

COURSE OUTLINE  
Revision: S. Hilderbrand  
February 2011

DEPARTMENT:	Hospitality and Service Occupations
CURRICULUM:	Landscape and Environmental Horticulture
COURSE TITLE:	Advanced Irrigation System Design
COURSE NUMBER:	LHO 236
TYPE OF COURSE:	Professional Technical
COURSE LENGTH:	1 Quarter
CREDIT HOURS:	5
LECTURE HOURS:	44
LABHOURS:	22
CLASS SIZE:	25
PREREQUISITES:	LHO 135 or Instructor permission

COURSE DESCRIPTION:

This course will be an in-depth study of systems and their relationship to specific commercial, residential, agricultural and sports turf environments focusing on layout and efficient use of water resources, irrigation technology and the application to system design. Site evaluation, controller, valve and sprinkler selection for proper system design and installation will be covered. Precipitation rate knowledge will be applied for water conservation and proper application settings for plants, soil type and environmental needs. Course will involve reading blueprints, schematics and designs as well as the preparation and drafting of original and existing systems.

LHO 236 Advanced Irrigation System Design  
February 2011

STUDENT LEARNING OUTCOMES ADDRESSED:

<u>Computation-</u>	Be able to design and layout a residential, commercial, agricultural and sports Field/Park irrigation system using all the components of an irrigation system.
<u>Technology-</u>	Have a firm understanding of the microclimate conditions, soil and plant relationship with a system and the water conservation practices needed to conserve water.
<u>Critical thinking and problem solving-</u>	Use critical thinking skills and knowledge to solve layout inadequacies and problems

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Design complex systems
2. Identify and design for the specific needs of a project or site
3. Knowledge of industry technological advances
4. Design systems using all type of applications
5. Create drawings that are industry and field ready for bidding and installation
6. Install properly designed systems

TOPICAL OUTLINE:

APPROX. HOURS

Plant/soil/water relationships,	3
Requirements and scheduling	4
Hardware, controllers and wiring	4
Piping and friction loss	9
System layout	9
Zone valve and head placement	9
Component usage	9
Irrigation Plan Reading	9
Irrigation Plan Drafting	10
Total	66

Revised by: Steve Hilderbrand  
Dated: March 2011