##

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Okaloosa Technical College

## Syllabus

## Program Title: Welding Technology & Advanced Welding Technology

## Program Type: Career Preparatory

## Career Cluster: Welding Technology

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**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.**

**Program Structure:** **This program is a planned sequence of instruction consisting of three occupational completion points.**

**The following table illustrates the postsecondary program structure:**

| OCP | Course Number | Course Title | Length | SOC Code |
| --- | --- | --- | --- | --- |
| A | PMT0070PMT0071 | Welder Assistant 1Welder Assistant 2 | 150 hours150 hours | 51-919851-9198 |
| B | PMT0072PMT0073 | Welder, SMAW 1Welder, SMAW 2 | 150 hours150 hours | 51-412151-4121 |
| C | PMT0074 | Welder | 450 hours | 51-4121 |
|  |  |  |  |  |

**Standards:**

**After successfully completing this program, the student will be able to perform the following: 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 basic knowledge of drawing and interpreting 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 knowledge of drawing and interpreting welding symbols**

**08.0 Apply intermediate oxyfuel gas cutting principles and practices.**

**09.0 Demonstrate plasma arc cutting principles and practices.**

**10.0 Demonstrate a basic understanding of shielded metal arc welding (SMAW).**

**11.0 Create a product using basic shielded metal arc welding (SMAW) principles and practices.**

**12.0 Apply basic shielded metal arc welding (SMAW) skills.**

**13.0 Demonstrate and apply Carbon Arc Gouging (GAC) principles and practices.**

**14.0 Apply visual examination skills.**

**15.0 Create a product using Carbon Arc Gouging and basic shielded metal arc welding (SMAW) principles and practices.**

**16.0 Demonstrate an understanding of employability skills and career opportunities related to the welding industry.**

**17.0 Apply intermediate shielded metal arc welding (SMAW) skills.**

**18.0 Create a product using intermediate shielded metal arc welding (SMAW) principles and practices**

**19.0 Apply basic gas metal arc welding (GMAW) skills.**

**20.0 Apply intermediate gas metal arc welding (GMAW) skills.**

**21.0 Apply basic flux-cored arc welding (FCAW) skills.**

**22.0 Apply intermediate flux-cored arc welding (FCAW) skills.**

**23.0 Apply basic gas tungsten arc welding (GTAW) skills.**

**24.0 Apply intermediate gas tungsten arc welding (GTAW) skills.**

**25.0 Demonstrate and apply basic pipe welding principles and practices.**

**Textbooks and/or Equipment/Supplies:**

**Required: Modern Welding 11th Edition, Auto darkening welding helmet, Chipping hammer, 12” wire brush, Vise grip clamp, (OSHA) approved safety glasses, Welding jacket or long sleeve shirts, jeans, welding gloves, steel toed boots**

**Additional Resources:** **National Standards corresponding to the standards and/or benchmarks for the Welding Technology program can be found using the following link:**

<http://www.aws.org/w/a/certification/CW/>

**Grading Criteria and Requirements:**

Grades will be based on quizzes, tests, and skill assessments

\_5\_% Quizzes

20\_% Tests

75\_\_% Skill Assessment

\_0\_% Other

\_\_\_\_\_\_

100%

**Grading Scale:**

90% and above = A

80% - 89.9% = B

70% - 79.9% = C

60% - 69.9% = D

59.9% and below = F

**Skill Assessment Rubric:**

**Make-up Policy:**

All testing and assessments will be scheduled per course syllabus. Make-up work in not allowed unless instructor gives prior approval. The instructor may assign additional outside work to be completed for each absence.

**Attendance:**

See Student handbook for attendance policies. Attendance is not only expected but vital to a student’s success.

**Class Room/Lab Rules:**

1. All students must wear safety and PPE equipment at all time while in the weld shop.
2. Any student not wearing appropriate clothing will remain in the classroom eg. Loose clothing, holes in shirt or pans, clothing that does not fit correctly.
3. Any student leaving the welding program during scheduled hours for any reason, needs to let the Instructor know.
4. No eating in the shop or classroom at any time.
5. Any student caught abusing shop equipment will be written up.
6. No jewelry at any time allowed in the shop.
7. Do not bring expensive items in the weld shop.
8. The class room is for studying and lessons, not for sleeping or playing on your phone.
9. All students must bring paper and pen or pencil along with welding gear each day.
10. The welding shop is for welding projects approved by the instructor.
11. Do not operate any equipment in the welding shop unless you have been properly trained.
12. If a person brings a project in to be fixed, send them to the instructor first for approval and acceptance. Students do not accept any project without instructor’s approval.