

Welding 3

Apply safety principles, practices, philosophy and guidelines to the work environment. STS.HS.38.1

- a Complete applicable safety assessment with 100% accuracy. STS.HS.38.1.A
- b Use appropriate Personal Protective Equipment (PPE) while in the lab setting. STS.HS.38.1.B
- c Use eye protection in compliance with Neb. Rev. Statute 79-715. STS.HS.38.1.C
- d Carry out the safe application of tools and machines. STS.HS.38.1.D
- e Explain the main hazards that are possible in the lab setting. STS.HS.38.1.E
- f Demonstrate proper handling and storing of materials. STS.HS.38.1.F

Identify career opportunities in the welding industry. STS.HS.38.2

- a Describe work behaviors needed to be employable. STS.HS.38.2.A
- b Identify employment trends in the welding industry. STS.HS.38.2.B
- c Identify the responsibilities and characteristics of professionals in the welding industry. STS.HS.38.2.C
- d Identify the training, education, certification, and licensing requirements for careers in the welding industry. STS.HS.38.2.D

Demonstrate the use of welding communications. STS.HS.38.3

- a Explain welding terminology. STS.HS.38.3.A
- b Identify a quality weld according to the American Welding Society (AWS). STS.HS.38.3.B
- c Measure metric and imperial measurements within an accuracy of a millimeter or 1/64 of an inch. STS.HS.38.3.C
- d Explain mechanical drawings according to the American National Standards Institute (ANSI). STS.HS.38.3.D
- e Explain welding symbols according to the AWS. STS.HS.38.3.E
- f Solve mathematical functions used in welding. STS.HS.38.3.F
- g Explain information from a welding procedure sheet. STS.HS.38.3.G

Identify the materials, tools, fasteners, and equipment needed to weld. STS.HS.38.4

- a Identify tools and their use in welding.** STS.HS.38.4.A
- b Identify welding equipment and proper set up procedures according to the manufacturer's recommendations.** STS.HS.38.4.B
- c Identify the material used in welding.** STS.HS.38.4.C
- d Identify the filler material used in welding.** STS.HS.38.4.D
- e Determine types of fasteners, adhesives, and finishes used for welding.** STS.HS.38.4.E
- f Identify automated or emerging technologies in welding.** STS.HS.38.4.F

Perform metal cutting operations. STS.HS.38.5

- a Perform an abrasive cutting procedure.** STS.HS.38.5.A
- b Perform a mechanical cutting procedure.** STS.HS.38.5.B
- c Perform a hot (flame) source cutting operation.** STS.HS.38.5.C
- d Perform an arc cutting operation.** STS.HS.38.5.D
- e Perform an automated cutting operation.** STS.HS.38.5.E

Join material using any methods of welding procedure in the flat, horizontal, vertical, and overhead positions. STS.HS.38.6

- a Create a pad of surface welds with no welding defects according to the AWS.** STS.HS.38.6.A
- b Create groove joints with no welding defects according to AWS standards.** STS.HS.38.6.B
- c Create fillet welds with no welding defects according to AWS standards.** STS.HS.38.6.C
- d Perform an AWS standard bend test.** STS.HS.38.6.D

Produce a product with welding processes that are available. STS.HS.38.7

- a Create a drawing with welding symbols according to AWS.** STS.HS.38.7.A
- b Perform mathematical calculations to estimate the cost of materials for the product.** STS.HS.38.7.B
- c Produce and finish the product to specifications.** STS.HS.38.7.C