

WATR 162: WATER USE EFFICIENCY I

Citrus College Course Outline of Record

Heading	Value
Effective Term:	Fall 2023
Credits:	3
Total Contact Hours:	54
Lecture Hours :	54
Lab Hours:	0
Hours Arranged:	0
Outside of Class Hours:	108
Transferable to CSU:	No
Transferable to UC:	No
Grading Method:	Standard Letter, Pass/No Pass

Catalog Course Description

This course provides an overview and technical information on the role of the water efficiency coordinator or similar position in the public or private sector. Topics include: water supply and cycle, structure and operations of utilities, regulatory agencies, best management practices, water conservation programs and technologies. This course will prepare the student for the American Water Works Association (AWWA) grade 1 Water Use Efficiency Practitioner Certification. 54 lecture hours.

Course Objectives

- Calculate the cost effectiveness of a conservation measure
- List and define the role of regulatory agencies that oversee the public water supply
- Articulate the value of water conservation
- Diagram and describe the water supply and cycle in California
- Describe the role and duties of the Water Conservation Coordinator
- Develop a public and/or private water conservation program proposal
- Analyze public and private water usage
- Recommend water usage reduction strategies.

Major Course Content

1. The Role of the Water Conservation Coordinator
 - a. Qualifications
 - b. Duties and Responsibilities
2. California's Water Supply and Water Cycle
3. Distribution Systems
 - a. Meters
4. Water Quality
5. Energy
6. Utilities - Definition
 - a. Business Structure - Public vs. Private
 - b. Rates and Revenue
7. Regulatory Agencies
 - a. Environmental Protection Agency
 - b. California Department of Public Health
 - c. Local and Municipal Codes

- d. California Water Code
 - e. Planning Agencies
 - f. Plumbing Codes
 - g. California Public Utilities Commission
8. California Urban Water Conservation Council
 - a. Memorandum of Understanding
 - b. Best Management Practices
 - i. Cost Effectiveness
 - ii. Methods and Technology
 - iii. Urban Water Conservation
 1. Residential
 2. Commercial
 3. Industrial
 4. Institutional
 5. Large Landscape
 9. Agricultural Water Conservation
 - a. Agricultural Best management Practices
 10. Careers in Water Conservation

Suggested Reading Other Than Required Textbook

AWWA Manual M22: Sizing Water Service Lines and Meters, Second Edition
 AWWA Manual M36: Water Audits and Leak Detection, Second Edition
 AWWA Manual M52: Water Conservation Programs – A Planning Manual, 2006
 WUCOLS Study (1999): Landscape reference covering ET and plant water needs
 Water Education Foundation – Layperson's Guide To Water Rights Law
 Water Education Foundation – Layperson's Guide To California Water
 Water Education Foundation – Layperson's Guide To Nevada Water
 Water Education Foundation – Layperson's Guide To The Delta
 Water Education Foundation – Layperson's Guide To The State Water Project
 Water Education Foundation – Layperson's Guide To The Central Valley Project
 Water Education Foundation – Layperson's Guide To The Colorado River
 Water Education Foundation – Layperson's Guide To The Groundwater
 Water Education Foundation – Layperson's Guide To The Water Recycling

Examples of Required Writing Assignments

Students will develop a water conservation proposal for a composite municipality, building, recreational area, theme park, or urban area.

Examples of Outside Assignments

Students will research careers and positions within the public and private sector where the skillset of a water use efficiency grade I coordinator is needed. Students will then write a cover letter to HR for one of the positions they found.

Instruction Type(s)

Lecture, Online Education Lecture