

COURSE SYLLABUS

WLDG 1430 (4:2:8)

Introduction to Gas Metal Arc Welding

Welding Technology Program

Career and Tech Department

Technical Division

Slaton, TX

Slaton High School

Fall 2024

COURSE SYLLABUS

COURSE TITLE: WLDG 1430 Introduction to Shielded Metal Arc Welding

INSTRUCTOR: Cody Kinch
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OFFICE HOURS: Posted on instructors office door.

I. GENERAL COURSE INFORMATION:

- A. **Course Description:** An introduction to the shielded metal arc welding process. Emphasis placed on power sources, electrode selection, and various joint designs.
- B. **End-of- Course Outcomes:** Select electrodes and amperage settings for various thicknesses of materials and welding positions; define principles of arc welding; explain electrode classifications; perform SMAW operations utilizing various positions electrodes and joint designs.
- C. **WLDG 1430** is taught in one of the three five week periods during the Fall and Spring semesters. Students are required to complete all lecture and lab competencies in this course before starting the next course.
- D. **Course Competencies:**
 - 1. The student will demonstrate proficiency in gas metal arc welding of structural joints in all positions. The student will achieve a minimum performance rating of “3” when performing these skills.
 - 2. The student will attain a minimum proficiency rating of 70% on written tests covering gas metal arc welding equipment, setup, and operation. Students will be required to achieve a minimum score of 75% on American Welding Society (AWS) written tests except for the AWS safety test where a 100% test score is required.

- E. **Academic Integrity:** It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences, possibly suspension.
- Cheating:** Dishonesty of any kind on examinations or on written assignments, illegal possession of examinations, the use of unauthorized notes during an examination, obtaining information during an examination from the textbook or from the examination paper of another student, assisting others to cheat, alteration of grade records, illegal entry or unauthorized presence in an office are examples of cheating. Complete honesty is required of the student in the presentation of any and all phases of course work. This applies to quizzes of whatever length as well as to final examinations, to daily reports and to term papers.
- Plagiarism:** Offering the work of another as one's own, without proper acknowledgement, is plagiarism; therefore, any student who fails to give credit for quotations or essentially identical expression of material taken from books, encyclopedias, magazines and other reference works, or from themes, reports or other writings of a fellow student, is guilty of plagiarism.
- F. **SCANS and Foundation Skills:**
Appropriate competencies and foundation skills set forth by the Secretary's Commission on Achieving Necessary Skills (SCANS) have been integrated into the Welding Technology program. For this course they are; C 1,3,5,6,7,12,13,14,15,16,17,19,20 and F 1,2,3,5,12,13,14,15,16.

II. SPECIFIC COURSE/INSTRUCTOR REQUIREMENTS:

- A. **Textbook:** *Shielded Metal Arc Welding Basic*, Lab Manual, Hobart. This textbook and standard classroom supplies (notebook, pen, pencil, calculator, etc.) are required for this class. Students who do not bring these supplies to class will have points deducted from their assignment grade.
- B. **Tools:** Students enrolled in this course are required to furnish their own personal tools. The instructor will provide the student with a list of the required tools. Students who do not bring these supplies to class will have points deducted from their assignment grade.
- C. **Slaton High School Attendance Policy**
- Students are expected to attend all classes in order to be successful in a course. The student may be administratively withdrawn from the course when absences become excessive as defined in the course syllabus.

When an unavoidable reason for class absence arises, such as illness, an official trip authorized by the college or an official activity, the instructor may permit the

student to make up work missed. It is the student's responsibility to complete work missed within a reasonable period of time as determined by the instructor. Students who enroll in a course but have "Never Attended" by the official census date, as reported by the faculty member, will be administratively dropped by the Office of Admissions and Records. A student who does not meet the attendance requirements of a class as stated in the course syllabus and does not officially withdraw from that course by the official census date of the semester, may be administratively withdrawn from that course and receive a grade of "X" or "F" as determined by the instructor. Instructors are responsible for clearly stating their administrative drop policy in the course syllabus, and it is the student's responsibility to be aware of that policy.

It is the student's responsibility to verify administrative drops for excessive absences through MySPC using his or her student online account. If it is determined that a student is awarded financial aid for a class or classes in which the student never attended or participated, the financial aid award will be adjusted in accordance with the classes in which the student did attend/participate and the student will owe any balance resulting from the adjustment.

D. The following attendance guidelines have been established for the Welding Technology program:

Excessive absences are a serious problem, and as a part of technical training good attendance habits are necessary. Positive steps will be taken in this program to develop these habits. The employer demands good work habits, and in order for the student to learn good work habits our attendance policy will require punctual and regular attendance.

When an unavoidable reason for class absence arises, such as illness, an official trip authorized by the college or an official activity, the instructor may permit the student to make up work missed. The student must provide documentation for this type of an absence. It is the student's responsibility to complete work missed within a reasonable period of time as determined by the instructor. Unexcused absences cannot be made up.

1. **Absent** from class is defined as "not present and ready to participate during scheduled lecture or lab times."
2. **Tardy** is defined as "not present at the designated starting time of the lecture or lab." **Three tardies will equal one absence and will be treated the same as any absence.**
3. The student and the Retention Specialist will be notified when the student reaches one (1) unexcused absence. The Retention Specialist will notify the student that counseling assistance is available and the student will be advised that regular attendance is necessary for success in the program. When the

student reaches three (3) unexcused absences in this class, he/she will be administratively dropped from the class.

4. Any unexcused absences will be minus 5 points at the end of the final grade.
5. Five (5) points will be deducted from the student's final grade for each absence.

E. **Assignment Policy:**

All required work must be in on time in order that the student may benefit from the corrections and study for future examinations. Assigned outside work is due ON THE CLASS PERIOD ASSIGNED; work turned in later than the due date will NOT be accepted. Regardless of the circumstance, late work may be assessed penalty points (for grading purposes) by the instructor; this subject will be a matter of instructor discretion.

Testing Policy:

Students that are late for any scheduled test will automatically be assessed a 10 point penalty; students that are absent for a test will be assessed a 20 point penalty. Should a student be absent from any scheduled test, it is the responsibility of the student to reschedule the test within one week with the approval of the instructor.

Tutoring Policy:

Students who do not pass their first exam will be required to attend three hours of tutoring each week until they pass their next exam. This is a course requirement and will be reflected in the course grade.

F. **Grading Policy:**

3. Lecture: Written examinations, worksheets, homework, etc. will be graded on a percentage basis, with a grade of 70% being the minimum acceptable performance standard. The student must attain a score of 70% in order to progress to next unit of study. Students will be required to achieve a minimum score of 75% on American Welding Society (AWS) written tests except for the AWS safety test where a 100% test score is required.
1. Lab: All lab work will be graded on a 5, 4, 3, 2, 1 basis with 5 being the highest score and 1 being the lowest score. The student must attain a score of 3 in order to progress to the next competency. An explanation of this system is as follows:
 - 5 - Superior mastery of competency
 - 4 - Better than average mastery of competency
 - 3 - Minimum acceptable performance
 - 2 - Below average mastery of competency
 - 1 - Inadequate mastery of competency
2. Calculation of Final Grade: The student's final grade for the course will be calculated in the following manner;
Lab grade = 80% of final grade
Tests and assignments grade = 20% of final grade

Tests = 80% of Tests and assignments grade
Assignments = 20% of Tests and assignments grade

G. Special Requirements:

- Students shall dress properly for the work environment. (No shorts, sandals, tennis shoes, or baggie clothing).
- Students in the Welding Technology program will be required to follow all safety rules and procedures while in the Welding Technology facility.
- Students must complete a comprehensive welding safety orientation, score a minimum of 100% on a written welding shop safety examination, and successfully complete a hands on practical shop safety test prior to continuing any other Welding Technology course requirements. Students will be given 3 attempts to successfully complete each.
- Students are required to wear eye and hearing protection at all times in the welding lab and other work areas.
- No cell phones or any other type of electronic communication device are allowed to be used in the classroom.
- All competencies in this and all other Welding Technology courses must be successfully completed for the student to be eligible for graduation. If a student does not complete all course competencies within a Welding Technology course, the student will receive a grade of “D” in that course. When the unfinished course competencies are completed the student’s grade will be changed.

III. COURSE OUTLINE

A. Shielded Metal Arc Welding (lecture)

1. The welder’s role in quality control
2. Electrode selection
3. Power sources
4. Distortion control

B. Shielded Metal Arc Welding (lab)

1. Pad of beads
2. Multi-pass tee joints, horizontal
3. Butt, lap, and tee joints, horizontal
4. Butt, lap, and tee joints, vertical up
5. Butt, lap, and tee joints, overhead

IV. The Welding Technology program at Slaton High School is a Participating Organization in the American Welding Society’s SENSE program. SENSE, which is an acronym for Schools Excelling through National Skill Standards Education - was originally published in 1995/96 to establish industry standards and guidelines for welder training. SENSE training and testing at South Plains College is done in accordance with AWS Specifications QC10 and QC11, and the Guide for the Training and Qualification of Welding Personnel, EG2.0 and EG3.0. SENSE testing consists of written tests, on-line tests, and workmanship qualification (hands-on) tests.

V. DIVERSITY STATEMENT:

In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

VI. ADA Statement

Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) & Lubbock Center 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

VII. Non-Discrimination Statement

South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

VIII. Campus Concealed Statement

South Plains College permits the lawful carry of concealed handguns in accordance with Texas state law, and Texas Senate Bill 11. Individuals possessing a valid License to Carry permit, or the formerly issued Concealed Handgun License, may carry a concealed handgun at all campus locations except for the following.

- Natatorium

For a complete list of campus carry exclusions zones by event, please visit

<http://www.southplainscollege.edu/campuscarry.php>

Notification of Nondiscrimination

In Career & Technical Education Programs

Slaton Independent School District offers several career and technical education programs. Admission to these programs is based on student interest and course prerequisites as listed in the Slaton High School Course Offering Guide.

It is the policy of Slaton Independent School District not to discriminate on the basis of race, color, national origin, sex or handicap in its vocational programs, services or activities as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended.

Slaton Independent School District will take steps to assure that lack of English language skills will not be a barrier to admission and participation in all educational and vocational programs. For information about your rights or grievance procedures, contact the Title IX / Section 504 Coordinator, Shelli Crow (scrow@slatonisd.net) 140 E. Panhandle, Slaton, TX 79364 (806) 828-6591.