

El Camino College Horticulture Department  
Basic Landscape Irrigation  
Hort 60 - Section 1240  
Saturday 8:00 A.M. to 1:25 P.M.

Instructor: Ron LaFond  
PHY 108  
Fall 2011

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My office email: [rlafond@elcamino.edu](mailto:rlafond@elcamino.edu)

Office Hours: 5:00 to 6:00 PM Mondays; 3:00 to 4:00 PM Tuesdays and Thursdays; 1:30 to 2:00 PM on Saturdays; or by appointment

**Course Description:** Landscape Irrigation is designed to provide a basic understanding of irrigation systems. We will look at the various types of pipe, fittings, backflow preventers and sprinkler heads commonly used in the industry. This course also introduces basic hydraulics used in landscape irrigation.

This is a combination Lecture-Lab class. Attendance for labs is expected and 25 points will be removed for each missed lab period.

Labs will be held mostly in the nursery area. We'll be digging in soil to install an irrigation system. You will need to wear hard shoes for digging. Bring gloves, a hat and sun screen for your protection. It's also a good idea to bring plenty of water for lab.

**Student Learning Outcome:** Given specific criteria determined by an analysis of the site to be irrigated, the successful irrigation student will be able to select suitable irrigation fittings, pipe, sprinkler heads and valves. The successful student will then be able to produce a layout and assemble it into a working, efficient landscape irrigation system.

#### Course Objectives:

Utilize terminology used in landscape irrigation

Evaluate prospective landscape irrigation sites

Differentiate landscape plant hydrozones

Organize various hydrozones of a site into irrigation stations

Calculate the required number of irrigation heads, appropriate nozzle sizes, types and spacing

Compare irrigation heads, valves and controllers

Perform friction loss calculations

Relate the ability to safely work with installation equipment

Demonstrate an understanding of the assembly and installation process

Compare and contrast various backflow prevention devices

#### Materials and Text:

Rain Bird® Landscape Irrigation Design Manual - downloaded free from the Rain Bird website

<http://www.rainbird.com/landscape/technical/index.htm>

Three ring binder for class notes, handouts and irrigation catalogs, architect scale, 45° triangle, calculator, Berol R-50 "Pocket Pal®", bow compass

Suggested Text:

*Simplified Irrigation Design* by Pete Melby

Grading Policy:

3 Tests (3 x 200 points each)	= 600 points
Homework assignments	= <u>500 points</u>
	1,100 points

Note: The final is on Saturday December 10th at 8:00 A.M.

Basic Course Outline:

Part 1: Irrigation components including: pipe fittings, piping, backflow preventers, irrigation timers, wiring and wire connectors, sprinklers and specialized equipment

Part 2: Basic hydraulics including: concepts of flow, pressure and velocity, static and working pressure, friction loss, elevation dynamics

Part 3: Friction loss calculations including: using charts, tables and graphs to predict the working pressure of a system; elementary head layout and system design

Final Grading Policy:

A = 90% - 100 % of the total points
B = 80% - 89%   "   "   "   "
C = 70% - 79%   "   "   "   "
D = 60% - 69%   "   "   "   "
F = Less than 59%

Drop Policy: The last day to drop the class without a "W" is September 23rd. The last day to drop the class with a "W" is November 18th. Students can be dropped due to excessive absences. The College drop dates can be found on inside cover of the Fall 2011 Class Schedule. Excessive absences are defined as missing three classes without notification to the instructor. Three unexcused absences will result in a reduction of one full letter grade for the course grade. Four unexcused absences will result in the student being dropped from the class. Students more than fifteen (15) minutes late will be counted as absent.

Cell Phone/Pager Policy: All cell phones and pagers must be turned off or put on a vibration setting. If you have to take a call, take it away from the rest of the class. If you are on the phone excessively instead of lecture/walkabout you may be dropped from class. Texting, gaming, facebooking, etc. during class will result in a reduction of 10 points per incident.

College Services: Can be found in the current ECC Class Schedule

Special Resource Center: Students with disabilities who believe they may need accommodations in this class are encouraged to contact the Special Resource Center on campus as soon as possible to better ensure such accommodations are implemented in a timely fashion. You may also contact me privately to discuss your specific needs.

Students with Disabilities, including Learning Disabilities: Students with disabilities, including learning disabilities, who believe they may need accommodations in this class are encouraged to contact the Special Resource Center on campus as soon as possible to better ensure such accommodations are implemented in a timely fashion. If you suspect, or are unsure if, you have a learning disability you are strongly encouraged to contact the Special Resource Center on campus as soon as possible for testing, to better ensure any needed accommodations are implemented in a timely fashion. If you have a documented or suspected disability and wish to discuss academic accommodations, please contact me privately to discuss your specific needs.