# CHIPOLA COLLEGE
## COURSE SYLLABUS
Chipola's website: www.chipola.edu

**COURSE TITLE:** | **COURSE NUMBER:**

Welding Technology: Welder SMAW1 | PMT0072V

**COURSE DESCRIPTION (with prerequisites):**

1050 Hour Course – Designed to provide students with a comprehensive understanding of Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux-Cored Arc Welding (FCAW), and Gas Tungsten Arc Welding (GTAW) on ferrous and non-ferrous materials in different positions by AWS D1.1 standard. With a focus on developing practical welding skills, students will learn about welding safety, welding equipment and tools, welding techniques and processes, welding metallurgy, and blueprint reading.

Welder SNAW1: 150 clock hours.

In this course, students will gain the practical skills and knowledge required to work as a welder in various industries.

Prerequisites:
- Basic Math and reading skills
- Physical ability to perform welding tasks in cold and hot environments while wearing proper personal protective equipment (PPE).
- Able to lift and carry 60lbs safely on occasion throughout the day.
- Ability to understand English, as all course work is taught in English.

**NAME(S) OF INSTRUCTORS:**

Welding Instructor: Chris Parrish
Office #: (850) 718-2498 Email: parrishc@chipola.edu

Assistant Welding instructor: Darien (Takoda) Shaw
Office #: (850) 718-2214 Email: shawd@chipola.edu

**EFFECTIVE ACADEMIC YEAR:**

2023-2024

**REQUIRED TEXTBOOKS AND INSTRUCTIONAL MATERIALS:**

No textbook or course materials are required to purchase for this course. ZTC
Materials provided by instructor
Tool Kit (available in the Welding classroom)

**GRADING POLICY:**

The standing of a student in each course is expressed by one of the following letters and corresponding grading system:

**A – 90 – 100**
**B – 80 – 89**
**C – 70 – 79**
**D – 60 – 69**
**F – 59 or less**

The Chipola Catalog provides policies and procedures regarding the grading system. A student's Grade Point Average is derived from the grading system/quality point scale.

## ATTENDANCE AND WITHDRAWAL POLICIES:

Chipola College expects regular attendance of all students and for all instructors to record attendance daily. Students who are absent from classes for any reason other than official college activities must satisfy the instructor concerned that the absence was due to illness or other clearly unavoidable reasons. Otherwise, the student may suffer grade loss at the discretion of the instructor. Chipola policy allows each instructor to specify in the Instructor First Day Handout whether or not an absence is excusable and what effect the absence or tardy may have on the grade.

A student is allowed to repeat a course a maximum of three (3) times. **On the third attempt a student (1) must bear the full cost of instruction (unless waived by Student Services), (2) cannot withdraw, and (3) must receive a grade.**

## MAKE-UP POLICY:

Chipola allows each instructor to specify in the Instructor First Day Handout the makeup policy.

## ACADEMIC HONOR CODE POLICY:

Students are expected to uphold the Academic Honor Code, which is based on the premise that each student has the responsibility to (1) uphold the highest standards of academic honesty in his/her own work; (2) refuse to tolerate academic dishonesty in the college community; and (3) foster a high sense of honor and social responsibility on the part of students. Further information regarding the Academic Honor Code may be found in the Chipola Catalog, Student Governance section.

## STUDENTS WITH DISABILITIES POLICY:

Chipola College is committed to making all programs and facilities accessible to anyone with a disability. Chipola's goal is for students to obtain maximum benefit from their educational experience and to effectively transition into the college environment. Students with disabilities are requested to voluntarily contact the Office of Students with Disabilities to complete the intake process and determine their eligibility for reasonable accommodations.

## NOTICE OF EQUAL ACCESS/EQUAL OPPORTUNITY AND NONDISCRIMINATION:

Chipola College does not discriminate against any persons, employees, students, applicants or others affiliated with the college in regards to race, color, religion, ethnicity, national origin, age, veteran's status, disability, gender, genetic information, marital

status, pregnancy or any other protected class under applicable federal and state laws, in any college program, activity or employment.

Wendy Pippen, Associate Vice President of Human Resources, Equity Officer and Title IX Coordinator, 3094 Indian Circle, Marianna, FL 32446, Building A, Room 183C, 850-718-2269, pippenw@chipola.edu.

## LIBRARY AND ON-LINE REFERENCE MATERIALS:

The library is a comprehensive learning resource center providing information in print, electronic, and multimedia format to support the educational objectives of the College. On-line catalogs, e-books, and electronic databases can be accessed through the Library Resources link within your course in Canvas or by using the *Search* icon on the Chipola Library website at www.chipola.edu/library. If you have questions about database usage, consult the "How to Use the Chipola Databases" on the Library website or call the Library at 850/718-2274 during regular hours. Library hours are posted each semester at the building entrance and on the Library website. See your Instructor First Day Handout for individual instructor recommendations and resources.

## TECHNOLOGY RESOURCES:

The college's learning management system is **Canvas**. Classes become available on Canvas on the first day of the semester. It is the student's responsibility to log onto the Canvas system the first day of class to establish the first day of attendance and to check announcements. All official class communication must be through Canvas. For further information, contact your instructor or the Director of Learning Resources. The Canvas support hotline is available online in live chat and on the phone, toll-free, at 855-308-2812 for any issues utilizing Canvas. The **Technology Center**, located in the library, is equipped with computer workstations. Lab hours are posted each semester at the building entrance and on the Library website.

## FREE TUTORING RESOURCES:

The Academic Center for Excellence (**ACE)** Lab, located in Building L, offers free tutoring from 8 a.m. to 5 p.m. and is equipped with computer workstations. ACE lab hours are posted each semester at the room entrance and on the website. Additionally, live online tutoring conferences and individual tutoring sessions are available for a variety of courses through ACE@Home. For a conference schedule or to schedule an individual appointment, visit "ACE Tutoring" in the left navigation from any course in Canvas.

## ELECTRONIC DEVICE USAGE STATEMENT:

Classrooms should be free of all unnecessary distractions from the task of learning. Therefore, as a general rule, students should silence and avoid use of all electronic devices (laptops, phones, tablets, etc.) not being used for coursework. Consult first-day handouts for any specific policies related to the use of electronic devices in the classroom, as they may vary depending upon the nature of the course or the guidelines of the instructor. Faculty reserve the right to regulate the use of electronic devices and their accessories in class.

## DISCIPLINE SPECIFIC COMPETENCIES / LEARNING OUTCOMES:

1. Identify welding safety rules and regulations in accordance with industry standards.
2. Describe welding-related mathematical concepts, including geometry and measurement.
3. Explain the fundamental principles of metallurgy, including material properties and characteristics, heat treating, and welding metallurgy.
4. Demonstrate proficiency in the use of welding machines, tools, and equipment associated with various welding processes.
5. Interpret and apply basic welding symbols, including groove welds, fillet welds, plug and slot welds.
6. Apply SMAW, GMAW, FCAW, and GTAW techniques to weld a combination of joints together by the AWS D1.1 welding standard.
7. Troubleshoot and identify welding defects and apply corrective measures.
8. Demonstrate an understanding of welding codes and standards and the ability to adhere to them.
9. Use critical thinking and analytical skills to make informed decisions during welding tasks.
10. Communicate and work collaboratively with team members and supervisors to complete welding tasks effectively and efficiently.

| *Linking Course-level Student Learning Outcomes with Discipline-Specific Competencies, Assessment Methods, and Artifacts* | | |
|---|---|---|
| **COURSE-LEVEL STUDENT LEARNING OUTCOMES FOR Welding Technology** | **DISCIPLINE-SPECIFIC GENERAL EDUCATION COMPETENCIES** | **ASSESSMENT METHODS FOR COURSE LEVEL STUDENT LEARNING OUTCOMES (see Notes below)** |
| • Demonstrate proficiency in welding techniques and produce quality welds with multiple processes of welding on ferrous and non-ferrous materials in the flat, horizontal, vertical and overhead positions by the American Welding Society (AWS) standard. | 1.Identify and interpret welding symbols in accordance with the American Welding Society (AWS)<br>2. Utilize the processes of welding (GMAW),(FCAW),( SMAW), (GTAW) safely and effectively.<br>3. Select welding processes and materials based on project specifications and requirements.<br>4. Produce quality welds that meet industry standards and pass non-destructive and destructive testing methods to become a certifiable welder. (e.g. visual, etching, and hydraulic bend stress test. | 1. Welding competency tests based on AWS standards.<br>2. Observation of student performance in welding exercises and projects.<br>3. Non-destructive and destructive testing methods of students welds. |

*Notes:* ***Assessment Codes***

**BO** - Behavioral Observation
**Cap Proj** - Capstone Course
**CF** - Cumulative Final
**Clin** - Clinicals
**CP -** Case Plan
**CS** - Case Study
**DB** - Discussion Board
**DE** - Documented Essays
**E** - Essays
**EX** - Dept Exam
**Exp** - Experiments
**F** - Final Exam
**H** - Homework
**Intern** - Internship
**J** - Jury
**JP** - Judged Perf/Exh
Obs - Teacher Observ
**OT** - Objective Tests
**Port** - Portfolio
**Prac** - Practicum
**Pre/ Post** - Pre-/Post-Tests
**Proj** - Projects
**PS** - Problem Solving
**Q** - Quizzes
**R** - Recital
**RP** - Research Papers
**RPT** - Report/Presentation
**SD** - Skills Demonstration
**SE** - Natl or State Standardized
**Sk** - Ck Skills Check-Off
**SP** - Skills Performance
**T** - Tests
**UT** - Unit Tests
**W** - Writing Assignments

## MEANS OF ACCOMPLISHING STUDENT LEARNING OUTCOMES:

The Instructor will demonstrate proficiency in welding techniques and produce quality welds.
- Will demonstrate the ability to interpret technical drawings and blueprints and explain various ways of learning to interpret them.
- Will demonstrate proficiency in the use of hand and power tools.
- Will demonstrate the knowledge of welding equipment and various welding techniques.
- Will demonstrate the welding procedures and safety protocols.
- Will give out performance tests to measure the ability to produce quality welds
- Will give Written examinations to evaluate knowledge of welding equipment and procedures.
- Will Observe students while performing welding tasks in the lab to asses their skills.

## ASSIGNMENT AND/OR COURSE OUTLINE

1. Course introduction
2. Overview of the welding program
3. Introduction to welding safety
4. Discussion of welding equipment and tools
5. Practice/ Perform welding and fitting ferrous and non-ferrous metals together using different process of welding such as: GMAW, FCAW, SMAW, & GTAW
6. Welding Metallurgy- Understand how different materials affect welding
7. Blueprint Reading- Understanding dimensions, tolerances and how to read welding symbols.
8. Final project to test the skills obtained throughout the course
   *Putting it all together!
   -A drawing given by the instructor to build to specification.
   - AWS Weld tests to be given to acquire the certifications offered in the program to become a Certified Welder by the American Welding Society.

See your Instructor First Day Handout for individual instructor assignment schedule.