

HORT 54B: LANDSCAPE CONSTRUCTION: TECHNICAL PRACTICES

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2022
Units:	3
Hours:	2.5 lecture, 1.5 laboratory per week (48 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

- Demonstrate, on manipulative examinations, the correct use of surveying tools used in landscape construction projects.
- Demonstrate, on written examinations, knowledge of estimating techniques used in landscape construction.

Description

Technical aspects of landscape construction projects. Landscape surveying and grading techniques, surface and subsurface hydraulics, landscape drainage systems, erosion control and soil conservation, fences and gates, and building codes. Estimating landscape materials, construction costs, and preparation of project bids and contracts.

Course Objectives

The student will be able to:

1. Demonstrate the correct use of surveying tools used in landscape construction projects.
2. Identify landscape hydraulic and drainage systems.
3. Install erosion control solutions.
4. Construct landscape fences and gates.
5. Interpret building codes and restrictions related to landscape construction.
6. Estimate and bid landscape projects.
7. Exhibit an understanding of different landscape construction practices around the world.

Course Content

1. Surveying and grading techniques
 - a. Plane and geodetic surveys
 - b. Laser plane, builders level, and transit
 - c. Taping and leveling
2. Surface and subsurface hydraulics and drainage

- a. Grading practices
 - b. Drainage systems
 - c. Drainage installation techniques
3. Erosion control and soil conservation
 - a. Biotechnical Erosion Control Systems (BEC)
 - b. Engineered erosion control solutions
 4. Fencing and gates
 - a. Equipment and materials
 - b. Installation of fences and gates
 5. Building codes and restrictions as applied to landscape projects
 6. Estimating and bidding
 - a. Estimating landscape materials and costs
 - b. Use of planimeter and electronic estimating tools
 - c. Producing bids and contracts
 7. International landscape construction practices

Lab Content

1. Surveying lab: Field practice in the use of surveying equipment on a residential lot
2. Surface drainage and grading lab: Field visits to witness drainage and grading applications. Installation of drainage systems. The application of grading as it applies to the proper drainage of a site
3. Plan reading lab: Following a lecture on plan reading, using a variety of landscape plans, students practice interpreting plans
4. Cost estimating lab: Students use a variety of estimating equipment to develop cost estimates for a typical residential landscape

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, architectural scale, and calculator.
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:

Midterm exam

Manipulative tests:

1. Demonstrate knowledge and use of survey equipment
2. Correctly complete basic calculations for preparing material and cost estimates used in bidding landscape construction projects

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 from the assigned texts with supplemental reading from a course reader. Out of class reading/assignments is approximately five 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 lecture and demonstration

Discipline(s)

Ornamental Horticulture