Colorado CTE Course – Scope and Sequence

Course Name	Introduction to Construction	Course Details		.5	
		Course = 0.50 Carnegie Unit Credit		**(Middle- level 3)**	
Course Description	The Introduction to Construction course will focus on basic safety, trade math and measurement, and an introduction to tools and materials in residential construction as well as employability skills to prepare the student for higher level courses in this field.				
Note:	This is a suggested scope and sequence for the course content. The content will work with any textbook or instructional resource. If locally adapted, make sure all essential knowledge and skills are covered. These competencies and outcomes align with the HBI PACT Core.				
SCED Identification #	Schedule calculation based on 60 calendar days of a 90-day semester. Scope and sequence allows for additional time for guest speakers, student presentations, field trips, remediation, or other content topics.				
All courses taught in an approved CTE program must include Essential Skills embedded into the course content. The Essential Skills Framework for this course can be found at **https://www.cde.state.co.us/standardsandinstruction/essentialskills**					

Instructional Unit Topic	CTE or Academic Standard Alignment	Competency / Performance Indicator	Outcome / Measurement	CTSO Integration
Safety		Safe working practices	Describe and practice safe use of hand and power tools.	SkillsUSA integration throughout
			Distinguish between safe and unsafe installation practices.	
			Inspect work area to ensure a safe working environment.	
			Identify hazardous conditions associated with tools and equipment.	
			Identify hazardous conditions associated with work areas.	
			Identify hazardous conditions associated with chemicals/supplies.	
			Select and wear proper safety attire on the job site including personal protective equipment. [PPE] (safety glasses, safety footwear, hearing protection, hard hats, etc.)	
			Accept the responsibility of the personal safety of other workers.	

				Demonstrate the ability to report all injuries immediately to the instructor.	
				Demonstrate personal safety rules/OSHA regulations.	
				Demonstrate shop safety rules/OSHA regulations.	
				Locate and operate fire safety equipment.	
				Demonstrate safe use of ladders and scaffolding.	
				Demonstrate safe fall protection procedures and equipment use.	
				Demonstrate the ability to properly lift and carry construction materials.	
			Basic First Aid		
				Identify locations of all first aid equipment and materials.	
				Demonstrate basic first aid practices	
Construction Math			Basic Construction Math		
				Read a rule to the nearest 16th of an inch	
				Calculate whole numbers using addition, subtraction, multiplication, and division.	
				Calculate fractions using addition, subtraction, multiplication, and division	
				Calculate decimals using addition, subtraction, multiplication, and division.	
				Add, subtract, multiply, and divide measurements using measuring tools.	
				Calculate square foot and lineal foot measurements	
				Apply specific formulas for estimating materials.	
				Calculate ranges, ratios, and indexes such as a HERS Energy Index.	
			Print Reading		
				Read and interpret basic construction prints.	
				Identify basic architectural symbols and abbreviations.	
				Demonstrate proper use of tools used to determine square.	
				Demonstrate proper use of tools used to determine plumb.	
				Demonstrate proper use of tools used to determine level.	

Tools and Construction Materials			Hand Tools	Demonstrate the proper use, care, and maintenance of hand tools	
				Describe safety rules for each hand tool.	
				Demonstrate the proper use, care, and maintenance of ladders and scaffolding.	
				Identify/select appropriate hand tools for specific tasks in carpentry	
				Identify/select appropriate hand tools for specific tasks in electrical.	
				Identify/select appropriate hand tools for specific tasks in plumbing.	
				Identify/select appropriate hand tools for specific tasks in brick masonry.	
				Identify/select appropriate hand tools for specific tasks in landscaping	
				Identify/select appropriate power tools for specific tasks in Building Construction Technology.	
				Demonstrate the proper use, storage, and handling of materials, chemicals, and compounds used in various trade areas.	
			Construction Materials		
				Demonstrate the proper use, storage, and handling of materials, chemicals, and compounds used in various trade areas.	
				Identify/select appropriate construction equipment and materials for specific tasks in carpentry	
				Identify/select appropriate construction equipment and materials for specific tasks in electrical.	
				Identify/select appropriate construction equipment and materials for specific tasks in plumbing.	
				Identify/select appropriate construction equipment and materials for specific tasks in brick masonry	

			Identify/select appropriate construction equipment and materials for specific tasks in landscaping.	
			Identify/select appropriate construction equipment and materials for specific tasks in Building Construction Technology.	
			Identify/select appropriate construction equipment and materials for specific tasks in painting and finishing	
		Measuring and calculating		
			Demonstrate proper use of measurement tools.	
Careers/ Employability		Preparing for the Workforce		
			Obtain documentation for employment.	
			Obtain government-issued driver's license.	
			Identify and describe industry-related job qualifications.	
			Use media, Internet, and other resources to contact employers for job opportunities.	
			Practice and successfully complete a job application.	
			Create a résumé	
			Practice and interview for a job.	
			Follow up with employers about interview and job.	
		Professionalism in the workplace		
			Demonstrate compliance with a drug-free workplace.	
			Respond appropriately to supervision.	
			Follow written and verbal directions.	
			Complete assigned tasks.	
			Work safely.	
			Dress appropriately for work.	
			Arrive for work on time.	
			Shows respect for tools, materials and other's property.	
			Work as a team member with diverse races, sexes, ages, and cultures, treating all with respect.	