HORT 54A: LANDSCAPE CONSTRUCTION: GENERAL PRACTICES

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2022
Units:	5
Hours:	4 lecture, 3 laboratory per week (84 total per quarter)
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade (Request for Pass/No Pass)
Repeatability:	Not Repeatable

Student Learning Outcomes

- Correctly identify tools used in landscape construction.
- Demonstrate, on manipulative examinations, the implementation of basic landscape construction projects using a variety of building materials and hardware.

Description

General practices of construction as applied to landscape projects. Basic tools and equipment, building materials and hardware, and installation techniques utilized in landscape construction. Focus is on hardscape applications, including paving, walls, masonry, decks, and related wood structures. Basics of installation of water features, landscape lighting and plant material. Overview of cost estimating. Review of safety practices, careers in landscape construction, and contractor licensing.

Course Objectives

The student will be able to:

1. List career opportunities in landscape construction.
2. Correctly identify and use tools and safety equipment used in landscape construction.
3. Identify and select proper landscape materials to complete an installation.
4. Demonstrate the implementation of basic landscape construction projects using a variety of building materials and hardware.
5. Build basic landscape site amenities, such as water features and landscape lighting.
6. Install landscape plants.
7. Estimate the general costs for landscape installation.
8. Read landscape plans.
9. Demonstrate a knowledge of contractor licensing, the correct steps to install a landscape and an understanding of the installation techniques used in landscaping projects.
10. Exhibit an understanding of different landscape construction practices around the world.

Course Content

1. Career opportunities in landscape construction industry (local, national, global) (lec)
    a. Landscape contractor
    b. Cost estimator
    c. Specialty contractor
2. Identification and use of tools and safety equipment (lec & lab)
    a. Hand tools
        i. Hammers
        ii. Screw drivers
        iii. Marking and measuring tools
        iv. Cutting tools
    b. Power tools
        i. Drills
        ii. Saws
    c. Larger equipment
        i. Power wheelbarrow
        ii. Vibraplate
        iii. Radial and table saws
        iv. Drill press
    d. Safety equipment
3. Identification and selection of landscape materials (lec & lab)
    a. Wood materials
        i. Wood
        ii. Composite materials
        iii. Fasteners and connectors
    b. Paving materials
        i. Concrete
        ii. Brick and unit pavers
        iii. Stone
    c. Wall materials
        i. Wood
        ii. Stone
        iii. Segmental concrete units
        iv. Cast in place concrete
        v. Other materials
    d. Masonry materials
        i. Stone
        ii. Brick and block
        iii. Mortar and reinforcing
    e. Other materials
        i. Fencing
        ii. Water feature components
        iii. Lighting materials
4. Implementation of basic construction projects (lab)
    a. Construction process
        i. Layout of site using survey and measurement instruments
        ii. Utilities
        iii. Walls
            1. Retaining walls
            2. Free-standing walls
        iv. Paving
            1. Patios
            2. Walkways

v. Wood construction
    1. Decks
    2. Walls
    3. Fences
vi. Irrigation systems
vii. Planting
viii. Amenity installation

b. Material installation techniques
c. Project finish and cleanup

5. Site amenity construction (lec & lab)
    a. Water features
        i. Liners
        ii. Pumps and filters
        iii. Piping and electrical
    b. Landscape lighting
        i. System layout
        ii. Wire sizing
        iii. Fixture selection and placement
6. Install landscape plants (lec & lab)
    a. Soil modification
    b. Ground cover and bed prep and installation
    c. Tree and shrub installation
    d. Post planting care
    e. Turf establishment
7. Cost estimates (lec & lab)
    a. Quantity estimates
    b. Unit costing
    c. Overhead and ancillary costs
    d. Preparing cost estimate
8. Reading landscape plans (lec & lab)
    a. Identification of plan type and scale
    b. Identification of hardscape and softscape items on plan
    c. Measurement of plant items
    d. Quantity takeoffs
9. Contractor licensing (lec)
    a. Purpose for licensing
    b. License requirements
    c. Laws and professionalism in profession
    d. Professional associations related to landscape contracting
10. International landscape construction practices (lec)

Lab Content

1. Safety practices lab: With the instructor, students review the individual tools and their safe handling and operation
2. Tool lab: Students actively use a variety of landscape construction tools in typical landscape applications
3. Deck lab: Working in groups, students build a small wood deck from the ground up
4. Concrete and masonry labs: Students pour concrete paving, build masonry walls, and install unit pavers and flagstone
5. Amenities lab: Layout and construction of small water feature and landscape lighting installation
6. Landscape materials lab: Students visit one or more landscape suppliers to gain an understanding of what materials are available for use in landscape construction, and how to manage and order the materials

Special Facilities and/or Equipment

1. Design lab, horticultural facilities, and equipment.
2. Students provide appropriate work boots and clothing for fieldwork, leather gloves, tool belt, hammer, tape measure, screwdrivers, torpedo level, pliers, utility knife, face mask, ear plugs, and architectural scale.
3. When taught online, on-going access to computer with email and internet access.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Participation
Midterm exam
Lab assessment
Term project
Final examination

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Lecture
Discussion
Laboratory
Demonstration
Field trips
Speakers

Representative Text(s) and Other Materials

Sauter, David. Landscape Construction, 3rd ed.. 2010.

Although this text is older than the suggested "5 years or newer" standard, it remains a seminal text in this area of study.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

1. Reading assignments will include reading approximately 35 pages per week with supplemental reading from a course reader. Out of class reading/assignments is approximately six hours per week
2. Lectures will address reading topics and experiences of the instructor. Classroom discussion and demonstrations in support of lecture topics will be provided
3. Guest speakers from industry will provide supplemental lectures and demonstrations

Discipline(s)

Ornamental Horticulture