



Water Utility Science Classes, Fall 2021

Classes are 16 weeks, August 23 through December 12 (except where otherwise noted.)

WATR 020, Introduction to Water Science 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, including applicable science and math principles.

Section 01886 Online Jeffry Dennis Full Semester

WATR 050, Water Mathematics and Hydraulics 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 01887 6:30-9:40PM Thu David Rodriguez Full Semester

Remote Live instruction is presented online, via zoom, at the times scheduled.

Section 01888 Online Jeffry Dennis 8/23-10/17/21

Section 01889 Online Jeffry Dennis 10/18-12/12/21

WATR 052, Water Conservation Practitioner 3 Units

Theoretical and practical training in applied water use efficiency. Preparation for American Water Works Association (AWWA) Grade 1 and 2 Water Conservation Practitioner certification.

Section 01890 Online Rachel Davis Full Semester

WATR 060, Water Utility Maintenance & Construction 3 Units

Overview of procedures, equipment, tools, and terminology used in water utility maintenance and construction. Topics include related math calculations and atlas map reading. This course is intended for individuals with minimal field experience who are seeking a career in the Water Industry.

Section 01891 Online David Rodriguez 10/18-12/12/21

WATR 061, Water Distribution 3 Units

Prerequisite: Water Utility Science 050.

Presents basic concepts of drinking water distribution, including water sources, water quality, and distribution system components. Preparation for the California State Water Resources Control Board level D1 and D2 Water Distribution Operator certification exams.

Section 01892 Online Dennis Cafferty 10/18-12/12/21

WATR 063, Electrical Wiring and Controls for Operators 3 Units

Theoretical and practical skills needed to perform preventive maintenance and minor repair of basic electrical wiring and control systems used in water and wastewater facilities.

Section 01893 6:30-9:40p Th Mike Molinari Full Semester

Remote Live instruction is presented online, via zoom, at the times scheduled.

WATR 065, Backflow Prevention Devices

3 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 01958 6:00–8:00p Th Hisham Elmishad Full Semester
Hybrid classes meet on campus, with the balance of instruction done online.

WATR 071, Water Treatment Fundamentals

3 Units

Prerequisite: Water Utility Science 050.

A specialized course including conventional treatment processes, facility maintenance, water sources, monitoring, sampling, and water quality standards. Primary course for CDPH Water Treatment T2 and T3 examinations.

Section 01895 Online Jeffry Dennis 08/23-10/17/21
Section 01896 Online Jeffry Dennis 10/18-12/12/21

WATR 072, Advanced Water Treatment

3 Units

Prerequisite: Water Utility Science 071.

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. Preparation for California State Water Resources Control Board Grade T1 and T2 Water Treatment Operator certification exams.

Section 01897 Online Jeffry Dennis Full Semester

WATR 073, Water Quality

3 Units

Examines basic principles of chemistry and microbiology, and applies them to drinking water quality and related state and federal regulations. Optional field trips may be offered.

Section 01898 Online Jeffry Dennis Full Semester

WATR 080, Intro to Wastewater Treatment

3 Units

This course provides an overview of the basic principles of wastewater treatment. It is intended both, for students preparing to become certified wastewater treatment operators as well as students interested in discovering how the environmental impacts of human activities are minimized through modern wastewater treatment technologies. Field trips may be required.

Section 01899 Online Shabbir Basrai Full Semester

WATR 081, Wastewater Treatment

3 Units

Prerequisite: Water Utility Science 050.

Presents the basic operating principles and techniques of conventional wastewater treatment. Successful completion provides student with 48 Certification for Wastewater Professionals (CWEA) contact hours and eight (8) State Water Resources Control Board (SWRCB) educational points. Prepares student for SWRCB Wastewater Treatment Plant Operator exam-Grades 1 and 2.

Section 01900 Online Shabbir Basrai 10/18-12/12/21

WATR 107, California Water Resources

3 Units

Introduction to water law and rights, California water history, political lore, and water supply agencies serving Orange County. Includes hydrologic cycle, seawater intrusion, protection of wells and reservoirs, flood control, pollution/contamination of ground water supplies, and the conservation of water.

Section 01901 Online Jeffry Dennis Full Semester