

**HORT 92.2 Course Outline as of Fall 2002****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	3.00	8	Lecture Scheduled	24.00
Minimum	1.50	Lab Scheduled	0	8	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	24.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 48.00

Total Student Learning Hours: 72.00

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 and completion of AG 78.

**Limits on Enrollment:****Schedule of Classes Information:**

Description: Intro. to design, installation, and maintenance of low volume irrigation systems. Plant water requirement calculations, emission devices selection/characteristics, run time calcs., CIMIS and other ET data. (Grade or P/NP)

Prerequisites/Corequisites:

Recommended: Eligibility for ENGL 100 or ESL 100 and completion of AG 78.

Limits on Enrollment:  
Transfer Credit: CSU;  
Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>	Transferable	Effective: Fall 2002	Inactive: Fall 2018
<b>UC Transfer:</b>		Effective:	Inactive:

### **CID:**

### **Certificate/Major Applicable:**

Certificate Applicable Course

## **COURSE CONTENT**

### **Outcomes and Objectives:**

The student will:

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. P.E.T.
- III. Water Requirements
  - A. Kc Factor
  - B. Hydrozones
- IV. Product Selection and Operation
- V. System Layout and Installation

- A. Emitter Placement
- B. Project Design & Takeoff
- VI. Run Time/Scheduling
- VII. Retrofit
  - A. Design & Takeoff
- VIII. System Maintenance & Troubleshooting
- IX. Project installation

**Assignment:**

Students will have reading assignments with corresponding worksheet calculations.

**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.

Written homework, Reading reports	Writing 10 - 20%
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**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems	Problem solving 40 - 50%
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**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances	Skill Demonstrations 40 - 50%
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**Exams:** All forms of formal testing, other than skill performance exams.

None	Exams 0 - 0%
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**Other:** Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%
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**Representative Textbooks and Materials:**

LOW-VOLUME LANDSCAPE IRRIGATION DESIGN MANUAL by Rain Bird.  
Rain Bird Sales, Inc., 2000.