



School District of Horicon

Course Outline

Learning Targets

Welding Technology

UNIT: Safety

The student will be able to

- Perform skills safely by using specific equipment properly.
- Effectively perform correct safety procedures in the classroom/lab/shop.
- Understand safe and unsafe behaviors and operations.

UNIT: Welding Refresher

The student will be able to

- Inspect all welding equipment (gloves, jackets, helmets) in order to ensure safety, as well as, proper functionality.
- Turn on gas, ground machine, clean nozzles and turn on ventilation to ensure safe welding practice.
- Use half moon and weaving techniques in order to weld a simple review piece that includes stringer beads and blending of beads.

UNIT: Physics/Joint Theory

The student will be able to

- Visualize how metal is fused together.
- Identify what properties are found in metal and how to determine what to use.
- Identify the 5 common welded joints.
- Determine what joint to use depending upon the application.

UNIT: Mig Welding

The student will be able to

- Follow safety protocols when welding with the GMAW process.
- Properly set up for GMAW by adjusting volts, travel speed, work angles & stick out.
- Adjust and manipulate metal into the proper welding joint and position.
- Perform competencies on the 5 basic welding joints.

UNIT: Stick Welding

The student will be able to

- Follow safety protocols when welding with the SMAW process.
- Properly set up for SMAW by adjusting volts, travel speed, work angles & stick out.
- Adjust and manipulate metal into the proper welding joint and position.
- Perform competencies on the 5 basic welding joints.

UNIT: Oxy-Fuel Cutting

The student will be able to

- Incorporate safe practices when using any cutting process.
- Determine how Oxy Fuel cutting processes function and be best used.
- Ignite and control the flame of an oxy fuel torch.
- Perform an oxy fuel cutting process on metal.

UNIT: Symbols/Blueprint Reading

The student will be able to

- Identify parts of the welding symbol.
- Distinguish between “arrow side” and “other side”.
- List what type of information is included in the tail of a weld symbol.
- Apply a weld according to a welding symbol.
- Correctly listing information according to the welding print.

UNIT: Projects & Prints

The student will be able to

- Create something by properly reading a print.
- Correctly reading a print for proper assembly, processes and procedures.

Students will be able to meet the learning targets above as evidenced by formative and summative classroom assessments.