HORT 92.2 Course Outline as of Summer 2012

CATALOG INFORMATION

Dept and Nbr: HORT 92.2 Title: LOW VOLUME LANDSC IRRIG
Full Title: Low Volume Landscape Irrigation
Last Reviewed: 10/10/2011

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.50	Lecture Scheduled	1.50	17.5	Lecture Scheduled	26.25
Minimum	1.50	Lab Scheduled	0	6	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	1.50		Contact Total	26.25
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 52.50 Total Student Learning Hours: 78.75

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	AG 297.72

Catalog Description:
Introduction to the design, installation, and maintenance of low volume irrigation systems. Topics include plant water requirement calculations, selection/characteristics of various types of emission devices, run time calculations, California Irrigation Management Information System (CIMIS), and other Evapo-transpiration (ET) data.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: Introduction to the design, installation, and maintenance of low volume irrigation systems. Topics include plant water requirement calculations, selection/characteristics of various types of emission devices, run time calculations, California Irrigation Management Information System (CIMIS), and other Evapo-transpiration (ET) data. (Grade or P/NP)
Prerequisites/Corequisites:

Recommended: Eligibility for ENGL 100 or ESL 100
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**			Effective:	Inactive:
CSU GE:	**Transfer Area**			Effective:	Inactive:
IGETC:	**Transfer Area**			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Fall 2002	Inactive:	Fall 2018
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Both Certificate and Major Applicable

COURSE CONTENT

Outcomes and Objectives:
Upon completion of the course, students will be able to:
1. Describe basic low volume irrigation characteristics.
2. Identify common site data factors for proper low volume irrigation design.
3. Demonstrate proper plant water requirement calculations.
4. Identify common low volume emission devices.
5. Demonstrate correct emission device placement when designing low volume irrigation systems for the landscape.
6. Demonstrate proper installation of a low volume irrigation system.
7. Demonstrate proper run time calculations.
8. Describe basic maintenance procedures.
9. Describe common techniques utilized to retrofit a conventional system to low volume.

Topics and Scope:

I. Introduction
   A. Irrigation system basics
   B. Low-volume Irrigation characteristics
II. Site Data
   A. Soil
   B. Climate
   C. Potential evapotranspiration (P.E.T.)
III. Water Requirements
   A. Crop coefficient (Kc) factor
   B. Hydrozones
IV. Product Selection and Operation
V. System Layout and Installation
   A. Emitter placement

B. Project design and takeoff
VI. Run Time/Scheduling
VII. Retrofit Design
VIII. System Maintenance & Troubleshooting
IX. Project Installation

Assignment:

1. Weekly reading assignments (5-10 pages) with corresponding worksheets
2. Calculation exercises
3. Skill demonstrations of irrigation knowledge
4. Final exam

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Worksheets on assigned reading	Writing 10 - 20%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Calculation worksheets	Problem solving 40 - 50%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Demonstrations of irrigation knowledge	Skill Demonstrations 30 - 40%

Exams: All forms of formal testing, other than skill performance exams.

Final exam	Exams 10 - 20%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:
Low-Volume Landscape Irrigation Design Manual, by Rain Bird, Rain Bird Sales, Inc., (current online at rainbird.com)
Instructor prepared materials