

Water Utility Science —Spring 19

WATR 020, Introduction to Water Science (ONLINE)

3 units

An overview of Water Science topics including water sources and supply, water quality and regulations, water transmission and distribution, and treatment of water and wastewater. Discussions will include applicable science and math principles, current events, and Water careers. Optional field trips may be offered.

Section 62987 requires 3.5 hours/week online SCC Web Stephen McLean 02/11-06/09/19

WATR 048, Wastewater Operator Exam Preparation (ONLINE)

0.5 units

This course provides a comprehensive review of topics from multiple courses in the Water Utility Science program in order to prepare students for the California State Water Resources Control Board, Wastewater Treatment Operator examinations. Recommended Preparation: WATR 081

Section 62990 requires 9 hours online total SCC Web Shabbir Basrai 03/11-04/13/19

WATR 050, Water Mathematics and Hydraulics (IN CLASS & ONLINE)

3 units

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.

Section 62996 6:30–9:40p Th Jeffry Dennis 02/14-06/06/19

Section 62997 requires 7 hours/week online SCC Web Jeffry Dennis 02/11-04/07/19

Section 65711 requires 7 hours/week online SCC Web Stephen McLean 04/15-06/09/19

WATR 052, Water Conservation Practitioner (ONLINE)

3 units

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 63006 requires 3.5 hours/week online SCC Web Rachel Davis 02/11-06/09/19

WATR 053 – Water Reclamation and Reuse (IN CLASS)

3 units

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 63009 6:30–9:40p Tu Amy Omae 02/12-06/04/19

WATR 054, Advanced Treatment Exam Preparation (ONLINE)

0.5 units

This course provides a comprehensive review of topics from multiple courses in the Water Utility Science program in order to prepare students for the California SWRCB, Water Treatment Operator T3 and T4 examinations.

Section 63012 requires 9 hours online total SCC Web Stephen McLean 04/22-05/18/19

WATR 056 –Treatment Exam Preparation (ONLINE)

0.5 units

Review information provided in various classes in the program and prepare students to take and successfully pass the California State Water Resources Control Board, Water Treatment Operator T1 and T2 examinations.

Section 63033 requires 9 hours online total SCC Web Stephen McLean 04/22-05/18/19

WATR 057 – Water Distribution Test Preparation (ONLINE)

0.5 units

Review information and prepare students to take and successfully pass the California State Water Resources Control Board, Water Distribution Operator D1 and D2 examinations.

Section 63035 requires 9 hours online total SCC Web Stephen McLean 02/11-03/16/19

WATR 059 – Advanced Distribution Test Preparation (ONLINE)

0.5 units

This course provides a comprehensive review of topics from multiple courses in the Water Utility Science program in order to prepare students for the California SWRCB, Water Distribution Operator D3, D4, and D5 examinations.

Section 63036 requires 9 hours online total SCC Web Stephen McLean 02/11-03/16/19

WATR 061, Water Distribution (ONLINE)

3 units

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 63077 requires 7 hours/week online SCC Web Staff 04/15-06/09/19

WATR 062, Advanced Water Distribution (IN CLASS)**3 units**

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 63078 6:30–9:40p M Dennis Cafferty 02/11-06/03/19

WATR 064, Pumps and Pumping (HYBRID)**3 units**

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 63080 6:30–9:00p W David Rodriguez 02/13-06/09/19

WATR 065, Backflow Prevention Devices (IN CLASS)**2 units**

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 63085 6:30–9:35p W Martin Friebert 02/13-06/05/19

WATR 071, Water Treatment Fundamentals (HYBRID)**3 units**

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 63091 6:30–9:00p Tu Jeffry Dennis 04/15-06/09/19

WATR 072, Advanced Water Treatment (ONLINE)**3 units**

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 SWRCB, Division of Drinking Water Programs. **Prerequisite: WATR 071.**

Section 63093 requires 3.5 hours/week online SCC Web Jeffry Dennis 02/11-06/09/19

WATR 073, Water Quality (ONLINE)**3 units**

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 63097 requires 3.5 hours/week online SCC Web Jeffry Dennis 02/11-06/09/19

WATR 082, Advanced Wastewater Treatment (HYBRID)**3 units**

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 63098 6:30–9:00p Th Shabbir Basrai 02/14-06/09/19

WATR 083, Collection Systems (HYBRID)**3 units**

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 63080 6:30–9:00p M David Rodriguez 02/11-06/09/19

WATR 092, Water Utility Management (ONLINE)**1 unit**

This course explores various supervision and management issues of particular relevance to the Water Utility Industry, including water quality regulations, other water industry regulations, employee safety programs, facilities security, emergency response, governing body interactions, and public relations. Recommended Preparation: Completion or concurrent enrollment in the other required courses in the Water Utility Management Certificate of Proficiency program.

Section 63122 requires 1 hour/week online SCC Web Stephen McLean 02/11-06/09/19

WATR 107, California Water Resources (ONLINE)**3 units**

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 Co.

Section 63128 requires 3.5 hours/week online SCC Web Stephen McLean 02/11-06/09/19