career Potential	Instructor will demonstrate proper welding techniques for welder certification.	1,2,4,5,6,A,B,C
10	Chapter 21 Welder Certification	Welder Qualification and Welder Certification, Welding Career Potential	Instructor will demonstrate proper welding techniques for welder certification.	1,2,4,5,6,A,B,C
12	Chapter 21 Welder Certification	Welder Qualification and Welder Certification, Welding Career Potential	Instructor will demonstrate proper welding techniques for welder certification.	1,2,4,5,6,A,B,C
17	Chapter 21 Welder Certification	Welder Qualification and Welder Certification, Welding Career Potential	Instructor will demonstrate proper welding techniques for welder certification.	1,2,4,5,6,A,B,C
19	Chapter 24 Weldability of Metals	Weldability of Metals	Lecture, Study Guides given out for Final Exam	1,2,A,B,C
24	Chapter 25 Filler Metal Selection	Filler Metal Selection	Lecture; Various Filler Metals	1,2,A,B,C
26	Chapter 26 Automation And Robotics	Welding Automation and Robotics	Lecture; Future of Robotics and Automation	1,2,A,B,C,D
Dec. 1	Reviewing for FINAL EXAM	Reviewing for FINAL EXAM	Reviewing for FINAL EXAM	1,2,3,4,5,6,7, ,A,B,C
3	FINAL EXAM	FINAL EXAM	FINAL EXAM	1,2,3,4,5,6,7, ,A,B,C

*** Competency Areas:**

1. Industrial Safety and Health Practices
2. Hand Tool and Power Machine Use
3. Measurement
4. Laboratory Operating Procedures
5. Welding Career Potentials
6. Introduction to Welding Codes and Standards
7. Welding Inspection

****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.
D) The ability to utilize basic computer skills.