

Central High School – Oakes Campus

Welding I Syllabus (Grades 10–12)

Instructor: Alicia Theriot

Course: Welding I

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Campus: Oakes Campus

Conference Time: Monday–Friday, 12:30–1:00 p.m. (by scheduled appointment only)

Tutorials: Monday & Friday, 3:50–4:20 p.m.

Class meeting times: 1st/2nd *8:20-9:50, 3rd/4th 10:56-12:20, and 6th/7th 2:25-3:50

IMPORTANT: This class is an optional Technical Dual Credit class with Howard College. Dual credit classes allow you to gain credit with an applicable secondary school or institution. This helps save you money on tuition and time if you choose to attend in the future. If you have not filled out the application, an email with a link to the application was sent to you and your guardian. The application must be received promptly to be enrolled for the Fall/Spring semester. If you have filled out an application, you will not have to fill out another one. During your first day of class, you will be given a schedule card to fill out in **black or blue ink** only. The form requires your first, middle and last name, SAISD student ID number, date of birth, social security number, signature and date from the student attending only. This must be filled out immediately and handed back to me so you may earn credit from Howard College for this course. If it is not turned in, you will miss your chance to earn credit from Howard College for this course. There are no second chances to enroll. If you fail to attend this course and complete assignments, you will be withdrawn from Howard.

MEMBERSHIP DUES: If you plan on taking part in any skills contests, you will need to become a member with Skills USA which is \$18 for membership and/or 4H for the FFA Ag Mechanics show at \$25 or \$30 if late. Please have these dues ready to pay before September 1st.

Welcome to Welding I

Welcome to Welding I! I am excited to have you in class and look forward to helping you develop the technical skills, work ethic, and professionalism necessary to become successful in the welding industry.

This course is designed to prepare students for entry-level employment, advanced welding coursework, industry certifications, and lifelong career skills. Students will gain extensive hands-on experience using industry-standard equipment while learning safe work practices, proper welding procedures, blueprint reading, measurement, fabrication techniques, and employability skills expected by today's workforce.

Our welding shop operates like a professional manufacturing environment. Students are expected to demonstrate responsibility, integrity, teamwork, punctuality, and respect every day.

About Your Instructor

My name is **Alicia Theriot**, and I am honored to be your Welding I instructor.

First and foremost, I am a Child of God and a follower of Jesus. I am blessed to be the wife of an awesome husband and the mother of two wonderful children. I also have two sisters and come from a family that values hard work, service, and lifelong learning. My father served as an Air Force Major, and my mother is an avid antiques and crafts enthusiast who inspired my creativity and appreciation for craftsmanship.

Outside of school, I enjoy caring for our many animals. Our newest family member is a Boston Terrier named **Buster**, who keeps everyone entertained.

Professionally, I have been a certified Agriculture teacher for eleven years and am also certified as a Welding Instructor. Welding has been a part of my life since high school, and it has opened many opportunities throughout my career. My goal is to provide students with real-world experiences, technical knowledge, and workplace expectations that prepare them for successful careers in manufacturing, fabrication, construction, and related industries.

I believe every student can be successful through dedication, perseverance, and a willingness to learn.

Course Description

Welding I introduces students to welding safety, equipment operation, metal preparation, welding processes, welding positions, fabrication, employability skills, and industry expectations. Students will learn both classroom theory and hands-on laboratory skills while developing habits expected in professional welding shops.

Instruction includes:

- Shop safety
- OSHA-based workplace practices
- Welding terminology
- Blueprint reading
- Measurement
- Equipment setup
- SMAW (Stick)
- GMAW (MIG)
- GTAW (TIG)
- Oxy-Acetylene Welding & Cutting
- Plasma Cutting
- Metal identification
- Welding positions
- Weld quality
- Career preparation
- Industry certifications

Course Goals

Students will:

- Practice safe welding procedures at all times.
- Demonstrate proper use of Personal Protective Equipment (PPE).
- Operate welding equipment safely and correctly.
- Develop employability skills required by today's welding industry.
- Demonstrate proper machine setup and shutdown.
- Produce quality welds using multiple welding processes.

- Prepare for industry-recognized welding certifications.
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Course Materials

Required Textbooks

Jeffus, L. (2027). *Welding Principles and Applications* (10th ed.). Independence, KY: Cengage Learning.

Jeffus, L. (2027). *Study Guide/Lab Manual to Accompany Welding Principles and Applications Aligning with SENSE American Welding Society* (9th ed.). Independence, KY: Cengage Learning.

References are listed in APA format.

Required Student Supplies

Students are expected to have:

- Safety glasses (ANSI Z87.1 approved)
- Welding gloves
- Leather work boots (required)
- Long pants (no holes)
- Cotton long-sleeve shirt
- Notebook
- Pencils
- Measuring tape
- Calculator
- Welding cap (recommended)

The school will provide welding equipment and specialized PPE as needed.

Course Schedule

Unit 1

July 13 – October 16

Shop Safety, Maintenance & Equipment Operation

Topics include:

- Shop Safety Review
- OSHA Safety Standards
- PPE Requirements
- Shop Maintenance
- Tool Maintenance
- Measurement
- Fractions and Decimal Conversions
- Responsibilities
- Shop Cleanliness
- Equipment Setup
- Equipment Shutdown
- Safe Operation of:
 - Stick Welding (SMAW)
 - MIG Welding (GMAW)
 - TIG Welding (GTAW)
 - Oxy-Acetylene Equipment
 - Plasma Cutter

Unit 2

October 20 – December 18

Welding Industry & Employment

Topics include:

- Welding Career Opportunities

- Types of Welding Jobs
- Fabrication Careers
- Pipe Welding
- Structural Welding
- Manufacturing Careers
- Industrial Maintenance
- Fitter Responsibilities
- Welder Responsibilities
- Resume Development
- Job Applications
- Interview Skills
- New Hire Orientation
- Workplace Expectations
- Teamwork
- Communication
- Professionalism
- Industry Certifications
- Guest Speakers (when available)
- Field Trip:
 - Long Industries
 - AFCO

Unit 3

January 5 – March 11

Welding Positions & Welding Variables

Topics include:

- Fillet Welds
 - Groove Welds
 - Welding Positions
 - 1G–6G
 - 1F–4F
 - Electrode Identification
 - Electrode Selection
 - Metal Thickness
 - Heat Settings
 - Welding Procedures
 - Weld Quality
 - Destructive Testing
 - Visual Inspection
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Unit 4

March 22 – May 21

Welding Performance & Certification Preparation

Topics include:

- Welding Multiple Metal Thicknesses
- Electrode Selection
- Vertical Welding
- Groove Welds
- Fillet Welds
- Pipe Welding
- Certification Practice
- Weld Testing

- Weld Repair
 - Career Readiness
 - End-of-Year Skills Assessment
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Grading Policy

Grades are based upon:

- Daily Participation & Professionalism
- Lab Performance
- Safety Compliance
- Written Assignments
- Quizzes
- Tests
- Projects
- Practical Welding Evaluations
- Final Practical Assessment

Late work is subject to campus policy unless prior arrangements have been approved.

Attendance

Because welding is a hands-on course, attendance is extremely important. Missed lab work must be completed whenever possible. Excessive absences may prevent students from meeting course competencies.

Shop Rules & Expectations

Students are expected to:

- Wear required PPE at all times.
- Follow all instructor directions immediately.
- Maintain a clean work area.

- Respect classmates and equipment.
- Use tools only after proper instruction.
- Never operate equipment without permission.
- Report damaged equipment immediately.
- Report all injuries immediately.
- Demonstrate professionalism at all times.
- Practice teamwork and respect.

Horseplay, unsafe behavior, or misuse of equipment will not be tolerated.

Safety Clause

Safety is the highest priority in Welding I.

Failure to follow safety procedures places yourself and others at risk.

Students who violate safety rules may receive one or more of the following consequences:

- Verbal warning
- Parent contact
- Loss of shop privileges
- Alternative classroom assignment
- Office referral
- Removal from laboratory activities
- Removal from the Welding I course if unsafe behavior continues

Students understand that repeated or serious safety violations may result in permanent removal from laboratory instruction regardless of academic performance.

Personal Protective Equipment (PPE)

The following PPE is required whenever applicable:

- Safety glasses

- Welding helmet
- Welding gloves
- Leather boots
- Cotton or FR clothing
- Hearing protection
- Face shield
- Respiratory protection when required

No synthetic clothing, shorts, sandals, or open-toed shoes are permitted in the welding laboratory.

Classroom Expectations

Students will demonstrate:

- Integrity
- Responsibility
- Respect
- Teamwork
- Leadership
- Positive Attitude
- Strong Work Ethic
- Professional Communication
- Safe Decision Making

Students are expected to treat the welding shop as if it were their place of employment.

Parent and Student Acknowledgment

We have read and understand the Welding I syllabus, shop expectations, grading policies, attendance requirements, laboratory safety procedures, and Personal Protective Equipment requirements.

We understand that failure to follow shop safety rules may result in removal from laboratory participation and possible removal from the Welding I course.

Student Name: _____

Student Signature: _____ Date: _____

Parent/Guardian Name: _____

Parent Signature: _____ Date: _____

Parent Phone: _____

Parent Email: _____

Emergency Contact: _____

Emergency Phone: _____

"Success in welding begins with safety, grows through hard work, and is earned by practicing excellence every day."

Resource links:

San Angelo ISD Code of Conduct - <https://www.saisd.org/fs/resource-manager/view/e08aa212-46d1-46a5-b9b4-b3d084d25b01>

San Angelo ISD Grading Policy – <https://www.saisd.org/fs/resource-manager/view/eb7047af-1eeb-42cb-bfea-cc8ec09665b3>

San Angelo Central High School GPA/Class Rank Calculation - <https://central.saisd.org/families/gpa-class-rank>

Schoology Link - https://sanangelo.schoology.com/home#/?_k=c25tu3

Manufacturing TEKS (Texas Essential Knowledge Skills) - <https://tea.texas.gov/laws-and-rules/sboe-rules-tac/sboe-tac-currently-effect/ch127o.pdf> (search for Welding 1 on page 27-31)

Notes:

Safety Test: Students will take a safety test before entering the shop. They will not be allowed to work in the shop until they pass the test. They will also sign a form indicating that they will be safe in the shop at all times and I will keep that on file. Being safe in the shop requires them to wear closed toed shoes, long sleeve shirts and pants that are 100%

cotton, along with the required eye/ear protection. Failing to wear the appropriate PPE will result in injuries to their body. Please comply with all safety requirements.

My Grading Guidelines: 10 points off for every day it's late unless you have spoken to me about an issue that I approve as an acceptable excuse for being late or not turning it in. Alternative assignments may be given upon request with my approval. After the third day of being late, you will receive a grade of ZERO. You may schedule a conference with me to discuss your grades and any possibility of making them up.

My Behavior Guidelines: You are expected to act in a responsible way at all times in my classroom and my shop. Any misbehavior that I deem was purposeful will necessitate a call home, detention, and possibly a referral depending on the seriousness. I am implementing the appropriate disciplinary actions according to the San Angelo ISD code of conduct. We will be utilizing Minga Kiosk where a student will have to sign in to and out of the bathroom one at a time. If more than one student is found to be in the bathroom, the consequences will be followed. Students may not leave the classroom or shop or shop area outside without my permission. Consequences will be followed for those who choose not to obey the rules. The safety of my students in the class and the right for students to use the restroom is of high priority.

Please don't hesitate to contact me with any questions, concerns, or requests. I look forward to meeting my new students and welcoming back my returning students this year. We will have some fun projects to work on, certifications to acquire and contests to attend.