

TTUSD COURSE DESCRIPTION FORM: Adult Education

Department:	Adult Education	Course Title:	NCCER: Core (Intro to Construction Trades)		
Course Level:	NA	Grade Level:	Adult	Course Length:	Year Long
Funded by:	WIOA II and CAEP grants	Leads to High School Equivalency:	No	College Prep:	Yes
Prerequisites:	Students must be eighteen years of age or older				
Resources and Materials (textbook):	NCCER: Core				

Course Description:

The National Center for Construction Education and Research (NCCER) is one of two nationally recognized construction-industry curriculum and certification agencies. The instructor for this course must be certified by NCCER as an NCCER Core Instructor in order to teach the course. The computer-based written summative assessment must be proctored by an NCCER certified Curriculum Proctor. And the summative performance assessment portion must be evaluated by an NCCER certified Curriculum Performance Evaluator for the Core curriculum.

The NCCER Core course serves as the introductory course to NCCER's various construction trades paths, such as Construction Technology, Welding, HVAC, Electrical, and Plumbing. Upon successful passing of the written and performance components of all of the modules within the Core curriculum, students will earn NCCER Core certification that is recognized by the construction trades. This certification will also serve as the prerequisite should the student decide to pursue NCCER certification along one of the NCCER construction trades paths.

This course meets the Adult Education goals at the federal level (Workforce Innovation Opportunity Act: WIOA II) and at the state level (California Adult Education Program: CAEP) by preparing adult CTE learners in one year or less for employment in a high need industry identified by local or regional Labor Market Information (LMI) data as provided by the Centers of Excellence (COE) for our region.

The NCCER Core curriculum is accessed by students via their online portal NCCERConnect, which allows this course to have an in-person and a distance-learning component. With this course being provided by CAEP funding within the Sierra Assets Adult Education Consortium, students from our partner Adult Education programs at Placer Adult School, Roseville Adult School, Nevada County Adult School, and Sierra College have the opportunity to fill empty seats in this class via distance learning. Prior to the Covid-19 pandemic, TTUSD Adult Education had leveraged WIOA II and CAEP grant funding to be prepared to offer distance learning options for our courses. This option is also offered internally within TTUSD in order to provide equitable access to adult learners regardless of where in our district they live. This distance learning component is one of the federal and state-level goals for Adult Education.

Goals: (Expected performance outcomes for students)

- **Module 1: Basic Safety: Students will be able to (SWBAT)**
 - Explain the benefits of safety, the cost of workplace incidents, and ways to reduce related hazards.
 - Describe common fall hazards and methods to prevent them.
 - Properly set up and climb/descend an extension ladder, demonstrating proper three-point contact, inspect PPE items (fall arrest harnesses, lanyards, connecting devices) and determine if they are safe to use, and properly don, fit, and remove PPE (fall arrest harnesses).


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- Recognize and avoid struck-by hazards and how to avoid them
- Identify common electrical hazards and how to avoid them
- Under supervision, inspect a typical power cord and GFCI to ensure their serviceability
- Associate PPE with the hazards they reduce or eliminate (such as eye, ear, respirator, gloves, hard hat, etc..)
- Under supervision, inspect PPE items and determine if they are safe to use
- Under supervision, properly don, fit, and remove PPE items
- Describe safety practices used with other common job-site hazards
- **Module 2: Construction Math: SWBAT**
 - Identify whole numbers and solve basic arithmetic problems with them
 - Name fraction types and calculate with fractions
 - Identify decimal numbers and calculate with them
 - Name the common length-measuring tools and use them to measure lengths accurately
 - Name common length, weight, volume, and temperature units in both the inch-pound and metric systems and convert them into other comparable units
 - Classify angles and geometric shapes, as well as calculating their areas or volumes
 - Using a measuring tape:
 - Measure lumber pieces in both English and metric units
 - Measure a room-sized space in both English and metric units
 - Determine a short inside measurement in both English and metric units
 - Add English measurements that include fractions
- **Module 3: Introduction to Hand Tools: SWBAT**
 - Name common hand tools and state how to use them
 - Identify common measurement and layout tools and describe how to use them
 - Identify and describe other hand tools common to shops and job sites
 - Inspect and demonstrate the safe and proper use of the following hand tools: Hammers, Demolition tools, Chisels and punches, Screwdrivers, Adjustable wrenches, Non-adjustable wrenches, Sockets, Pliers, Tape measures, Levels, Squares, Handsaws, Clamps, Files, Utility knives, Shovels
- **Module 4: Introduction to Power Tools: SWBAT**
 - Identify and explain how to use various types of power drills and impact wrenches
 - Identify and explain how to use various types of power saws
 - Describe the types of jobs best suited to grinders and oscillating multi-tools
 - Identify and explain how to use miscellaneous power tools
 - Safely and properly demonstrate the use of the following tools: Electric drill (corded or cordless), Hammer drill, Impact driver, Circular saw, Jigsaw, Reciprocating saw, Portable band saw, Miter or cutoff saw, Table saw, Portable or bench grinder, Oscillating multi-tool, Power nailer

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- **Module 5: Introduction to Construction Drawings (Residential): SWBAT**
 - Describe components and features used in construction drawings and identify how the drawings are different
 - Summarize the purpose of the six basic construction drawing components
 - List and explain the significance of various drawing elements, such as lines of construction, symbols, and grid lines
 - Explain how dimensions relate to various drawing scales
 - Demonstrate how to use engineer's and architect's scales
 - Identify the six types of construction drawings
 - Using the supplied residential floor plans and elevations: SWBAT
 - Locate the wall common to bedroom #3 and the garage
 - Determine the overall width of the home
 - Calculate the distance from the outside northwest corner of the house to the center of the window in bedroom #2
 - Determine the overhang of the eaves
 - Using an architect's scale, determine the width of the garage.
- **Module 6: (optional) Introduction to Basic Rigging: SWBAT**
 - Identify and describe various types of rigging slings, hardware, and equipment
 - Demonstrate the proper ASME Emergency Stop hand signal
 - Demonstrate the ability to report the load capacity of a sling, and whether the sling is too damaged to use
- **Module 7: Basic Communication Skills: SWBAT**
 - Describe the communication, listening, and speaking processes and their relationship to job performance
 - Describe good reading and writing skills and their relationship to job performance
 - Perform a given task after listening to oral instructions
 - Fill out a work-related form provided by the instructor
 - Read and interpret a set of instructions for properly donning a safety harness and then orally instruct another person on how to don the harness
- **Module 8: Basic Employability Skills: SWBAT**
 - Describe the opportunities in the construction businesses and how to enter the construction workforce
 - Explain the importance of critical thinking and how to solve problems
 - Explain the importance of social skills and identify ways good social skills are applied in the construction trade
- **Module 9: Introduction to Material Handling**
 - Identify the basic concepts of material handling and common safety precautions
 - Identify various types of material handling equipment and describe how they are used
 - Demonstrate safe manual lifting techniques
 - Demonstrate how to tie two of the following common knots: Square, Bowline, Half hitch, Clove hitch

Evaluation:

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This is a not-for credit course that leads toward NNCER Core certification for students who pass the summative written and performance assessments for these modules.

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