

# HORT 80I: LANDSCAPE CERTIFICATION: IRRIGATION INSTALLATION

## Foothill College Course Outline of Record

| Heading                            | Value  |
|------------------------------------|--|
| <b>Units:</b>                      | 2  |
| <b>Hours:</b>                      | 2 lecture per week (24 total per quarter)                            |
| <b>Advisory:</b>                   | Completion of or concurrent enrollment in HORT 80E strongly advised. |
| <b>Degree &amp; Credit Status:</b> | Degree-Applicable Credit Course                                      |
| <b>Foothill GE:</b>                | Non-GE   |
| <b>Transferable:</b>               | CSU  |
| <b>Grade Type:</b>                 | Letter Grade Only  |
| <b>Repeatability:</b>              | Not Repeatable   |

## Student Learning Outcomes

- Install irrigation piping and components.
- Identify and repair irrigation problems.

## Description

General subjects related to certification with the California Landscape Contractors Association. Topics include irrigation plan reading, advanced irrigation components, basic horticultural principles, lateral repair and head adjustment, advanced program controller, lateral installation, mainline installation, valve repair, valve wiring and pipe installation equipment. This course is intended for students seeking Certified Landscape Technician certification.

## Course Objectives

The student will be able to:

- Read an irrigation plan.
- Identify advanced irrigation components.
- Describe basic horticultural principles.
- Program advanced controllers.
- Install mainline.
- Install laterals.
- Wire a valve.
- Repair a valve.
- Perform lateral repair and head adjustment.
- Operate pipe installation equipment.

## Course Content

- Irrigation plan reading.
  - Determining scale and orientation of plan.
  - Identifying irrigation related symbols.
  - Locating irrigation component installation.
- Advanced irrigation components.
  - Description of irrigation components.
  - Identification of new component advantages.
  - Description of valves for irrigation system.
  - Description of backflow prevention devices.

- Description of low flow and drip irrigation components.
- Basic horticultural principles.
  - Identification of plant material requirements for site.
  - Description of soil conditions at site.
  - Description of drainage conditions at site.
- Advanced program controller.
  - Setting up irrigation zones.
  - Setting timing for irrigation zones.
  - Scheduling irrigation applications.
- Mainline installation.
  - Identification of mainline location and size.
  - Describe connection to other irrigation components.
  - Describe installation details such as trench preparation and depth.
- Lateral installation.
  - Locate and size lateral irrigation lines.
  - Describe connection to other irrigation components.
  - Describe installation details such a trench preparation and depth.
- Valve wiring.
  - Layout and installation of valve wires.
  - Connection of valve wires to controller.
  - Connection of valve wires to valves.
- Valve repair.
  - Identify problems association with valve malfunction.
  - Describe repair procedures to correct valve problems.
- Lateral repair and head adjustment.
  - Identify damage and problems with irrigation laterals.
  - Repair damage to irrigation laterals.
  - Identify irrigation head misplacement.
  - Correct irrigation head placement.
- Pipe installation equipment.
  - Identify equipment used to create irrigation trenches.
  - Describe operation of irrigation trenching equipment.

## Lab Content

Not applicable.

## Special Facilities and/or Equipment

- Classroom with multi-media equipment.
- Outdoor area with open space to view equipment operation.
- Outdoor area to observe pipe and valve installation.
- Horticulture equipment and vehicles.

## Method(s) of Evaluation

- Objective written exams.
- Descriptions of field practices.
- Written reports on horticultural topics.

## Method(s) of Instruction

- Lecture from instructor.
- Lecture from guest speakers.
- Observe participatory demonstrations.
- Discussion with groups and students in class.

## Representative Text(s) and Other Materials

[Landscape Training Manual for Installation](#), Professional Landcare Network (PLANET), 2017.  
Study manual required for training courses.

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

- A. Reading 10-25 pages per week from assigned text.
- B. Reading handouts and website material.
- C. Web and library research.
- D. Writing specifications for irrigation installation and management.

## **Discipline(s)**

Ornamental Horticulture