# Welding Technology (J400400)

*Offered at Tom P. Haney Technical College*

Length of Program……..……1050 hours

**Building 8, Room 804**

**Instructor Office Hours:** 1:30 PM - 2:00 P.M

850-767-5500 ext 212-5147

**Welding Instructors:**

| **Paul Richardson** | **Zacchae'us Long** | **Colby Estes** |
|---|---|---|
| richapd@bay.k12.fl.us | longzi@bay.k12.fl.us | estescc@bay.k12.fl.us |

**Class Hours**

| | |
|---|---|
| **Class Start Time** | **6:45 AM** |
| **Essential Education Group 1** | **7:00 AM - 7:15 AM** |
| **Lunch Time** | **10:45 AM - 11:30 AM** |
| **Essential Education Group 2** | **11:35 AM - 11:50 AM** |
| **Class End Time** | **1:30 PM** |

**Purpose:**

The Welding Technology certificate program prepares students for careers in the welding industry. Program learning opportunities develop academic, technical, and professional knowledge and skills required for job acquisition, retention, and advancement. Program graduates receive a Welding Technology Certificate, have qualifications of a welding technician, and are prepared to take qualification tests required by industry. This program emphasizes welding theory and practical application necessary for successful employment.

**Mission Statement:**

The purpose of the Welding Technology program is to provide training for those who are interested in working in the welding trade. The program is designed to enable the student to acquire top skills and knowledge he or she will need to compete in today's global market.

**Attendance Policy:**

- Attendance must be maintained without missing a maximum of 10% of hours for each of the two 525 hour sections.
- Students who arrive after the scheduled AM time will not be allowed to clock in until 11:30 A.M.

**Grading Policy:**

Tom P. Haney Technical College considers a grade "C" and below to be below minimum standards for business/industry. A 2.0 cumulative grade point average is required to meet Satisfactory Academic Progress and to graduate.

| **Grading Scale** | **GPA** | |
|---|---|---|
| A – 100%-90% | 4.0 | Exceeds business/industry standards |
| B – 89% - 80% | 3.0 | Meets business/industry standards |
| C – 79% - 70% | 2.0 | Below desirable business/industry standards |
| D – 69% - 60% | 1.0 | Below/industry standards |
| F – 59% - 0% | | Failure |

**Program Requirement:**

- A grade of "B" or higher must be achieved in each occupational course in order to complete the program
- Final Grade Breakdown:
    - 40% Lab Work
    - 30% Academics
    - 30% Employability

**Required Materials**:

- Tools
    - Vise-grip style clamp (models 11sp or 11sr)
    - Stainless steel wire brush
    - Chipping hammer
    - 14" half round file
    - Torch striker
    - Torch tip cleaners (Wypo brand recommended)
    - Small flashlight
    - 12' to 25' tape measure
    - Speed square or combination square
    - 4 ½" grinder with non-locking trigger

- PPE
    - Safety Glasses
    - Welding Hood (Fixed shade or auto-darkening)
    - Gloves
    - Jeans or other cotton pants
    - Cotton long sleeve shirt
    - Leather boots with minimum 6” tall (steel toe preferred).

- Textbooks
    - NCCER 6th edition Core Curriculum
    - NCCER 6th edition Level 1 Welding
    - NCCER 6th edition Level 2 Welding

**Safety Policies:**

1**. Permission Requirement:**

- No individual shall operate or attempt to operate any electrical equipment, appliances, machinery or fixtures within the classroom or lab without explicit permission from the instructors.

2. **Instructor Responsibility**:

- The instructors shall have the sole responsibility to authorize the operation of any electrical or mechanical devices during instructional sessions.
- Prior to the commencement of any practical activities involving electrical or mechanical equipment, the instructor shall provide clear instructions regarding the proper use, safety precautions, and any necessary permissions required for operation.

3**. Prohibited Actions:**

- It is strictly prohibited to turn on or manipulate any electrical switches, outlets, or controls unless specifically instructed to do so by the instructors.
- Tampering with electrical systems, attempting unauthorized repairs, or making alterations to electrical connections without proper authorization is strictly forbidden.

4. **Safety Measures:**

- All individuals present in the classroom shall adhere to established safety protocols and guidelines when interacting with electrical or mechanical equipment.
- Instructors shall ensure that all electrical and mechanical devices and systems are in safe operating condition before allowing their use by students or participants.
- Personal protective equipment must be worn at all times in the welding lab.

5. **Awareness and Education:**
   - The policy shall be communicated to all individuals involved in classroom activities involving electrical and mechanical equipment through orientations, safety briefings, and posted notices.
   - Educational resources on electrical safety, including guidelines and best practices, shall be made available to promote awareness and understanding among classroom occupants.

6. **Enforcement:**
   - Non-compliance with this policy will result in disciplinary actions as outlined in the institution's code of conduct or safety policies.
   - Any observed hazards, violations, or concerns regarding electrical safety shall be promptly reported to the instructor or relevant authorities for immediate resolution. Conclusion: By adhering to this policy, we prioritize the safety and well-being of all individuals within the classroom environment. Responsible behavior and adherence to established procedures are essential for the prevention of accidents and the promotion of a safe and productive learning environment.

   - First Offense: Students will be placed on academic probation.
   - Second Offense: Recommended to administration for dismissal from the program

**Class Rules:**

1. Use proper personal protective equipment (PPE) at all times
2. No cell phone usage including playing music. If caught using a cell phone, you will be sent home and counted absent for the remaining scheduled hours for the day
3. Do not leave the shop without notifying an instructor
4. Work on the task assigned to you
5. Ask instructors for assistance - not another student
6. Students must have ID badges at all times and use the ID badges to sign in/out each for each class session
7. Signing in for another student or having another student sign in/out for you will result in dismissal from the school by administration

**<u>Program Courses and Requirements</u>**

***Students must remain on task at all times during the course. All work must be done in accordance with appropriate safety and PPE in mind***

This welding course is broken into hours as follows. You will have a project sheet that you will keep and maintain that will help you keep track of your progress. These projects must be completed and turned in on the completed projects table.

**Welder Assistant 1 (First 150 Hours):**

- Safety and procedures
- All 8 NCCER Core book module tests must be completed (exclude rigging)
- Basic oxyfuel gas cutting principles and practices
- Must be able to demonstrate exceptional weld quality on three positions of SMAW weld pads (*Flat, Vertical, and Horizontal)*

**Welder Assistant 2 (Second 150 Hours):**

- NCCER Tests
    - Welding Safety
    - Oxyfuel Cutting
    - Plasma Arc Cutting
    - Air-Carbon Arc Cutting and Gouging
    - SMAW - Equipment and Setup
    - SMAW - Beads and Fillet Welds
- Must be able to demonstrate exceptional weld quality on three positions of SMAW T-joints(*Flat, Vertical, and Horizontal)*
- Plasma arc cutting principles and practices

**Welder SMAW 1 (Third 150 Hours):**

- NCCER Tests
    - Base Metal Preparation
    - SMAW Electrodes
    - Joint Fit-up and Alignment
- Must show proficient use in track torch, plasma cutting, and arc gouging

**Welder SMAW 2 (Fourth 150 Hours):**

- NCCER Tests
    - Weld Quality
    - SMAW - Groove Welds and Backing (Plate)
    - SMAW - Open-Root Groove Welds (Plate)
- Demonstrate exceptional weld quality on three positions of SMAW V-grooves(Horizontal, Vertical, and Overhead)

**Welder OCP (Last 450 Hours):**

- NCCER Tests
    - Welding Symbols
    - Reading Welding Detail Drawings
    - Physical Characteristics and Mechanical Properties of Metals

  - Preheating and Postheating of Metals
  - GMAW and FCAW - Equipment and Filler Metals
  - GTAW - Equipment and Filler Metals
  - GTAW - Plate
  - GMAW - Plate
  - FCAW - Plate
- Demonstrate exceptional weld quality on three positions of FCAW V-grooves (Horizontal, Vertical, and Overhead)
- Demonstrate basic GMAW skills
- Demonstrate basic GTAW skills
- Introduction to pipe welding

**Industry Certifications:**

- NCCER Credentials are required for course completion. Students must earn all NCCER Core Curriculum, Level 1 Welder, and Level 2 Welder certifications.

- American Welding Society (AWS) Certifications
  Based on instructor recommendation, qualified students with passing practical welding tests will be selected to test for the AWS certifications.

**Academic Probation Policy (60-Hour Make-Up Period)**

In accordance with school policy and the structured demands of the welding program, students who fall behind in their required coursework, project completion, or skills assessments may be placed on academic probation. Academic probation is a focused, time-bound intervention designed to provide students the opportunity to catch up and demonstrate competency in the required learning outcomes.

**Duration and Requirements:**

- The academic probation period will consist of two weeks, totaling 60 class hours.
- During this time, students are expected to demonstrate dedicated focus and progress toward meeting the course benchmarks and welding skill requirements outlined for their current phase in the program.

- Students on probation must actively engage in completing any outstanding project work, safety modules, or practical demonstrations, including retakes of NCCER tests if necessary.

- Probation is not a break in the educational plan, but a structured extension of instruction and practice, aligned with the competencies expected within each course module.

**Expectations During Academic Probation:**

- Attendance is mandatory throughout the 60-hour probation period. Any unexcused absences may result in dismissal from the program.

- Students must work under direct supervision, maintain strict adherence to all safety procedures, and use appropriate PPE at all times.

- All probation activities must be relevant to the program's learning objectives, including welding performance standards, safety protocol comprehension, and timely completion of assigned tasks and projects.

- Progress will be evaluated daily, and students must demonstrate clear, measurable improvement to be removed from probation status.

**Timeframe for probationary periods**

- The first 60 hour probationary period will begin at 240 hours of the first OCP(Welding Assistant 1 and Welding Assistant 2)
- The second 60 hour probationary period will begin at 240 hours for the second OCP(SMAW 1 and SMAW 2)
- The third probationary period will begin at 390 hours of the Welder OCP

# Student Acknowledgment of Receipt and Agreement to Program Syllabus

**Welding Technology Program**

I acknowledge that I have received a complete copy of the program syllabus for the Welding Technology program. I have carefully read and fully understand the expectations, policies, requirements, and standards outlined in the syllabus, including but not limited to attendance, conduct, safety protocols, academic performance, and program-specific guidelines. I agree to abide by these expectations and commit to achieving the necessary standards for success in this program. I understand that failure to comply may result in disciplinary action, up to and including dismissal from the program.

Date: _____

Student ID Number: _____

Student's Name (Printed): _____

Student's Signature: _____

*(This form should be signed and returned to the instructor on the first day of class. Keep a copy for your records.)*