



**Welding and Metal Fabrication
Course Syllabus
2019-2020**

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Course Description

Students will study and practice basic welding principles of SMAW, thermal cutting, FCAW, and GMAW in the flat, horizontal, and vertical positions. Safety and health awareness along with employability skills needed for success in the welding industry will be taught. Common units of measurement will be covered and students will be introduced to blueprint reading. Students will have the opportunity to be involved in welding competitions against other schools and each other. The course is taught through lecture, group work, and personal hands-on lab activities. This course will serve as an introduction to welding as an occupation and industrial safety standards.

Course Content

- Communication Skills/ Soft Skills
- Industrial safety
- Layout
- Welding theory
- Welding electrode selection and usage
- Blueprint reading
- Measurement
- SMAW
- GMAW
- FCAW
- Thermal cutting
- Electrical theory
- Metallurgy
- Fabrication
- Weld inspection
- Current code and standards as established by AWS

Upon successful completion of the program, students will be able to work and communicate competently in the welding industry. Local industry needs will be highlighted and trained. Students will be able to explore and pursue the many career paths under the welding umbrella.

Required Materials

- Leather work shoes/ boots
- Natural fiber long pants and long sleeve shirt or hoodie
- School supplies (pens, pencils, paper etc.)
- Calculator
- A 2 inch three ring binder with 8 dividers used ONLY for the Welding Academy
- A composition notebook with hole punches to be stored in the above three ring binder. Binders are an essential requirement for the class and will be checked for content bi-monthly

Safety is our number one priority in the lab setting. Therefore no personal music devices or earbuds will be permitted the lab. Additionally, all personal protective equipment must be worn, including safety glasses, at all times the lab. Failure to follow safety requirements will result in loss of “Time-Card” points and shop time. No exceptions.

Attendance

All absences must be cleared within 48 hours from the date of the initial absence.

Parents/guardians need to call **360 848-0706** to excused a student’s absence.

- Absences communicated to the student’s sending high school will NOT be relayed to the Northwest Career & Technical Academy. Therefore, parents/guardians must make contact with the Northwest Career & Technical Academy directly, as well as the sending high school, to excuse any absences.
- Technical Academy Student Center staff with verifiable parent/guardian permission before a student to will be allowed to leave campus prior to regular dismissal time. A written note or phone call from a parent/guardian is considered verifiable permission. In addition, all students, even those who have adult status, must sign out at the Administration Office prior to leaving campus. Students who leave campus without proper permission are subject to disciplinary action.
- An automated message will be sent to parents/guardians by phone when a student has an unexcused absence. The instructor will refer the student to a Northwest Career & Technical Academy administrator when the student has reached five or more unexcused absences. In accordance with state law, the Northwest Career & Technical Academy must in turn refer the student to the juvenile court system when the student has seven unexcused absences in a month or ten in an academic year. Additionally, students may face disciplinary action, which may include removal from program due to lack of attendance, as deemed appropriate by Northwest Career & Technical Academy administration.
- A tardy is not being in your seat ready to learn by the start of class, 8:00am. If a student misses more than 30 minutes, the student is marked with an unexcused absence.

Credit Opportunities

High School Credits

- o Occupational Ed. 1.0
- o Technical Math 1.0
- o English 1.0

The Academy Grading Scale

- A 93% and above
- A- 90% - 92.9%
- B+ 88% - 89.9%
- B 83% - 87.9%
- B- 80% - 82.9%
- C+ 78% - 79.9%
- C 73% - 77.9%
- C- 70% - 72.9%
- D+ 68% - 69.9%
- D 60% - 67.9%
- NC 59% and below

Late Work Policy

Late Assignments drop 10% per day late or one full letter grade with a maximum reduction of 50%.

In the event of an excused absence the student will receive two day extension from the day they return to class.

Re-Do Policy

All weld projects can be challenged for a higher score.

All written assignments, tests, and quizzes will be accepted on an as-is basis.

All students at the Academy will be responsible for the rules and expectations laid out in the Student/Employee handbook.

The handbook can and should be downloaded from the website:

<http://www.nwtech.k12.wa.us>

I acknowledge that both the student and parent/guardian have read the above syllabus.

Student Name (printed) _____

Student Signature _____ Date _____

Parent/Guardian _____ Date _____