



Course Outline

2026-2027 Catalog

ITEC 55 - Introduction to Industrial Trades

Catalog Description

Transfer Status: CSU

Unit(s): 2.00

Lecture: 17.00 Contact hours/34.00 Out of class hours/51.00 Total hours/1.00 Unit(s)

Lab: 51.00 Contact hours/0.00 Out of class hours/51.00 Total hours/1.00 Unit(s)

Total: 68.00 Contact hours/34.00 Out of class hours/102.00 Total hours/2.00 Unit(s)

Course Description: This course is designed to provide pre-employment training for industrial trades. Emphasis will be placed on developing basic safety skills, tool identification, basic rigging and material handling skills, with soft skills training. These areas of instruction will be reinforced by hands-on application in several performance lab exercises. This course is part of the National Center For Construction Education and Research (NCCER) core curriculum qualification.

Objectives

Upon successful completion of this course, the student should be able to:

1. Practice safety skills that are required on job-sites.
2. Demonstrate the use and care of appropriate personal protective equipment (PPE).
3. Add, subtract, multiply, and divide whole numbers, with and without a calculator.
4. Convert fractions to decimals and decimals to fractions.
5. Identify and properly use hand and power tools.
6. Interpret and use drawing dimensions.
7. Demonstrate proper use of American National Standards Institute (ANSI) hand signals.
8. Interpret information and instructions presented in both verbal and written form.
9. Demonstrate critical thinking skills and the ability to solve problems using those skills.
10. Choose appropriate materials-handling techniques.

Course Content

Topic Titles / Suggested Time Topic

Lecture

<u>Topics</u>	<u>Lec Hrs</u>
Basic Safety	1.00
Introduction to Construction Math	3.00
Introduction to Hand Tools	1.00
Introduction to Power Tools	1.50
Introduction to Construction Drawings	2.50
Basic Rigging	1.00
Basic Electricity	1.00
Basic Communication Skills	1.50
Basic Employability Skills	1.00
Introduction to Material Handling	1.50
Industrial Technology Trade Careers	2.00

Total Hours: 17.00

Lab

<u>Topics</u>	<u>Lab Hrs</u>
Basic Safety	4.00
Introduction to Construction Math	4.50
Introduction to Hand Tools	2.50
Introduction to Power Tools	6.00
Introduction to Construction Drawings	8.00
Basic Rigging	3.00
Basic Electricity	6.00
Basic Communication Skills	3.00
Basic Employability Skills	3.00

<u>Topics</u>	<u>Lab Hrs</u>
Introduction to Material Handling	5.00
Industrial Technology Trade Careers	6.00
Total Hours:	51.00

Methods of Instruction

- A. Demonstrations
- B. Field Trips
- C. Group Discussions
- D. Guest Speakers
- E. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
- F. Laboratory Experiments

Methods of Evaluation

- A. Exams/Tests
- B. Quizzes
- C. Papers
- D. Projects
- E. Homework
- F. Written Assignments

Examples of Assignments

Reading Assignments

1. Read assigned trade journal article and be prepared to discuss in class.
2. Read the selection on basic electricity and be prepared to discuss in class.

Writing Assignments

1. Write an order of operations for rigging setup for lifting materials.
2. Write a two-page essay, explaining how the trade journal article can be implemented in workplace safety and how it relates to the class.

Out-of-Class Assignments

1. Research online the proper process for setting up an electrical circuit using manufactures publications and be prepared to discuss in class.
2. Research OSHA publications for the use and safety of power tools properly and write a one-page essay. Read NCCER module 6 and then answer the review questions at the end of the module.

Recommended Materials of Instruction

National Center for Construction Education and Research (NCCER). (2021). CORE: Introduction to Basic Construction Skills. *Pearson Education INC*, 6th Edition. 9780137483341.

Other Learning Materials

All tools listed in the Butte College Core Program Guide

Minimum Qualifications

Construction Technology
Manufacturing Technology
Welding
Agricultural Engineering
Air Cond,Refrig,Heating
Industrial Technology

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