

Construction Trades I

Career Cluster	Architecture and Construction
Course Code	17002
Prerequisite(s)	Introduction to Architecture and Construction
Credit	.5 - 1
Program of Study and Sequence	Foundation Courses, Introduction to Architecture and Construction, Construction Trades I, Residential Construction, Capstone
Student Organization	SkillsUSA
Coordinating Work-Based Learning	This standard includes Workplace Tours, Service learning and Apprenticeship
Industry Certifications	None
Dual Credit or Dual Enrollment	TBD
Teacher Certification	Architecture & Construction Cluster Endorsement; Construction Pathway Endorsement; Construction Trades I Endorsement;
Resources	

Course Description:

Students will gain insight into the career within construction by developing practical skills such as safety on the jobsite, construction math, use of hand/power/pneumatic tools, basic residential blueprint reading, basic land surveying techniques, building construction, plumbing, electrical, concrete, employability skills and career exploration required to succeed in the construction industry.

Program of Study Application

This is the third course in the suggested sequence of the Residential Construction Program of Study. It is recommended that it is preceded by (1) Foundation Courses, (2) Introduction to Architecture and Construction, and followed by (4) Construction Trades II-Residential and (5) Capstone Experience.

Indicator # CT 1 Understand and Apply Industry Safety Procedures

Webb Level	Sub-indicator	Integrated Content
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Level 2 Skill/ Concept	CT1.1 Identify and demonstrate the proper industry safety standards	
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Indicator # CT 2 Utilize appropriate industry math skills and formulas

Webb Level	Sub-indicator	Integrated Content
Level 2 Skill/ Concept	CT2.1 Understand and demonstrate basic math skills and formulas	

Indicator # CT 3 Identify and correctly use appropriate hand, power, and pneumatic tools

Webb Level	Sub-indicator	Integrated Content
Level 2 Skill/ Concept	CT3.1 Demonstrate safe and proper use of hand tools.	
Level 2 Skill/ Concept	CT3.2 Demonstrate safe and proper use of power tools	
Level 2 Skill / Concept	CT3.3 Demonstrate safe and proper use of pneumatic tools.	

Indicator # CT 4 Understand blueprint reading and perform basic survey techniques

Webb Level	Sub-indicator	Integrated Content

Level 3 Strategic Thinking	CT4.1 Demonstrate how to read blueprints.	
Level 3 Strategic Thinking	CT4.2 Demonstrate basic survey techniques.	

Indicator # CT 5 Apply basic organizational, spatial, structural and construction principles of carpentry

Webb Level	Sub-indicator	Integrated Content
Level 3 Strategic Thinking	CT 5.1 Demonstrate the understanding of the building process by the building of a construction project.	

Indicator # CT 6 Study principles, standards and applications of plumbing

Webb Level	Sub-indicator	Integrated Content
Level 1 Recall	CT6.1 Define safety procedures for plumbing.	
Level 2 Skill/Concept	CT6.2 Distinguish pipe sizes, fittings, adapters, and coupling.	
Level 3 Strategic Thinking	CT6.3 Demonstrate the use of plumbing materials.	

Indicator # CT 7 Employ basic knowledge and methods of electrical wiring

Webb Level	Sub-indicator	Integrated Content
Level 1 Recall	CT7.1 Select electrical materials considering safety.	
Level 2 Skill/ Concept	CT7.2 Identify electrical materials.	
Level 3 Strategic Thinking	CT7.3 Illustrate uses of electrical materials.	

Indicator # CT 8 Employ basic knowledge and methods of concrete technology

Webb Level	Sub-indicator	Integrated Content
Level 1 Recall	CT8.1 Identify safe practice associated with concrete materials	
Level 3 Strategic Thinking	CT8.2 Calculate the various required ingredients used in concrete.	
Level 4 Extended Thinking	CT8.3 Employ application of concrete in different situations.	

Indicator # CT 9 Student will participate in career exploration activities

Webb Level	Sub-indicator	Integrated Content
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Level 4 Extended Thinking	CT9.1 Research career opportunities in residential and commercial (including horizontal and vertical) construction.	
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