CONSTRUCTION CORE
Course Syllabus

Course Number: CNST-0766  OHLAP Credit: No
OCAS Code: None
Course Length: 120 Hours
Career Cluster: Architecture and Construction
Career Pathway(s): Construction, Design/Pre-Construction, Maintenance/Operations
Career Major(s): Carpentry, Masonry, Architecture & Construction Academy

Pre-requisite(s):
Course Description: This is an introduction to basic safety, construction math, hand tools, power tools, blueprints, rigging, communication skills, and employable skills.

Textbooks:

Course Objectives:
A. Complete Administrative Requirements for Enrollment.
   1. Discuss district, school, and class policies and procedures.
   2. Discuss NCCRE Certification requirements.
   3. Discuss grading criteria.

B. Orientation To The Construction Trades
   1. Describe the history of construction.
   2. Identify the responsibilities of a person working in the construction industry.
   3. State the personal characteristics of a professional.
   4. Explain the importance of safety in the construction industry.

C. Basic Safety
   1. Identify the responsibilities and personal characteristics of a professional craftperson.
   2. Explain the role that safety plays in the construction crafts.
   3. Describe the meaning of job-site safety.
   4. Describe the characteristics of a competent person and a qualified person.
   5. Explain the appropriate safety precautions to take around common job-site hazards.
   6. Demonstrate the use and care of appropriate personal protective equipment (PPE).
      a. Safety Goggles.
      b. Hard Hat.
      c. Gloves.
      d. Safety harness.
      e. Safety Shoes.
   7. Properly don and remove personal protective equipment (safety goggles, hard hat, and personal fall protection).
8. Follow the safety procedures required for lifting heavy objects.  
9. Describe safe behavior on and around ladders and scaffolds.  
10. Explain the importance of Hazard Communications (HazCom) and material safety data sheets (MSDSs).  
11. Describe fire prevention and firefighting techniques.  
12. Define safe work procedures to use around electrical hazards.  
13. All applicable safety tests will be completed with 100% accuracy.

D. Construction Math
1. Add, subtract, multiply, and divide whole numbers, with and without a calculator.  
2. Use a standard ruler to measure.  
3. Use a metric ruler to measure.  
4. Add and subtract fractions.  
5. Multiply and divide fractions.  
6. Add, subtract, multiply, and divide decimals, with and without a calculator.  
7. Convert decimals to percentages and percentages to decimals.  
8. Convert fractions to decimals and decimals to fractions.  
9. Explain what the metric system is and how it is important in the construction trade.  
10. Recognize and use metric units of length, weight, volume, and temperature.  
11. Recognize some of the basic shapes used in the construction industry.  
12. Apply basic geometry to measure the basic shapes used in the construction industry.

E. Demonstrate An Understanding Of Basic Communication Skills.  
1. Demonstrate the ability to interpret information and instructions presented in both written and verbal form.  
2. Demonstrate the ability to communicate effectively in on-the-job situations using written and verbal skills.

F. Demonstrate An Understanding Of Basic Employability Skills.  
1. Explain the construction industry, the role of the companies that make up the industry, and the role of individual professionals in the industry.  
2. Demonstrate critical thinking skills and the ability to solve problems using those skills.  
3. Demonstrate knowledge of computer systems, and explain common uses for computers in the construction industry.  
4. Demonstrate effective relationship skills with teammates and supervisors, the ability to work on a team, and appropriate leadership skills.  
5. Be aware of workplace issues such as sexual harassment, stress, and substance abuse.

G. Demonstrate An Understanding Of Basic Blueprint Reading.  
1. Recognize and identify:  
   a. Basic blueprint terms  
   b. Components  
   c. Symbols.  
2. Relate information on blueprints to actual locations on the print.  
3. Recognize different classifications of drawings.  
4. Interpret and use drawing dimensions.
H. Demonstrate An Understanding Of Basic Rigging Practices.

1. Identify and describe the use of slings and common rigging hardware.
2. Describe basic inspection techniques and rejection criteria used for slings and hardware.
3. Describe basic hitch configurations and their proper connections.
4. Describe basic load-handling safety practices.

1 Core-Introductory Craft Skills, National Center for Construction Education and Research (NCCER)

Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures: 1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

Available Certifications/College Credit The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.

College Credit Eligibility: The student must maintain a grade point average of 2.0 or better.