



El Camino College
COURSE OUTLINE OF RECORD – Approved

I. GENERAL COURSE INFORMATION

Subject and Number: Noncredit Construction Technology 2
Course Disciplines: Basic Forklift
Course Discipline: Construction Technology
Division: Industry and Technology

Catalog Description:

In this noncredit course, students learn basic safety and operation of forklifts including lifting principles, load rating, stability, and operation techniques.

Conditions of Enrollment:

Recommended Preparation: Possession of a valid California Driver's License or equivalent

Course Length: Full Term
Hours Lecture: 20.00 hours
Hours Laboratory: 10.00 hours
Total Hours: 30.00 hours

Course Units: 0.00

Grading Method: Pass/No Pass
Course Type: NonCredit

Transfer CSU: No
Transfer UC: No

General Education:
El Camino College

CSU GE:

IGETC:

II. OUTCOMES AND OBJECTIVES

A. COURSE STUDENT LEARNING OUTCOMES (The course student learning outcomes are listed below, along with a representative assessment method for each. Student learning outcomes are not subject to review, revision or approval by the College Curriculum Committee)

SLO #1 Developing a Plan

Upon completion of this course, students will be able to develop a plan for the safe operation and procedure for operating a forklift.

SLO #2 Safe Operation

Upon completion of this course, students will be able to demonstrate the ability to safely operate a forklift.

SLO #3 Recognition and Application of Forklifts

Upon completion of this course, students will be able to recognize the various types of forklifts and understand their application

B. COURSE OBJECTIVES (The major learning objective for students enrolled in this course are listed below)

1. Identify all operational and safety components on the forklift.
2. Perform a pre-operational inspection as prescribed by the Occupational Safety and Health Administration (OSHA) in order to evaluate and predict safety hazards.
3. Demonstrate the following:
 - a. Turning a forklift on and off
 - b. Starting and stopping
 - c. Raising and lowering lift
 - d. Driving in forward and reverse direction
 - e. Driving up and down a ramp with a load
 - f. Driving in forward and reverse
 - g. Slings a suspended load
4. Correctly and safely compensate if forklift tips.
5. Calculate load capacity by referring to data plate.
6. Interpolate load center rating with a variety of conditions
7. Judge and estimate the number of maneuvers required to place a 20ft beam through a 16ft entrance.

III. OUTLINE OF SUBJECT MATTER Topics should be detailed enough to enable a qualified instructor to determine the major areas that should be covered as well as ensure consistency from instructor to instructor and semester to semester.

Lecture or Lab	Approximate Time in Hours	Topic Number	Major Topics
Lecture	2	I	Introduction to the Forklift A. History of lift truck industry B. Safety requirements C. Category and use of equipment D. Driving skills E. Characteristics of a forklift F. Types of forklifts G. Attachments
Lecture	3	II	Safety A. OSHA standards B. Safety videos C. Safety tests
Lecture	2	III	Parts of a Forklift A. Controls B. Forks C. Chassis D. Mast
Lecture	2	IV	Pre-Operational Check A. Fluids B. Tires C. Leaks
Lecture	2	V	Data Plate A. Mast and back tilt B. Capacity
Lecture	3	VI	Load Limitations A. Center of gravity B. Static forces vs. dynamic forces 1. Load characteristics 2. Lift height 3. Amount of tilt 4. Tire condition 5. Acceleration 6. Travel speed 7. Braking 8. Surface condition
Lecture	3	VII	Forklift stability A. Fulcrum B. Load C. Calculating stability
Lab	10	VIII	Operation A. Start, stop B. Forward, reverse C. Loading and unloading

			D. Raising and lowering load E. Stacking F. Picking up a load G. Maneuvering H. Slings a load suspended from a chain or cable I. Using the drum attachment J. Driving up and down a ramp
Lecture	3	VIX	Liquefied Petroleum Gas (LPG) Forklifts A. Procedure for refueling or changing tank B. Characteristics of LPG 1. Heavier than air 2. Flammable 3. Odored
Total Lecture		20	
Total Laboratory		10	
Total Hours		30	

IV. PRIMARY METHODS OF EVALUATION AND SAMPLE ASSIGNMENTS

A. PRIMARY METHOD OF EVALUATION

Skills demonstrations

B. TYPICAL ASSIGNMENT USING PRIMARY METHOD OF EVALUATION

In a class setting, safely pick up and transport a pallet of ceramic tiles 20 yards and then stack it on top of another pallet.

C. COLLEGE LEVEL CRITICAL THINKING ASSIGNMENTS

1. In a 3- to 5-minute oral presentation explain what the stability triangle is and its importance for the safe operation of a forklift.
2. In a 3- to 5-minute oral presentation explain how to calculate forklift load center and why it is important to know the forklift load center.

D. OTHER TYPICAL ASSESSMENT AND EVALUATION METHODS:

Objective Exam
Performance Exams
True/False
Matching Items
Multiple Choice

V. INSTRUCTIONAL METHODS:

Lecture
Lab
Demonstration
Role play/simulation

Note: In compliance with Board Policies 1600 and 3410, Title 5 California Code of Regulations, the Rehabilitation Act of 1973, and Sections 504 and 508 of the Americans with Disabilities Act, instructional delivery shall provide access, full inclusion, and effective communication for students with disabilities.

VI. WORK OUTSIDE OF CLASS: Select from this list.

Study
Answer questions

Estimated Study Hours Per Week: 2 hours

VII. TEXTS AND MATERIALS

A. UP-TO-DATE REPRESENTATIVE TEXTBOOKS

Not Applicable

B. REQUIRED TEXTS (title, author, publisher, year)

None

C. REQUIRED SUPPLEMENTARY READINGS

D. OTHER REQUIRED MATERIALS

Instructor-generated materials and handouts

VIII. CONDITIONS OF ENROLLMENT

A. Requisite/s (Course and Non-Course Prerequisite/s and Corequisite/s).

Requisites	Category and Justification
------------	----------------------------

B. Requisite Skills

Requisite Skills – Matching

C. Recommended Preparations (Course and Non-Course)

Recommended Preparation	Category and Justification
Non Course Recommended Preparation California driver’s license	In order for the student to be able to operate a forklift, it is recommended for a student to have a valid state driver’s license and possess: <ul style="list-style-type: none">• basic motor vehicle operational knowledge• understanding of motor vehicle laws• knowledge of safe driving practices• familiarity with typical automobile controls
Non Course Recommended Preparation Or equivalent	If a student does not possess a valid California Driver’s License but has a valid military, out of state or international license, the student has the skills needed to enroll in this course.

D. Recommended Skills

Recommended Skills

E. Enrollment Limitations

Enrollment Limitations and Category	Enrollment Limitations Impact
-------------------------------------	-------------------------------

Course created by: ROSS DURAND on 03/01/2020

BOARD APPROVAL DATE: 05/18/2020

LAST BOARD APPROVAL DATE:

Last Reviewed and/or Revised by