Nebraska CTE

Manufacturing Production - Metals

Apply safety principles, practices, philosophy, and guidelines to the work environment. STS.HS.24.1	**a** Complete applicable safety assessment with 100% accuracy. STS.HS.24.1.A
	b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting. STS.HS.24.1.B
	c Employ eye protection in compliance with Neb. Rev. Statute 79–715. STS.HS.24.1.C
	d Employ the safe application of tools and machines. STS.HS.24.1.D
	e Explain the main hazards that are possible in the lab setting. STS.HS.24.1.E
	f Demonstrate proper handling and storing of materials and chemicals. STS.HS.24.1.F
Execute accurate measurements using metals measurement and layout tools. STS.HS.24.2	**a** Identify types of metals measurement and layout tools. STS.HS.24.2.A
	b Categorize metals measurement and layout tools by use. STS.HS.24.2.B
	c Demonstrate the accurate use of measurement and layout tools to 0.010” or 0.001” precision or 1mm precision. STS.HS.24.2.C
Solve math functions and formulas to complete metals job/workplace tasks. STS.HS.24.3	**a** Identify whole numbers, decimals, fractions, and complex numbers. STS.HS.24.3.A
	b Apply basic arithmetic operations. STS.HS.24.3.B
	c Solve decimal and fraction conversions. STS.HS.24.3.C
Identify career opportunities in the metals manufacturing industry. STS.HS.24.4	**a** Describe work behaviors needed to be employable. STS.HS.24.4.A
	b Describe appropriate work behavior that meets or exceeds metals manufacturing industry standards. STS.HS.24.4.B
	c Identify the education, certification, or licensure required in metals manufacturing careers. STS.HS.24.4.C

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	d Identify the value that may be added to the community by metals manufacturing professionals. STS.HS.24.4.D
	e Identify the industry standard compensation for a metals manufacturing professional. STS.HS.24.4.E
Demonstrate use of metal manufacturing communications. STS.HS.24.5	a Define metal manufacturing terminology. STS.HS.24.5.A
	b Estimate metal manufacturing timelines based on criteria. STS.HS.24.5.B
	c Demonstrate business and interpersonal communication appropriate to the work environment. STS.HS.24.5.C
Describe the materials, tools, machines, and processes required to manufacture a metal product. STS.HS.24.6	a Identify the characteristics, properties, and origin of diverse metals. STS.HS.24.6.A
	b Differentiate between additive and subtractive manufacturing. STS.HS.24.6.B
	c Categorize fasteners by their industry standard applications. STS.HS.24.6.C
	d Differentiate between various types of mechanical fasteners. STS.HS.24.6.D
	e Determine feed rate and speed settings for a material and process. STS.HS.24.6.E
	f Explain the operation and application of common industry chemicals. STS.HS.24.6.F
	g Assess potential environmental and health impacts of using specific materials and/or processes. STS.HS.24.6.G
	h Estimate amount of materials and supplies needed for a product. STS.HS.24.6.H
	i Determine the correct tools, machines and processes needed to produce a specific metal product. STS.HS.24.6.I
Produce a production-level metalworking project. STS.HS.24.7	a Interpret plans, drawings, and specifications to process materials. STS.HS.24.7.A
	b Coordinate the standard operation and application of tools and machines along the manufacturing process. STS.HS.24.7.B
	c Apply the type of materials, processes, and finishes required to manufacture a specific metal product. STS.HS.24.7.C
	d Critique a finished product. STS.HS.24.7.D
	e Appraise the manufacturing process for streamlining opportunities. STS.HS.24.7.E