

Curriculum and Instruction

CTE Course of Study Outline

Title of Course of Study **Construction Technology 2 CTE**

Course Number: _____ *(Assigned by Curriculum Department)*

CTE Course of Study Adoption Process		
PROCEDURES:		
1		Write/revise Course of Study. (If course is available at other district sites, all current teachers of that course must collaborate on the revision.)
2		Review with CTE Principal and acquire signature
3		Technology review if any technology components used (attach Tech Ticket)
4		If this course shares a CTE Pathway with CTE Teachers at other sites, email course of study to appropriate CTE sector staff at all high schools
5		CTE Administrator and CTE Teachers that share the same pathway review and discuss course of study and sign.
6		Course of study MUST be complete, including required signatures, and submitted to Curriculum Dept. 2 weeks prior to the scheduled Curriculum Council meeting.
7		Assistant Superintendent, Curriculum & Instruction - Review/Sign
8		Assistant Superintendent, Secondary Education - Review/Sign
9		Present course of study to Curriculum Council
10		Curriculum Council Recommends
11		Board of Education Approves

Note: Please complete all sections. Enter "none" or "n/a" as appropriate.

I. Course Title: Construction Technology 2 CTE

II. Industry Sector: Building and Construction Trades

Pathway Name: Residential and Commercial Construction **Pathway Number:** 123

Calpads: 7341

CTE Course Level:

- Introductory Course
- Concentrator Course
- Capstone Course
- Capstone Course (standalone 300+ hours)

Course of Study Proposal Reason:

- New Course
- Curriculum Update
- Textbook Update
- UC/CSU a-g Update
- Course Title Change

III. Length of Course: 1 year **Credit Value:** 10

Meets Lodi USD high school graduation requirement credits

Elective course credit
No credit

IV. Grade:

- 9th
- 10th
- 11th
- 12th

V. Course Level: General CP Honors Pre-AP AP

VI. Is this an Internet-based course? Yes No (e.g. Apex, Odysseyware...)
If so, who is the course provider?

VII. UC/CSU Approved Course:

Do you wish to submit this course to the UCOP to obtain UC/CSU a-g approval?

Yes No

Is this course modeled after a UC-approved course from another district?

Yes No If so, which school/district?

VIII. Recommended UC/CSU Subject Area Pathway:

(Please complete each section as required by the UC system)

A. History/Social Science

E. Languages Other than English

B. English

F. Visual/Performing Art

C. Math

G. Elective

D. Lab Science

IX. Subject Area Code for Lodi USD Graduation Requirements (select all that apply):

B. Fam Lvg/World Geography

L. Life Science

C. Economics

M. Mathematics

D. Driver's Ed

P. Physical Education

E. English

S. Physical Science

F. Fine Arts/World Lang/CTE

U. US History

G. Government

W. World History

H. Health/Safety

Y. Elective

- X. COURSE DESCRIPTION:** *Use this section to emphasize the core knowledge and skills students are expected to learn in the course, including concepts, theory and texts. There should be clear evidence of the course's level of rigor and the development of essential critical thinking skills.*

The Course Description is comprised of three sections:

1. COURSE OVERVIEW:

This course covers a more advanced knowledge of safety, use of hand and power tools, blueprint reading, and geometry. Students will learn all aspects of framing, including floor, wall, and roof framing. Students will have the opportunity to learn about and perform basic residential electrical wiring, plumbing, and roof installation. Integrated throughout the course are foundation standards, which include communication, ethics, interpersonal/team skills, critical thinking and other employment skills needed for the construction industry. Each unit will have a different team leader assigned to it so that all students will have the opportunity to lead their team through a phase of the construction process. Students in this course will have the opportunity to take the OSHA 10 hour safety course to obtain their lifetime safety certificate.

2. HIGHLY RECOMMENDED PREREQUISITES:

Building Trades and Construction I CTE

3. COURSE CONTENT:

Unit 1: Floor Framing

In this unit, students will learn how to calculate area. They will establish and check layout and framing for square. They will learn to identify the name and purpose of the members involved in the construction of floors, and how they are assembled. Students will learn to assess floor framing adherence to code, cleanliness, and accuracy (compared to prints and scale).

Estimated number of class periods: 25

Unit Assignment:

Under the direction of their team leader, students will layout and assemble a shed floor using the correct materials in the correct order. They will work in teams and be required to demonstrate their understanding of floor construction and terminology through verbal communication and physical demonstrations. Students will have to demonstrate their understanding of safe working procedures in a construction environment.

Unit 2: Wall Framing

In this unit, students will learn to identify the primary members of a wood stick-framed wall and how to layout and construct walls from blueprints. Students will correctly use the terminology associated with wood wall framing and be able to name and state the purpose of the members involved in the construction of wood stick-framed walls, and how they are assembled.

Estimated number of class periods: 30

Unit Assignment:

Under the direction of their team leader, students will work to layout, construct, and stand up four shed walls. They will use verbal and physical skills to demonstrate their knowledge of the order of construction in preparation for, and the processes of wall framing and be able to identify what properly constructed wall sections look like. Students will have to demonstrate their understanding of safe working procedures in a construction environment.

Unit 3: Roof Framing

In this unit, students will learn how to layout and construct a conventionally stacked roof from blueprints. Students will learn about the different styles of roofs. Students will learn how to correctly use the terminology associated with wood framed roofs and be able to identify the name and purpose of the members involved in the construction of a conventionally stacked roof, and how they are assembled. They will learn how to assess scale roof framing; adherence to code, cleanliness, squareness, and accuracy (compared to prints and scale).

Estimated number of class periods: 25

Unit Assignment:

Under the direction of their team leader, students will work to construct a conventionally stacked roof on the shed walls built in the previous unit. Students will use their verbal and physical skills to demonstrate their understanding of conventionally stacked roof terminology and construction. They will be able to identify properly constructed roof sections. Students will have to demonstrate their understanding of safe working procedures in a construction environment.

Unit 4: Siding

In this unit, students will learn how to properly identify the different types of siding used in the construction industry and when and where to use them. They will learn the name and purpose of the members involved in the construction siding and trim.

Estimated number of class periods: 20

Unit Assignment:

Under the direction of their team leader, students will work to install siding on the walls of the shed that were built in unit 2. They will demonstrate their understanding of siding through verbal and physical demonstrations using correct terminology. Students will assess the siding for adherence to code, cleanliness, squareness and accuracy (compared to prints and scale).

Unit 5: Electrical

In this unit, students will learn how to name and identify electrical symbols while reading electrical plans and define terms related to electrical safety. They will develop and apply basic skills in electrical wiring work and layout and install a circuit. Students will learn how to identify tools and equipment used by electricians today. Students will learn how to identify electrical hazards and how to avoid or minimize them on the job site.

Estimated number of class periods: 20

Unit Assignment:

Under the direction of their team leader, students will work to layout and install circuits including switches and receptacles in the shed walls previously built. They will demonstrate their knowledge of electricity by using correct terminology and identifying tools and equipment used in the electrical trades. Students will have to demonstrate their understanding of safe working procedures when working with electricity and be able to identify potential hazards.

Unit 6: Plumbing

In this unit, students will develop and apply basic skills in plumbing. They will learn to identify parts, tools, and equipment used in the plumbing trade. Students will learn how to assess plumbing's adherence to code, cleanliness, and accuracy (compared to prints and scale).

Estimated number of class periods: 20

Unit Assignment:

Under the direction of their team leader, students will work to plumb sinks that are in portable workstations, as the sheds will not be equipped with plumbing. They will learn how to set sinks and plumb the valves and p-trap assemblies. Students will have to demonstrate their understanding of plumbing through verbal and physical demonstrations. Students will have to demonstrate their understanding of safe working procedures in a construction environment.

Unit 7: Doors and Windows

In this unit, students will learn to identify the different types of doors and windows. They will learn about the different types of glass and their uses. Students will also learn the purpose of window flashing and how to properly install it.

Estimated number of class periods: 20

Unit Assignment:

Under the direction of their team leader, students will work to install 2 windows and 1 door in the previously framed shed. They will learn how to properly install flashing prior to window installation. They will demonstrate their understanding through verbal communication of proper terminology and through physical demonstrations. Students will assess the doors and windows by checking for squareness and reveal.

Unit 8: Roofing

In this unit, students will learn about the different types of roofing materials and their practical applications. Students will learn the name and purpose of members involved in roofing. They will also learn the importance of a properly flashed roof and how to accomplish that.

Estimated number of class periods: 20

Unit Assignment:

Under the direction of their team leader, students will work to properly sheath, flash and install asphalt composition shingles on the previously built shed. They will have to demonstrate their knowledge by verbally using correct terminology and physically installing the roofing material. Students will assess the roof for; adherence to code, cleanliness, squareness, and accuracy (compared to prints).

XI. Texts and Supplemental Instructional materials:

(Primary, Supplemental, newspapers, magazines, and software.)

Please supply ISBN #'s for all texts.

Title: Basic Principles for Construction, Fifth Edition

Author: Mark Huth

Publisher: Cengage

Date of Publication: 2020 **ISBN #:** 978-1-337-91382-9

Board Approval Date: _____


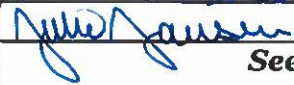
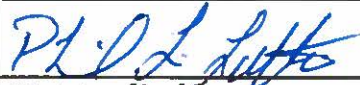



Title: Workbook: Basic Principles for Construction, Fifth Edition


Author: Mark Huth

Publisher: Cengage

Date of Publication: 2020 **ISBN #:** 978-1-337-91385-0

Board Approval Date: _____

SIGNATURES for REVIEW		
Outline prepared by		Site: Lodi HS
CTE Principal		Site: Lincoln Technical Academy
Technology Representative (if applicable)	See attached Web Ticket	
Teacher Representative:	<i>Signature indicates course is aligned to CTE Model Standards.</i>	** Please state reason for no signature in the space below.
Lodi High School		
Bear Creek High School	Not Applicable	Not taught at this site & no current Pathway Teacher
McNair High School	Not Applicable	Not taught at this site & no current Pathway Teacher
Tokay High School	Not Applicable	Not taught at this site & no current Pathway Teacher
Principal		
Lodi High School		
Assistant Superintendent Curriculum & Instruction		
Assistant Superintendent, Secondary Education		

DATE	
9/3/2021	Date sent and/or presented to principal for review
9/3/2021	Course Outline Submitted
	Curriculum Council Recommendation for Approval
	Board of Education Approval