HORT 91 Course Outline as of Fall 2024

CATALOG INFORMATION

Dept and Nbr: HORT 91 Title: LANDSCAPE CONST/ESTIM
Full Title: Landscape Construction/Estimation
Last Reviewed: 4/26/2021

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	3.00	6	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00 Total Student Learning Hours: 157.50

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
Introduction to the field of landscape contracting, including cost estimating and bidding procedures. Course includes hands-on experience with tools, materials, and methods used in the construction of wood and simple concrete and masonry landscape features. This course also prepares students for the C-27 landscape contractor's licensing exam and national industry certification. This course requires students to: walk, stand, crouch for long periods of time and carry out strenuous physical tasks; work with hand tools, power tools, and landscape materials; work outdoors in various conditions including heat, humidity, rain, dust, noise, and cold; and lift up to 50 pounds repeatedly within a 3 hour period.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 100 OR EMLS 100 (formerly ESL 100) or equivalent

Limits on Enrollment:

Schedule of Classes Information:
Description: Introduction to the field of landscape contracting, including cost estimating and

bidding procedures. Course includes hands-on experience with tools, materials, and methods used in the construction of wood and simple concrete and masonry landscape features. This course also prepares students for the C-27 landscape contractor's licensing exam and national industry certification. This course requires students to: walk, stand, crouch for long periods of time and carry out strenuous physical tasks; work with hand tools, power tools, and landscape materials; work outdoors in various conditions including heat, humidity, rain, dust, noise, and cold; and lift up to 50 pounds repeatedly within a 3 hour period. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended: Eligibility for ENGL 100 OR EMLS 100 (formerly ESL 100) or equivalent
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**			Effective:	Inactive:
CSU GE:	**Transfer Area**			Effective:	Inactive:
IGETC:	**Transfer Area**			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Fall 2004	Inactive:	
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Both Certificate and Major Applicable

COURSE CONTENT

Student Learning Outcomes:
At the conclusion of this course, the student should be able to:
1. Interpret landscape plans; select lumber, tools, materials and estimate the costs for a construction project.
2. Design basic masonry landscape features and select materials for construction.
3. Demonstrate the necessary skills for successful performance on the C-27 landscape contractor's licensing exam.

Objectives:
At the conclusion of this course, the student should be able to:
1. Evaluate careers in the landscape industry.
2. Describe C-27 licensing requirements.
3. Interpret landscape plans in order to construct a specific landscape element.
4. Select lumber, tools, and materials for basic landscape construction projects.
5. Estimate the cost of materials and labor for basic landscape construction projects.
6. Describe the various materials that can be used to construct a fence.
7. Design basic wood landscape features.
8. Calculate riser to tread ratios for step construction.
9. Construct a simple wood landscape structure.
10. Mix, pour, and finish concrete to form a patio or walkway landscape feature.

11. Compare alternate pavings for patio and walkway areas.
12. Estimate the cost of materials for simple concrete and masonry landscape features.
13. Design basic masonry landscape features and select materials for construction.
14. Construct a simple landscape feature using brick or paving materials.

Topics and Scope:

I. Introduction
II. Scope of the Landscaping Contracting Industry
  A. Professions
  B. Scope of work
III. California State Contractors Laws, Rules, and Regulations
  A. Licensing
  B. C-27 exam
  C. Fees
  D. Requirements
  E. Scope of license
  F. Exemptions
IV. Estimating Procedures
V. Lumber and its uses
VI. Fence Design
  A. Purpose
  B. Construction elements
    1. Post & rail spacing
    2. Footings
    3. Fasteners
  C. Styles
VII. Gate Design
  A. Relationship to the fence
  B. Frame construction
  C. Hardware/fasteners
  D. Hanging techniques
VIII. Deck Design
  A. Purpose
  B. Construction elements
  C. Ground level vs. raised (comparisons)
  D. Decking options
  E. Fastener options
IX. Garden Step Design
  A. Purpose and uses
  B. Riser/tread ratios
  C. Construction elements
  D. Fastener options
X. Retaining Wall Design
  A. Purpose
  B. Material selection
  C. Construction specifications
  D. Drainage concerns
XI. Masonry Elements
  A. Uses
  B. Characteristics
  C. Industry specifications

XII. Walkway and Patio Design
- A. Construction elements
- B. Industry specifications
- C. Site preparation
- D. Installation procedures
  1. Headers
  2. Base
  3. Dry vs. wet

XIII. Raised Planter and Retaining Wall Design
- A. Construction elements
- B. Industry specifications
- C. Site preparation
- D. Installation procedures
  1. Foundation
  2. Unit courses
  3. Mortar techniques

NOTE: All topics covered in lecture are also covered in lab.

Assignment:

Lecture-related Assignments
1. Weekly readings (10-20 pages per week)
2. Written homework assignments
3. Prepare list of materials and cost estimates for two-ten projects
4. Quizzes (2-12)
5. One midterm and final Exam
6. Field trip reports (1-8)

Lab-related Assignments
1. Demonstrate proper use of hand and power tools
2. Design, construct, and install simple wood landscape structures
3. Design a concrete patio and walkway
4. Design masonry patio and walkway
5. Design masonry retaining wall
6. Construct and install simple wood, concrete and/or masonry landscape element
7. Field trips required (1 - 8)

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Homework, Field trip reports	Writing 5 - 15%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Material and labor cost estimates	Problem solving 20 - 30%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Design and construction projects including tool use	Skill Demonstrations 30 - 40%

Exams: All forms of formal testing, other than skill performance exams.

Quizzes and exam	Exams 20 - 30%

Other: Includes any assessment tools that do not logically fit into the above categories.

Participation, including field trip attendance	Other Category 0 - 20%

Representative Textbooks and Materials:
State Contracting Board, California Contractors License Law & Reference. Lexis Nexis. Current edition
All About Decks. Erickson, Larry. Ortho Books. 2000 (classic)
All About Fences & Gates. Johnston, Larry. Ortho Books. 2001 (classic)
Landscape Construction. 3rd ed. Sauter, David. Cengage L. 2010 (classic)
California Landscape Standards. California Landscape Standards Committee. 1989 (classic)
All About Patios. Erickson, Larry. Ortho Books. 2000 (classic)
All About Masonry Basics. Erickson, Larry. Ortho Books. 2000 (classic)