| Course Acronym: | CTFC |
|-------------------------------|--|
| Course Number: | |
| | Fundamentals of Construction |
| Division: | Industry and Technology |
| Department: | Construction Technology |
| Course Disciplines: | Construction Technology |
| Catalog Description: | In this noncredit course, students learn all the skills necessary to complete a specific construction application. Students also learn safety, tool operation, material handling, and math applications. |
| Prerequisite: | |
| Co-requisite: | |
| Recommended Preparation: | |
| Enrollment Limitation: | |
| Hours Lecture (per week): | 3 |
| Hours Laboratory (per week): | 9 |
| Outside Study Hours: | 1 |
| Total Course Hours: | 12 |
| Course Units: | 0 |
| Grading Method: | Pass/No Pass only |
| Credit Status: | Non Credit |
| Transfer CSU: | No |
| Effective Date: | |
| Transfer UC: | No |
| Effective Date: | |
| General Education: ECC | |
| Term: | |
| Other: | |
| CSU GE: | |
| Term: | |
| Other: | |
| IGETC: | |
| Term: | |

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| Other: | |
|--------------------|---|
| Student Learning | SLO #1 Safety Procedures Upon completion of this course, students will be able to list safety procedures relevant to the construction process covered in the course. SLO #2 Tool Usage Upon completion of this course, students will be able to demonstrate proper usage of tools used in the construction process covered in the course. SLO #3 The Construction Process Upon completion of this course, students will be able to perform the construction process. |
| Course Objectives: | Identify proper safety equipment and situations when the equipment is appropriate. Create a materials list for a construction project. Accurately estimate the cost of a construction project. Properly utilize tools for a construction project. Handle materials safely and properly. |
| Major Topics: | I. Safety (1 hour, lecture) A. Personal Protective Equipment (PPE) B. Occupational Safety and Health Administration (OSHA) standards II. Work Preparation (1 hour, lecture) A. Materials list B. Estimating cost III. Construction Processes (1 hour, lecture) A. Preparing the job site B. Tool usage C. Handling materials D. Math application IV. Construction Processes (9 hours, lab) A. Preparing the job |

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| C. Using tools D. Math application E. Completing a construction project Total Laboratory Hours: Total Hours: Primary Method of Evaluation: Typical Assignment Using Primary Method of Evaluation: Critical Thinking Assignment 1: Critical Thinking Assignment 1: Critical Thinking Assignment 2: Other Evaluation Other Evaluation Methods: Multiple Choice Performance Exams Demonstration Methods: Multiple Choice Performance Exams Demonstration Froulp Activities Lab Lecture Role Play/simulation If other: Work Outside of Class: Alternative Texts: Alte | | P. Handling materials |
|--|------------------------------|---|
| Total Lecture Hours: Total Laboratory Hours: Total Hours: Total Hours: Primary Method of Evaluation: Typical Assignment Using Primary Method of Evaluation: Critical Thinking Assignment 1: Critical Thinking Assignment 2: Critical Thinking Assignment 3: Critical Thinking Assignment 3: Critical Thinking Assignment 3: Critical Thinking Assignment 4: Demonstration Graph At 9: Plan the installation of a sprinkler system in the front yard of a residential property. The Assignment 2: Critical Thinking yard is a rectangle measuring 20' x 43'. Indicate on the worksheet provided the number Assignment 2: Other Evaluation Methods: Demonstration Group Activities Lab Lecture Role Play/simulation Instructional Methods: Instructional Methods: If other: Up-To-Date Representative Texts: Alternative T | | B. Handling materials |
| E. Completing a construction project Total Lecture Hours: Total Laboratory Hours: Primary Method of Evaluation: Typical Assignment Using Primary Method of Evaluation: Critical Thinking Assignment 1: Critical Thinking Assignment 2: Critical Thinking Assignment 2: Other Evaluation Methods: In the construction yard dig a 3' x 3' square plot ensuring you have 90 degree angles by using the 3-4-5 method. Once you are finished, your instructor will check to see if your plot is square. Plan the installation of a sprinkler system in the front yard of a residential property. The yard is a rectangle measuring 20' x 43'. Indicate on the worksheet provided the number of sprinkler zones needed. Be sure to consider the flow rate in gallons per minute. Submit worksheet to the instructor. Class Performance Matching Item Multiple Choice Performance Exams Demonstration Group Activities Lab Lecture Role Play/simulation If other: Work Outside of Class: If Other: Up-To-Date Representative Texts: Alternative Texts: | | C. Using tools |
| Total Lecture Hours: Total Laboratory Hours: Total Hours: Primary Method of Evaluation: Typical Assignment Using Primary Method of Evaluation: Critical Thinking Assignment 1: Critical Thinking Assignment 1: Critical Thinking Assignment 2: Critical Thinking Assignment 3: Critical Thinking Assignment 3: Critical Thinking Assignment 4: Critical Thinking Assignment 5: Critical Thinking Assignment 6: Diaboratory Plan the installation of a sprinkler system in the front yard of a residential property. The yard is a rectangle measuring 20' x 43'. Indicate on the worksheet provided the number of sprinkler zones needed. Be sure to consider the flow rate in gallons per minute. Submit worksheet to the instructor. Class Performance Matching Item Multiple Choice Performance Exams Demonstration Group Activities Lab Lecture Role Play/simulation If other: Work Outside of Class: Alternative Texts: Alternative Te | | D. Math application |
| Total Lecture Hours: Total Laboratory Hours: Primary Method of Evaluation: Typical Assignment Using Primary Method of Evaluation: Critical Thinking Assignment 1: In the construction yard dig a 3' x 3' square plot ensuring you have 90 degree angles by using the 3-4-5 method. Once you are finished, your instructor will check to see if your plot is square. Plan the installation of a sprinkler system in the front yard of a residential property. The Critical Thinking Assignment 2: Other Evaluation Methods: Other Evaluation Methods: In the construction yard dig a 3' x 3' square plot ensuring you have 90 degree angles by using the 3-4-5 method. Once you are finished, your instructor will check to see if your plot is square. Plan the installation of a sprinkler system in the front yard of a residential property. The yard is a rectangle measuring 20' x 43'. Indicate on the worksheet provided the number of sprinkler zones needed. Be sure to consider the flow rate in gallons per minute. Submit worksheet to the instructor. Class Performance Matching Item Multiple Choice Performance Exams Demonstration Group Activities Lab Lecture Role Play/simulation If other: Work Outside of Class: Alternative Texts: Alternative Texts: Alternative Texts: Alternative Texts: None Required Supplementary Readings: | | |
| Total Laboratory Hours: Total Hours: Primary Method of Evaluation: Typical Assignment Using Primary Method of Evaluation: In the construction yard dig a 3' x 3' square plot ensuring you have 90 degree angles by using the 3-4-5 method. Once you are finished, your instructor will check to see if your plot is square. Plan the installation of a sprinkler system in the front yard of a residential property. The Yardina Assignment 2: Critical Thinking Assignment 2: Critical Thinking Assignment 2: Critical Thinking Assignment 2: Other Evaluation Methods: Other Evaluation Methods: Instructional Methods: Instructional Methods: If other: Up-To-Date Representative Texts: Alternative Texts: Alternative Texts: Required Supplementary Readings: | | |
| Total Hours: Total Hours: 12 | Total Lecture Hours: | |
| Primary Method of Evaluation: Typical Assignment Using Primary Method of Evaluation: Critical Thinking Assignment 1: In the construction yard dig a 3' x 3' square plot ensuring you have 90 degree angles by using the 3-4-5 method. Once you are finished, your instructor will check to see if your plot is square. Plan the installation of a sprinkler system in the front yard of a residential property. The yard is a rectangle measuring 20' x 43'. Indicate on the worksheet provided the number of sprinkler zones needed. Be sure to consider the flow rate in gallons per minute. Submit worksheet to the instructor. Class Performance Other Evaluation Methods: Multiple Choice Performance Exams Demonstration Group Activities Lab Lecture Role Play/simulation If other: Work Outside of Class: Problem solving activity Skill practice Up-To-Date Representative Texts: None Required Supplementary Readings: | Total Laboratory Hours: | 9 |
| Typical Assignment Using Primary Method of Evaluation: Critical Thinking Assignment 1: Critical Thinking Assignment 2: Critical Thinking Assignment 2: Other Evaluation Methods: Instructional Methods: Instructional Methods: Instructional Methods: If other: Work Outside of Class: If Other: Up-To-Date Representative Texts: Alternative Texts: Measure, cut, and install underlayment for ceramic tile in an 8' x 5' space. Consult your instructor will check to see if your plot is square. Measure, cut, and install underlayment for ceramic tile in an 8' x 5' space. Consult your instructor will check to see if your plot is square. In the construction yard dig a 3' x 3' square plot ensuring you have 90 degree angles by using the 3-4-5 method. Once you are finished, your instructor will check to see if your plot is square. Plan the installation of a sprinkler system in the front yard of a residential property. The front yard of a residential property. The variety and the action of a sprinkler system in the front yard of a residential property. The front yard of a residential property. The variety and the instructor. Class Performance Matching Item Multiple Choice Performance Exams Demonstration Group Activities Lab Lecture Role Play/simulation Not Applicable Not Applicable None Not Applicable None | Total Hours: | 12 |
| Using Primary Method of Evaluation: Critical Thinking Assignment 1: Critical Thinking Assignment 1: Critical Thinking Assignment 1: Critical Thinking Assignment 2: Plan the installation of a sprinkler system in the front yard of a residential property. The yard is a rectangle measuring 20' x 43'. Indicate on the worksheet provided the number of sprinkler zones needed. Be sure to consider the flow rate in gallons per minute. Submit worksheet to the instructor. Class Performance Other Evaluation Methods: Instructional Methods: Instructional Methods: Instructional Methods: If other: Up-To-Date Representative Texts: Alternative Texts: Not Applicable None Required Supplementary Readings: | _ | 3) Skills demonstration |
| Assignment 1: Critical Thinking Assignment 2: Plan the installation of a sprinkler system in the front yard of a residential property. The yard is a rectangle measuring 20' x 43'. Indicate on the worksheet provided the number of sprinkler zones needed. Be sure to consider the flow rate in gallons per minute. Submit worksheet to the instructor. Class Performance Other Evaluation Methods: Instructional Methods: Instructional Methods: Instructional Methods: If other: Work Outside of Class: Problem solving activity Skill practice Vp-To-Date Representative Texts: Alternative Texts: None Required Supplementary Readings: | Using Primary Method | |
| Critical Thinking Assignment 2: of sprinkler zones needed. Be sure to consider the flow rate in gallons per minute. Submit worksheet to the instructor. Class Performance Matching Item Multiple Choice Performance Exams Demonstration Group Activities Instructional Methods: If other: Work Outside of Class: If Other: Up-To-Date Representative Texts: Alternative Texts: Alternative Texts: Readings: Assignment 2: of sprinkler zones needed. Be sure to consider the worksheet provided the number of sprinkler zones and the more should be sure to consider the flow rate in gallons per minute. Submit worksheet to the instructor. Class Performance Matching Item Multiple Choice Performance Exams Demonstration Group Activities Lab Lecture Role Play/simulation If other: Up-To-Date Representative Texts: Alternative Texts: Not Applicable None | _ | using the 3-4-5 method. Once you are finished, your instructor will check to see if your |
| Other Evaluation Methods: Multiple Choice Performance Exams Demonstration Group Activities Lab Lecture Role Play/simulation If other: Work Outside of Class: If Other: Up-To-Date Representative Texts: Alternative Texts: Alternative Texts: None Matching Item Multiple Choice Performance Exams Demonstration Group Activities Lab Lecture Role Play/simulation If other: Notle Matching Item Multiple Choice Performance Exams Demonstration Group Activities Lab Lecture Role Play/simulation Notle Matching Item Multiple Choice Performance Exams Demonstration Group Activities Lab Lecture Role Play/simulation Not Applicable Not Applicable Not Applicable Supplementary Readings: | _ | yard is a rectangle measuring 20' \times 43'. Indicate on the worksheet provided the number of sprinkler zones needed. Be sure to consider the flow rate in gallons per |
| Instructional Methods: Group Activities Lab Lecture Role Play/simulation If other: Work Outside of Class: If Other: Up-To-Date Representative Texts: Alternative Texts: Required Supplementary Readings: | | Matching Item Multiple Choice |
| Work Outside of Class: If Other: Up-To-Date Representative Texts: Alternative Texts: Required Supplementary Readings: | Instructional Methods: | Group Activities Lab Lecture |
| Work Outside of Class: If Other: Up-To-Date Representative Texts: Alternative Texts: None Required Supplementary Readings: | If other: | |
| Up-To-Date Representative Texts: Alternative Texts: None Required Supplementary Readings: | Work Outside of Class: | |
| Representative Texts: None Required Supplementary Readings: | If Other: | |
| Alternative Texts: None Required Supplementary Readings: | - | Not Applicable |
| Supplementary Readings: | • | None |
| | Supplementary | |
| Other Required Materials: Instructor-created materials and handouts | Other Required Materials: | Instructor-created materials and handouts |
| Requisite: | Requisite: | |

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| Category: | |
|--|-------------|
| Requisite course(s): List | |
| both prerequisites and | |
| corequisites in this box. | |
| Requisite and Matching skill(s):Bold the | |
| requisite skill. List the | |
| corresponding course | |
| objective under each | |
| skill(s). | |
| Requisite Skill: | |
| Requisite Skill and | |
| Matching Skill(s): Bold the requisite skill(s). If | |
| applicable | |
| Requisite course: | |
| Requisite and Matching | |
| skill(s):Bold the | |
| requisite skill. List the | |
| corresponding course | |
| objective under each | |
| skill(s). | |
| Requisite Skill: | |
| Requisite Skill and Matching skill(s): Bold | |
| the requisite skill. List | |
| the corresponding | |
| course objective under | |
| each skill(s). If applicable | |
| Enrollment Limitations | |
| and Category: | |
| Enrollment Limitations | |
| Impact: | |
| Course Created by: | Ross Durand |
| Course Created by. | |
| Date: | 05/14/2019 |
| | |
| Original Board Approval Date: | 5/18/2020 |
| Last Reviewed and/or | |
| Revised by: | Ross Durand |
| | 11/20/2023 |
| Last Board Approval | |
| Date: | 01/17/2024 |
| Effective Term: | FALL 2024 |
| | |

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