Basic Landscape Irrigation

Room #: PHY 108
Hort 60                         Section # 1240                 Saturday 8:00 A.M. to 1:25 P.M.

Horticulture Department Phone No.: (310) 532-3670 x5359
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Office Hours:
3:00 to 4:00 PM Tuesdays and Thursdays; 5:00 to 6:00 PM Wednesdays
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 = 500 points
1,100 points

Note: The final is on Saturday December 12th 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:

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\begin{align*}
A &= 90\% - 100\% \text{ of the total points} \\
B &= 80\% - 89\% \quad " \quad " \\
C &= 70\% - 79\% \quad " \quad " \\
D &= 60\% - 69\% \quad " \quad " \\
F &= \text{Less than 59}\% \\
\end{align*}
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Drop Policy: The last day to drop the class without a "W" is September 25th. The last day to drop
the class with a "W" is November 20th. Students can be dropped due to excessive absences.
Excessive absences are defined as missing three classes without notification to the instructors.
The College drop dates can be found on inside cover of the Fall 2009 Class Schedule.

Cell Phone/Pager Policy: All cell phones and pagers must be turned off or put on a vibration
setting. If you have a call, take it away from the rest of the class. If you are on the phone instead
of lecture/lab you will be dropped from class. Texting during class will not be tolerated.

College Services: There are several services available to the students of El Camino College. These
services include: Tutoring, Basic Skills Lab, Math Lab, Health Center, Disabled Students Center,
and more. These services can be found on inside cover of the Fall 2009 Class Schedule. Let us know
if we can help.

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.