Las Positas College
3000 Campus Hill Drive
Livermore, CA 94551-7650
(925) 424-1000
(925) 443-0742 (Fax)

Course Outline for HORT 58

LANDSCAPE CONSTRUCTION

Effective: Fall 2004

I. CATALOG DESCRIPTION:
HORT 58 — LANDSCAPE CONSTRUCTION — 3.00 units

Design, engineering, construction techniques, and installation methods for landscape site development. Cost estimating, bidding, construction materials, methods, equipment, tools, and safety for landscape plan implementation. Contracts, specifications, and legal aspects regarding landscape installation and site development.

3.00 Units Lecture

Grading Methods:
Letter or P/NP

Discipline:

	MIN
Lecture Hours:	54.00
No Unit Value Lab	18.00
Total Hours:	72.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

III. PREREQUISITE AND/OR ADVISORY SKILLS:

IV. MEASURABLE OBJECTIVES:

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

1. effectively read landscape construction drawings;
2. develop accurate cost estimates and bid effectively;
3. demonstrate an understanding of landscape construction documents, procedures, and site development techniques;
4. communicate effectively with other landscape construction professionals;
5. plan, organize, and initiate a small landscape site development project;
6. select sound construction materials and methods for various landscape site elements, i.e., wood construction, site grading, drainage, irrigation systems, planting, concrete, masonry, and paving construction.

V. CONTENT:

A. Cost estimating and bidding
   1. Project and site factors to consider
   2. Cost estimate preparation, material, and labor calculations
   3. Preparing a bid and proposal
   4. Construction documents

B. Plans and specifications
   1. Contracts
   2. Legal aspects of landscape construction
   3. Landscape installation
   4. Plan implementation
   5. The landscape installation process
   6. Project management

C. Wood construction
   1. Decks, arbors, planters, benches, fences, etc.
   2. Nails, bolts, and fastening devices
   3. Wood types, grades, and uses
   4. Surface protection materials

D. Concrete construction
   1. Concrete mixes, use, and application
   2. Concrete finishes, finishing, and curing
   3. Concrete walks, drives, and other structures
   4. Construction, expansion joints

E. Masonry construction
   1. Brick classification, types, uses, and application
   2. Mortar mixes and use
   3. Brick patterns and layout
   4. Brick construction of walls, planters, etc.

F. Grading and drainage
    1. Topography, contours, slope, spot elevations, etc.
    2. Grading methods and procedures
    3. Cut and fill calculations
    4. Surface and sub-surface site drainage
    5. Drainage structures
G. Retaining walls
    1. Retaining wall construction and specifications
    2. Steel reinforcement
    3. Types of retaining walls and construction materials
H. Surveying and leveling
    1. Surveying and leveling equipment and methods
    2. Establishing grades and elevations
    3. Calculations for leveling
I. Landscape water features
    1. Streams, pools, and waterfalls
    2. Construction techniques and materials
J. Construction license law
    1. California state law related to landscape construction
    2. License requirements
    3. How to become licensed
K. Planting
    1. Planting plans and how to read them
    2. Plan take-off for estimating
    3. Plant installation techniques ext

VI. METHODS OF INSTRUCTION:
A. **Lecture** -
B. **Discussion** -
C. **Demonstration** -
D. Handout materials
E. Slides and video media
F. **Field Trips** -
G. Examples of materials and methods

VII. TYPICAL ASSIGNMENTS:
A. Weekly reading assignments in text and handouts B. Design and construction drawings of arbors doecks, fences, benches, etc. C. Draw topographic maps D. Calculate grading cut, fill, slope, etc. E. Draw details for landscape site development F. Calculate and provide cost estimate for a residential landscape development project.

VIII. EVALUATION:
A. **Methods**

B. **Frequency**

1. Written exams equally spaced during the semester
2. Weekly sketches and drawing assignments
3. One project cost estimate
4. Thirty construction detail drawings of landscape elements

IX. TYPICAL TEXTS:
1. H. Landphair, F. Klatt Jr. *Landscape Architectural Construction.* 3rd ed., Prentice Hall, 1999.
2. G. Robinsette *Guide to Estimating Landscape Costs.*, Von Nostrand Reinhold, 1983.

X. OTHER MATERIALS REQUIRED OF STUDENTS: