

# Drafting and Design

Apply safety principles, practice, philosophy, and guidelines to the work environment. [STS.HS.13.1](#)

- a** Employ eye protection in compliance with Neb. Rev. Statute 79-715. [STS.HS.13.1.A](#)
- b** Identify office safety hazards. [STS.HS.13.1.B](#)
- c** Employ appropriate Personal Protective Equipment (PPE). [STS.HS.13.1.C](#)
- d** Employ proper ergonomics. [STS.HS.13.1.D](#)
- e** Complete applicable safety assessment with 100% accuracy. [STS.HS.13.1.E](#)

Identify career opportunities in the drafting industry. [STS.HS.13.2](#)

- a** Identify the various careers, primary duties, and attributes of a drafting technician or a design engineer. [STS.HS.13.2.A](#)
- b** Identify the training, education, certification and licensing requirements for various careers of a drafting technician or design engineer. [STS.HS.13.2.B](#)
- c** Identify the relationships between stakeholders involved in a manufacturing project. [STS.HS.13.2.C](#)
- d** Identify positive work behaviors and personal qualities needed to be employable. [STS.HS.13.2.D](#)
- e** Identify high-wage, high-demand, and high-skill drafting careers. [STS.HS.13.2.E](#)

Apply math terminology, functions, and formulas to mechanical drafting. [STS.HS.13.3](#)

- a** Identify whole numbers, decimals, fractions, and complex numbers. [STS.HS.13.3.A](#)
- b** Apply arithmetic operations. [STS.HS.13.3.B](#)
- c** Solve decimal/fraction conversions. [STS.HS.13.3.C](#)
- d** Explain scale using architect or engineer scales. [STS.HS.13.3.D](#)

Apply conventional drafting standards used in mechanical drafting. [STS.HS.13.4](#)

- a** Identify terms and definitions commonly used in the mechanical drafting profession. [STS.HS.13.4.A](#)
- b** Employ multiple sketching methods such as oblique, isometric and/or orthographic projection. [STS.HS.13.4.B](#)

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**c Apply dimensional information and general notes in mechanical plans.** STS.HS.13.4.C

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**Utilize drafting and design technology.** STS.HS.13.5

**a Employ the appropriate technology tools (i.e., CAD, SolidWorks, Fusion 360, Inventor, etc.) for conveying information, solving problems, and expediting workplace processes.** STS.HS.13.5.A

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**b Employ basic computer and information technology skills used in the drafting industry.** STS.HS.13.5.B

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**c Employ ethical digital citizenship.** STS.HS.13.5.C

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**Produce a multiview working drawing.** STS.HS.13.6

**a Explain working drawings.** STS.HS.13.6.A

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**b Determine types of materials, fasteners, adhesives, and finishes needed to build a product.** STS.HS.13.6.B

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**c Produce applicable drawing views, schedules, notes, and index tables.** STS.HS.13.6.C

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**d Produce and label section lines.** STS.HS.13.6.D

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**e Produce and label detail drawings.** STS.HS.13.6.E

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**f Produce dimensions.** STS.HS.13.6.F