Academy of Arts, Careers and Technology (AACT)
Engineering Academy
2020/2021
Welding Technology 3 Syllabus

Total Units of Course Credit
2 Credits
Course pre-requisite(s), Co-requisite(s)
Welding Technology 2
Mode of Instruction and class meeting time(s) Class meeting will vary based on personal or district schedule
In Person Class meets face to face, periods 3 and 7 on A and B days for 85 minutes in room 314 and Lab 310 and room 150 Welding Lab at TMCC 425 Edison Way.
Hybrid program will meet in person one day and remotely one day. Students will be expected to complete most classwork and textbook work during remote time, using teams and Remind, as to allow for lab time on in person days.
Distance learning will be conducted entirely through Microsoft teams and Remind with lab being nearly impossible unless equipment is available at home.

Instructors Name and Contact Information:
James Cooney
Email: jcooney@washoeschools.net
Office location 380 Edison Way Suite 101 RM 311 (inside lab room 310) Reno NV 89502
Office hours 7:45am-8:00 and 3:00-3:30 Daily or by appointment

Course Purpose
The purpose of Welding Technology 3 is to train students to apply safety skills, hands-on skills and knowledge to the lab to prepare students for industry. The program will begin to prepare students for an understanding about equipment and safety in a shop environment. Students will also apply technical skills to complete projects as well as learn about industry expectations and rules. Upon completion of the Welding Technology 3 students will be able to continue within the Engineering and Welding pathways.
This industry is in dire need of qualified people to work in the field. There are not enough qualified people available to fill the amount of jobs across the country. These skills relate to real world careers. Students will have opportunities to compete in Skills USA and participate in activities throughout the year. Successful passing of the state welding exam and career readiness exam earns students 16 college credits through TMCC.

Course Objectives

1. Students will be able to explain how safety is an important part of the shop.
2. Students will be able to demonstrate how to safely operate equipment in the shop.
3. Students will be able to identify safety concerns and problems, including fire prevention.
4. Students will be able to identify, explain the uses and characteristics of, and demonstrate the proper use of various pieces of equipment, in the shop.

5. Students will practice proper shop cleanup and placement of tools and equipment at the end of each class.
6. Students will be able to identify metals.
7. Students will be able to identify, Oxy Fuel Welding (OFW), Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Spray Transfer (GMAW-S), Flux Cored Arc Welding (FCAW), Gas Shielded FCAW-G, Self Shielded FCAW-S and Gas Tungsten Arc Welding (GTAW).
8. Students will be able to identify and demonstrate how to use Oxyfuel Cutting (OFC) and Plasma Arc Cutting (PAC).
9. Students will be able to identify American Welding Society (AWS) welding codes and inspection techniques to become a certified welder. Students will see nondestructive testing with test specimens and tools to be able to precisely measure discontinuities.
10. Students will be able to identify Fabrication techniques and uses.

Assignments/Assessments of student learning outcomes

Welding Technology builds upon itself throughout the year. Student outcomes are expected to be ongoing throughout the class. Much of the assessments are hands on in the shop, but a few will be done through tests.

Class assignments

There will be a series of assignments required in class, which will include required research and notebook material in order to assess comprehension of material.

Welding Lab

Labs will be graded by a series of rubrics as well as individual project completion depending on size requirements and proper procedures. Assessments will include safety, cleanliness of workspace, returning equipment when a student finishes a task. Teamwork, time management, use of equipment, and product waste and techniques.

Participation

Participation in class is a significant part of the education process. From class discussions, demonstrations, labs, safety glasses, safety gear including welding gear. Bring boots, pants and clothes that you do not mind getting dirty and you can store in a locker.

Quizzes and tests

There will be a series of quizzes and tests throughout the year in order to assess learning beyond the lecture and demonstrations.

Grading System

The grading system is designed on a point system for individual items in a weighted category by Washoe County School District and Nevada state mandates. Final grades are calculated by category grades.

Semester 1 and 2 Grading Categories

Classwork 10%
Notebook 10%
Tests 20%
Final 20%
Projects 40%

Grading Scale

90-100%	A
80-89%	B
70-79%	C
60-69%	D
0-59%	F

Textbook

Notebook and provided documentation on Microsoft Teams, we use the Modern Welding book in the classroom.

Class Policies

Classroom Rules

1. Be in the classroom in an approved clothing for that day's activities, before class starts. (On time)
2. Be prepared: In the classroom- Notebook, pen, pencil, paper, etc.
3. Pay attention.
5. All students will need to plan for safety (Hair, jewelry, shoes, drinking i.e. no food or drinks near electrical equipment, etc.)
6. All students will conform to W.C.S.D., TMCC and the Welding Program standards, rules, regulations, and policies. (Including)
    a. Not leaving the class or lab without permission. (Including cars)
    b. Not operating any Lab, classroom equipment until they have been shown the proper procedures.
    c. No smoking when representing the academy or AACT.
    d. Keep notes every day
    e. No electronic devices, such as, radios, phones, cd, ipods, mp3's, computers, etc used without permission.
    f. Proper language
    g. Represent the academy and AACT well
    h. Use appropriate web sites.
    i. Be respectful to everyone at TMCC.
7. Be **appropriate**, **respectful**, and **prepared** always.
8. Students are responsible for cleaning up the labs. Failure to clean, to specifications from a lab project, will result in the loss of points and can affect grades.
9. Rules may be changed or added at any time by the instructor.

Attendance, Participation, and Attitude:

Attendance, participation, and a positive attitude are required in this class. In the work world, you are not allowed to be late to work and since we are developing your work skills, tardiness may not be tolerated. If you are going to be late for class, you may email or send a message on remind to the teacher in advance to notify him. Attendance in all classes is expected; However, just as in the work world absenteeism occurs; the difference is, you are not paid when you do not work. If you are going to miss a class, you may notify the teacher, in advance, to notify them. Your grade could be affected by not being in the lab finishing projects.

Academic Honesty/ Plagiarism Policy:

AACT's Honest/ Plagiarism Policy may be adhered to in this class. Students in this course, as well as all courses, should be aware of strong sanctions against plagiarism as stated in the current Student Handbook. Plagiarism may result in an automatic "F" in the course work and possible expulsion from AACT. In this context, forms of academic dishonesty include but are not limited to:

1. Cheating on tests, examinations, case studies, and other class work.
2. Involvement in plagiarism (the appropriation of another work and the unacknowledged of that work in one's own written work offered for credit.)
3. Collusion (the unauthorized collaboration with another person in preparing course work.

A written statement of the official policies, procedures, and processes related to Academic Honesty/Plagiarism can be found in the Student / Parent Handbook.

Special Accommodations:

In accordance with the American with Disabilities Act and section 504 of the Rehabilitation Act of 1973, students with a documented disability are eligible for support services and accommodations. Services for students with disabilities are offered through the WCSD. Possible accommodations for disabilities include extended testing time, test- taking in isolation, computer use for test taking, tape recorders in class, study skills counseling and shared notetaking in classes. If a student wishes to request an accommodation in one of his or her classes, the student may call WCSD.

In Class Distractions:

During the program involvement time, the attention of all participants is demanded. Cellular phones and pagers may be turned off unless an emergency call is expected. As for the laptops, PDA's, Smart Phones, they can be used for taking notes and for accessing the Internet if you are using it for this class. However, sending e-mails or surfing the web, during class may not be tolerated.

Make-up policy

Projects may be made up or completed at lunch, after school, or during open shop times when students are scheduled to be at the school. Sometimes there could be possibilities during enrichment.

Late Work:

I will accept all assignments up to the last class before the final exam for full credit.

Institutional Policies

For more details of the policies at the Academy of Arts, Careers and Technology, or the Washoe County School District view the Student / Parent handbook