


## Water Utility Science — Intersession and Spring 18

### WATR 071, Water Treatment Fundamentals (3 units)

01/02-01/28/18


Presents the basic operating principles and techniques of the conventional surface water treatment process of coagulation, flocculation, sedimentation, and filtration, plus those of common disinfection processes. Assists in preparation for Grade T1 and T2 Water Treatment Operator certification examination given by the California State Water Resources Control Board, Division of Drinking Water Programs. **Prerequisite: WATR 050.**

 Section 44902 requires 12 hours/week online SCC Web Stephen McLean

### WATR 050, Water Mathematics and Hydraulics (3 units)

02/06-05/29/18


Practical application of mathematics to perform unit conversions and to calculate areas, volumes, flow rates, pressures, velocities, chemical dosages and related hydraulic calculations used in water system operations. Completion of Mathematics N06 or equivalent skills as measured by the Math Level 1 Exam recommended.

 Section 44910 requires 3 hours/week online SCC Web Stephen McLean  
Section 44909 6:30–9:40p Tu E-306 Mike Molinari

### WATR 052, Water Conservation Practitioner (3 units)

02/05-06/03/18

Theoretical and practical training in applied water use efficiency. Includes residential, commercial, and landscape customers, water uses, budgets, demand management, water audits, best management practices, rate structures, program design and management. Preparation for American Water Works Association (AWWA) Grade 1 and 2 Water Conservation Practitioner certification.

 Section 44912 requires 3 hours/week online SCC Web Rachel Davis

### WATR 053 – Water Reclamation and Reuse (3 units)

02/07-05/30/18

Fundamentals of reclaimed water, includes case studies and history of reclaimed water development. Planning, design and construction of reclaimed distribution systems. Problems regarding marketing, legislation and regulations for reclaimed water. Includes microbiology and health/safety issues.

Section 44913 6:30–9:40p W E-306 Andy Komor

### WATR 056 – Treatment Exam Preparation (8 contact hours)

Stephen McLean

Review information provided in various classes in the program and prepare students to take and successfully pass the California Department of Public Health Operator T1 & T2 examinations.

**Friday, 05/04/18, 8:00 AM to 4:50 PM**

Section 44916

**Online, 04/09-05/04/18**

Section 46934

### WATR 057 – Water Distribution Test Preparation (8 contact hours)

Stephen McLean

Review information and prepare students to take and successfully pass the California Department of Public Health Operator examinations D1 & D2 examinations.

**Friday, 03/02/18, 8:00 AM to 4:50 PM**

Section 45024

**Online, 02/05-03/02/18**

Section 46937

### WATR 061, Water Distribution (3 units)

02/05-05/21/18

Presents basic concepts of drinking water distribution, including water sources, water quality, and distribution system components. Water mathematics topics addressed include volume, flow rate, velocity, and chemical feeding calculations. Assists in the preparation for the California State Water Resources Control Board level D1 and D2 Water Distribution Operator certification exams. **Prerequisite: WATR 050.**

Section 45051 6:30–9:40p M E-206 Raymond Burk

### WATR 062, Advanced Water Distribution (3 units)

02/05-06/03/18

Advanced concepts of drinking water distribution, including water quality regulations, distribution system components, maps and records, and supervisory and management topics. Water math topics including applied system and pump hydraulics. Assists in the preparation for the California State Water Resources Control Board level D2, D3, and D4 Water Distribution Operator certification exams. **Prerequisite: WATR 061.**

 Section 45052 requires 3 hours/week online SCC Web Dennis Cafferty

**WATR 064, Pumps and Pumping (3 units)** 02/05-06/03/18

Basic pump theory, operation, and repair. Assists operators and technicians in the design, selection, installation and maintenance of various dynamic and positive displacement pumps. Topics include pumps and pump components, hydraulics, and pumping system efficiencies.

Section 45053 6:30–9:40p W E-206 David Rodriguez

**WATR 065, Backflow Prevention Devices (2 units)** 02/07-05/30/18

Theory, testing, and maintenance of backflow prevention devices in water systems. Prepares the journeyman plumber, plant maintenance operator, and water utility operator to become a certified tester in Orange County. Also prepares the student for American Water Works Backflow Prevention certification exam.

Section 45054 6:30–9:35p W U-95 Martin Friebert


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Presents the basic operating principles and techniques of the conventional surface water treatment process of coagulation, flocculation, sedimentation, and filtration, plus those of common disinfection processes. Assists in preparation for Grade T1 and T2 Water Treatment Operator certification examination given by the California State Water Resources Control Board, Division of Drinking Water Programs. **Prerequisite: WATR 050.**

Section 45056 6:30–9:40p Tu E-305 Stephen McLean


**WATR 072, Advanced Water Treatment (3 units)** 02/05-06/03/18

Examines advanced topics in conventional drinking water treatment processes and disinfection, as well as non-conventional treatment processes. Assists in preparation for Grade T2 and T3 Water Treatment Operator certification examination given by the California State Water Resources Control Board, Division of Drinking Water Programs. **Prerequisite: WATR 071.**

 Section 45057 requires 3 hours/week online SCC Web Stephen McLean

**WATR 073, Water Quality (3 units)** 02/05-06/03/18

Examines basic principles of chemistry and microbiology, and applies them to drinking water quality and related state and federal regulations. Recommended preparation, Water Utility Science 050.

 Section 45058 requires 3 hours/week online SCC Web Stephen McLean

**WATR 082, Advanced Wastewater Treatment (3 units)** 02/05-06/03/18

Presents advanced operating principles and techniques of conventional wastewater treatment. Also presents operating principles and techniques of advanced processes including activated sludge, disinfection, tertiary treatment and sludge handling. Successful completion provides student with 48 CWEA contact hours and 8 SWRCB educational points. Prepares student for SWRCB Wastewater Treatment Plant Operator exams 1 and 2.

**Prerequisite: WATR 081.**

 Section 45059 requires 3 hours/week online SCC Web Shabbir Basrai

**WATR 083, Collection Systems (3 units)** 02/05-05/21/18

Sewer construction, inspection and testing, cleaning methods, safety, elementary hydraulics, pipeline repair, equipment maintenance, communications, and record keeping. Successful completion provides student with 48 CWEA contact hours and 4 SWRCB educational points. Preparation for CWEA Wastewater Collection System exam all Grades.

Section 45060 6:30–9:40p M E-205 David Rodriguez

**WATR 107, California Water Resources (3 units)** 02/05-05/21/18

A detailed examination of the supply and demand of water in California. Topics addressed include California geography and climate, State history and the effects of population growth, water rights, water quality, water uses, the hydrologic cycle, groundwater and surface water resources. Also addressed are the major water projects in the State and the government agencies responsible for these projects, including projects and agencies that provide water to Orange County.

Section 45062 6:30–9:40p M E-305 Stephen McLean