Iowa CTE

Construction

Students understand and apply measurement systems in the planning and layout process used in the residential construction industry. CON1	1 **Identify design solutions for residential construction problems.** CON1.1 2 **Calculate required materials for residential construction applications.** CON1.2 3 **Convert scaled blueprint drawing measurements to full dimensions for a given construction project.** CON1.3 4 **Apply conventional construction measurement processes accurately (geometric and trigonometric functions).** CON1.4 5 **Know the use of conventional construction formulas to determine production requirements.** CON1.5
Students understand the safe and appropriate use of hand tools common to the residential and commercial construction industry. CON2	1 **Use the common hand tools of the trade, such as hammers, torches, pliers, wire cutters, pipe cutters, saws, chisels (wood and concrete) and wrenches, safely and properly.** CON2.1 2 **Maintain and care for hand tools used in residential and commercial construction.** CON2.2
Students understand the safe and appropriate use of portable power tools that are common to the residential construction industry and are appropriate to the individual student's level. CON3	1 **Use portable power tools, such as circular saws, table saws, saber saws, drills, planers and sanders, safely and properly.** CON3.1 2 **Use portable pneumatic tools, such as rough framing nail guns, interior finishing and brad nail guns, hammers, impact wrenches, drills and compressors, safely and appropriately.** CON3.2 3 **Maintain and care for portable power tools and portable pneumatic tools.** CON3.3
Students understand project management procedures and processes as they occur in a construction project. CON4	1 **Interpret and use residential construction blueprints and specifications.** CON4.1 2 **Understand how to estimate materials from blueprints and specifications.** CON4.2 3 **Understand the sequencing of events for specific construction projects.** CON4.3 **olve common residential construction problems, such as framing, plumbing and lectrical, by using the official codes.** CON4.4

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	5 Understand industry conventions for the creation and maintenance of construction logs. CON4.5
	6 Understand customer service/relations as applied to project management and wholesale and retail sales. CON4.6
Students understand the value and necessity of practicing occupational safety in the construction industry facility and job site. CON5	1 Understand the safe use of electrical connection methods and electrical wiring procedures. CON5.1
	2 Know the safety procedures and practices in various work environment settings pertaining to residential and commercial construction. CON5.2
Students understand the variety of building phases, systems and techniques used in residential and commercial construction. CON6	1 Develop building plans and schedules by using processes common to residential and commercial construction. CON6.1
	2 Understand the processes and materials (e.g., structural, electrical, mechanical, finish) appropriate to the architectural design and residential construction. CON6.2
	3 Prepare the site layout and the site, including the grading and engineering of the building pad. CON6.3
	4 Complete the phases of residential and commercial construction. CON6.4
Students understand the impact of financial, technical, environmental and labor trends on the past and future of the construction industry. CON7	1 Understand significant historical trends in the construction industry. CON7.1
	2 Develop plans for construction projects. CON7.2
	3 Understand the environmental regulations that influence residential and commercial. CON7.3