

Metals and Fabrication (2021-)

Demonstrate professional standards/employability skills as required by the industry. [AFNR.HS.23.1](#)

- a** Identify career-development opportunities and opportunities in the associated fields of the welding industry. [AFNR.HS.23.1.A](#)
- b** Apply metal and fabrication concepts in career situations related to metals and fabrication . [AFNR.HS.23.1.B](#)
- c** Examine certifications, credentialing, and compliance within the industry. [AFNR.HS.23.1.C](#)

Demonstrate safety principles, practices, and guidelines to the work environment. [AFNR.HS.23.2](#)

- a** Demonstrate knowledge of safety principles for the laboratory environment and industry. [AFNR.HS.23.2.A](#)
- b** Identify personal and occupational health practices including safety and first-aid practices. [AFNR.HS.23.2.B](#)
- c** Demonstrate awareness of safety devices assembled and installed correctly on tools and devices. [AFNR.HS.23.2.C](#)
- d** Apply the requirements of eye safety protection and other Personal Protection Equipment. [AFNR.HS.23.2.D](#)
- e** Identify potential injuries or illnesses from the industry and laboratory setting. [AFNR.HS.23.2.E](#)

Summarize the components of proper handling and storage of materials. [AFNR.HS.23.3](#)

- a** Identify the proper storage methods of chemicals, hazardous materials, and metal products. [AFNR.HS.23.3.A](#)
- b** Demonstrate proper orientation and operation of all equipment in the laboratory. [AFNR.HS.23.3.B](#)
- c** Identify the composition and classification of the materials. [AFNR.HS.23.3.C](#)

Summarize the scheduling process of a product. [AFNR.HS.23.4](#)

- a** Identify the steps required and equipment needed to create the product. [AFNR.HS.23.4.A](#)
- b** Define schedule requirements to create a product. [AFNR.HS.23.4.B](#)
- c** Identify materials used in the fabrication process. [AFNR.HS.23.4.C](#)

Create a project design, draw, construct, and preserve a metalworking project. [AFNR.HS.23.5](#)

a Plan metalworking projects using simple drawing techniques. [AFNR.HS.23.5.A](#)

b State the use and format of the project and calculate a bill of materials. [AFNR.HS.23.5.B](#)

c Apply metalworking knowledge to plan a project using hand and power tools while demonstrating the safe use of these tools according to industry standards. [AFNR.HS.23.5.C](#)

d Utilize the proper techniques of welding, cutting, and shaping metal for the construction of the project. [AFNR.HS.23.5.D](#)

e Prepare metal projects for finishing by selecting and using appropriate materials for grinding, sanding, and polishing with appropriate materials and finishes. [AFNR.HS.23.5.E](#)