HORT 90Q: RESIDENTIAL IRRIGATION SYSTEMS

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2021
Units:	1
Hours:	12 lecture per quarter (12 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 a basic understanding of irrigation equipment & materials.
- Demonstrate the ability to install a residential irrigation system.

Description

Basic design and installation techniques for residential landscapes. Course takes a hands-on approach to understanding the materials and techniques used in installing both drip and spray irrigation systems. Examines methods for evaluating performance of existing irrigation systems.

Course Objectives

The student will be able to:
A. Demonstrate a basic understanding of irrigation equipment and materials.
B. Evaluate the performance of an irrigation system.
C. Plan and design an irrigation system.
D. Describe forms of irrigation.
E. Install a residential irrigation system.
F. Maintain a residential irrigation system.
G. Recognize the different applications of residential irrigation systems by different cultures around the world.

Course Content

A. Irrigation equipment and materials
1. Controllers
2. Valves
3. Lines
4. Heads
5. Additional equipment
B. Evaluating existing irrigation system performance
1. Identifying inefficient systems
2. Spotting faulty equipment and leaks
C. Planning and design for residential irrigation systems
1. Calculating water need
2. Selecting proper irrigation technique for a residence
3. Choosing proper irrigation equipment for a residence
D. Drip, spray, and other alternative forms of irrigation
E. Methods and techniques for installing residential irrigation systems
1. Installing controller and valves
2. Trenching and installing mains and laterals
3. Installing head
4. Routing drip lines and installing drip emitters
F. Methods and techniques for repairing residential irrigation systems
G. Use of irrigation systems by different cultures

Lab Content

Not applicable.

Special Facilities and/or Equipment

A. Design laboratory, irrigation field lab, and related horticultural facilities and equipment.
B. Students provide work boots, leather gloves, clothing for field work, tape measure, screwdrivers, mechanics pliers, utility knife, face mask, ear plugs, eye protection, and small calculator.

Method(s) of Evaluation

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

Evaluation of existing system or design produced in the class
Test review of irrigation system components
Practical skills tests

Method(s) of Instruction

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

Lecture
Demonstrations
Discussions

Representative Text(s) and Other Materials

Irrigation Association. Landscape Drip Irrigation Design & Management, 3rd ed.. 2016.

The most recent edition of this textbook will be used, as each new edition is published.

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

A. Reading assignments will include reading approximately 20 pages per week from the assigned text (two hours).

Discipline(s)

Ornamental Horticulture