Welding Technology

Program Number: J400400   **Program Hours:** 1050

Instructor: Steve Dorriety (5:00 PM-9:00 PM)   Walter Miller
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Mission Statement: We prepare and empower today's students to meet the demands of an evolving and competitive workforce.

Program Description:
This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the manufacturing career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the manufacturing career cluster. This program offers a broad foundation of knowledge and skills to prepare students for employment in the welding industry.

The content includes but is not limited to planning, management, technical and product skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

The purpose of the Welding Technology program reflects Emerald Coast Technical College's mission as evidenced by the desire to provide students with the training and education that is required to function successfully in the professional workforce.
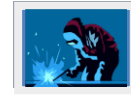
Prerequisites: None

Industry Certification: American Welding Society (AWS)

OCP	Course Number	Course Title	Length	SOC Code
	PMT0070	Welder Assistant 1	150 hours	51-9198
A	PMT0071	Welder Assistant 2	150 hours	51-9198
	PMT0072	Welder, SMAW 1	150 hours	51-4121
B	PMT0073	Welder, SMAW 2	150 hours	51-4121
C	PMT0074	Welder	450 hours	51-4121

Occupational Completion Points:

Program objectives and outcomes include but are not limited to:
01.0   Demonstrate an understanding and apply workplace safety and workplace organization skills.
02.0   Demonstrate basic knowledge of industrial and manufacturing processes.
03.0   Describe and identify metals and their properties accurately.
04.0   Demonstrate and apply basic knowledge of drawing and interpreting AWS welding symbols.
05.0   Apply basic oxyfuel gas cutting principles and practices.
06.0   Create a product using basic oxyfuel gas cutting principles and practices.
07.0   Apply intermediate oxyfuel gas cutting principles and practices.
08.0   Demonstrate plasma arc cutting principles and practices.
09.0   Demonstrate a basic understanding of shielded metal arc welding (SMAW).
10.0   Create a product using basic shielded metal arc welding (SMAW) principles and practices.

11.0   Apply basic shielded metal arc welding (SMAW) skills.
12.0   Demonstrate and apply Carbon Arc Gouging (GAC) principles and practices.
13.0   Apply visual examination skills.
14.0   Create a product using Carbon Arc Gouging and basic shielded metal arc welding (SMAW) principles and practices.
15.0   Demonstrate an understanding of employability skills and career opportunities related to the welding industry.
16.0   Apply intermediate shielded metal arc welding (SMAW) skills.
17.0   Create a product using intermediate shielded metal arc welding (SMAW) principles and practices
18.0   Apply basic gas metal arc welding (GMAW) skills.
19.0   Apply intermediate gas metal arc welding (GMAW) skills.
20.0   Apply basic flux-core arc welding (FCAW) skills.
21.0   Apply intermediate flux-core arc welding (FCAW) skills.
22.0   Apply basic gas tungsten arc welding (GTAW) skills.
23.0   Apply intermediate gas tungsten arc welding (GTAW) skills.
24.0   Demonstrate and apply basic pipe welding principles and practices.

Grading Scale:
 A   93-100
 B   84-92
 C   70-83
 F   69 & Below

Evaluation/Assessment:
Core Curriculum
Welder Assistant 1
Welder Assistant 2
Welder, SMAW 1
Welder, SMAW2
Welder

Satisfactory Progress:
This program is a planned sequence of instruction consisting of three occupational completion points. When the recommended sequence is followed, the structure is intended to prepare students to complete the industry certifications associated with this program of study. This program adheres to the Satisfactory Progress guidelines listed in the ECTC Catalog and Student Handbook.
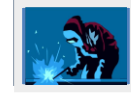
Instructional Delivery Methods:
This program is a traditional program taught on ECTC campus. It uses a variety of instructional delivery methods including but not limited to:
   ❖   Hands-on training
   ❖   Lectures
   ❖   Videos

Conferences and Assistance:
Please contact the instructor first. Counselors located in student services are also available.

Program Syllabus

Classroom Location:
761 N. 20th Street   DeFuniak Springs, Florida 32433
Building 500

Office Location:
761 N. 20th Street   DeFuniak Springs, Florida 32433
Building 500

Office Hours:
Regular office hours for the instructor are 4:30-5:00 p.m. (Mon-Thurs) or W. Miller: 4:30-5:00 p.m. (Mon-Thurs) as scheduled by appointment.

Attendance:
Attendance is mandatory. Students who believe that attendance may present a problem should discuss their situation with the instructor and with student services. Meet with instructor to schedule makeup hours.

Meeting Times/Contact Hours:
Refer to student schedule for class meeting times.

Equipment:
Students will use welding equipment and safety gear used in the industry.

Safety:
- Safety is priority one.
- Report any unsafe conditions to the instructor immediately.
- If you are not comfortable or confident with any lab or project, stop and notify instructor.

Emergency Procedures:
- Emergency exits are clearly marked.
- As part of regular classroom instruction, students will be asked to participate in regular safety and emergency drills.
- Fire extinguishers are located in the lab.
- An eyewash station and first aid kits are located in the lab.

Rules and Regulation / Policies and Procedures:
Students will follow all rules/regulations outlined in the Program Handbook and the Emerald Coast Technical College Catalog and Student Handbook.

General Information:
Refer to the ECTC Catalog and Student Handbook and the program handbook, both located at http://www.ECTC.edu, for additional information:
- Career and Counseling Services
- Services for Students with Disabilities
- Student Grievance Procedures
- Leave of Absence
- Withdrawal
- Forms