

WATER TECHNOLOGY (WATR)

WATR-299 Special Projects: Water Technology **1-3 Unit (IS 16-54)**

Students with previous course work in the program may do special projects that involve research and special study. The actual nature of the project must be determined in consultation with the supervising instructor.

Prerequisite: Two Water Technology classes must be completed prior to enrollment; a contract must be completed with the instructor prior to enrollment.

Transfers to CSU only

WATR-500 Introduction to Water/Wastewater Operations (formerly WATR-100) **1 Unit (LEC 16-18)**

This course covers water utility operations plus the basic knowledge needed to advance in the industry. Regulations, industry certification, and the examination process will be discussed as a part of this course. (formerly WATR 100)

Transfers to CSU only

WATR-503 Water Treatment Plant Operations I & II (formerly WATR-103) **3 Units (LEC 48-54)**

This course will cover sources of water, the water treatment process, water treatment plant operations, safety, water quality regulations, and waterworks mathematics. The course will prepare students for Water Treatment Plant Operator I or II (T-1 or T-2) licenses for the State of California. (formerly WATR 103)

Recommended Preparation: WATR-790.

Transfers to CSU only

WATR-505 Water Treatment Plant Operations III, IV & V (formerly WATR-105) **3 Units (LEC 48-54)**

The course covers sources of water, the water treatment process, water treatment plant operations, safety, water quality regulations and waterworks math. This course is designed for individuals seeking employment or already employed in the water industry. It covers the Water Treatment Plant Operator's job-related knowledge identified by the State Water Resources Control Board examination developers as essential for minimally competent Water Treatment Plant Operator III, IV or V (T-3, T-4, or T-5). (formerly WATR 105)

Prerequisite: WATR-503 (with a grade of C or better).

Recommended Preparation: WATR-790.

Transfers to CSU only

WATR-507 Water Distribution I & II (formerly WATR-107) **3 Units (LEC 48-54)**

The course covers the sources of water, principles of design, installation, operation and maintenance of pipes, pumps, valves, meters, and other related hydraulic units. Operation and maintenance safety considerations are emphasized. The course is designed to prepare the student to take the State of California Water Distribution Operator exam. (formerly WATR 107)

Recommended Preparation: WATR-790.

Transfers to CSU only

WATR-509 Water Distribution III, IV & V (formerly WATR-109) **3 Units (LEC 48-54)**

This course exposes students to advanced principles in the operation and maintenance of a water distribution systems. State regulations, administrative duties, and basic supervision responsibilities will also be examined. (formerly WATR 109)

Prerequisite: WATR-507 (with a grade of C or better).

Transfers to CSU only

WATR-520 Wastewater Treatment Plant Operations I & II (formerly WATR-120) **3 Units (LEC 48-54)**

This course is an introduction to wastewater treatment. Students will explore the scope, limits, and methods of wastewater treatment processes through readings, discussions, analysis, and laboratory study. This course is designed for individuals seeking employment or already employed in the wastewater field. It covers the wastewater operator's job-related knowledge identified by the CSWRB examination developers as essential for a minimally competent Grade I or Grade II Wastewater Treatment Plant Operator. (formerly WATR 120)

Recommended Preparation: WATR-790.

Transfers to CSU only

WATR-522 Wastewater Plant Operations III, IV & V (formerly WATR-122) **3 Units (LEC 48-54)**

This course explores the scope, limits, and methods of secondary and advanced treatment, solids handling, disinfection, and the reclamation of wastewater, through readings, discussions, analysis, and laboratory study. This course is designed for individuals seeking employment or already employed in the wastewater field. It covers the wastewater operator's job-related knowledge identified by the California State Water Resources Control Board examination developers as essential for a minimally competent Wastewater Treatment Plant Operator Grade III or above. (formerly WATR 122)

Prerequisite: WATR-520 (with a grade of C or better).

Transfers to CSU only

WATR-525 Test Procedures for Water and Wastewater (formerly WATR-125)
3 Units (LEC 48-54)

This course prepares students to analyze and interpret test data relating to water/wastewater treatment plants. Topics include: Basic chemistry and related mathematical analyses involved in the operation of water/wastewater treatment plants; tests necessary to maintain process control of wastewater treatment plants as well as monitoring of industrial wastes prior to disposal; and proper methods for collecting and handling samples. (formerly WATR 125)

Recommended Preparation: WATR-790, WATR-503, WATR-507 or WATR-520.

Transfers to CSU only

WATR-526 Introduction to Wastewater Collections
3 Units (LEC 48-54)

This course is designed to train operators in the practical aspects of operating and maintaining wastewater collection systems, emphasizing safe practices and procedures. The course focuses on the knowledge, skills, and abilities required to perform the essential duties of an entry-level wastewater collection system operator. The course also prepares students to take the California Water Environment Association (CWEA) Collection System Certification Exam.

Transfers to CSU only

WATR-530 Environmental Laws and Regulations (formerly WATR-130)
3 Units (LEC 48-54)

This course provides an overview of federal, state, and local laws pertaining to environmental protection and pollution prevention relating to water quality, air quality, solid waste, and cross media contamination. (formerly WATR 130)

Transfers to CSU only

WATR-533 Introduction to Water Use Efficiency
3 Units (LEC 48-54)

This introductory water conservation course is designed for students interested in working as a water use efficiency practitioner. It includes the expected range of knowledge required for the American Water Works Association (AWWA) Water Use Efficiency Practitioner I Certificate.

Transfers to CSU only

WATR-537 Introduction to Water Utility Management
3 Units (LEC 48-54)

This course is designed for students interested in managing water and/or wastewater utilities. Topics will include personnel management, organizational management, financial management, training, problem-solving/decision-making, regulatory compliance, health and safety programs, community relations, personal and professional skills.

Prerequisite: WATR-530 (with a grade of C or better).

Prerequisite/Corequisite: WATR-509, WATR-505 or WATR-522.

Transfers to CSU only

WATR-549 Work Experience Education: Water Technology
0.5-8 Units WEE 24-432

This experiential learning course places students in supervised internships related to their academic major or career interests. Through hands-on work experience, students will build upon classroom-based learning and develop transferable skills. Internship work sites must be approved by the college prior to enrollment.

Other Enrollment Criteria: Each student must be enrolled for the full semester and have completed one course in the discipline. Students must also complete a WEE Orientation and Training Plan (Agreement) prior to registration. Please refer to the Work Experience Student Handbook for specific information.

Transfers to CSU only

Offered as Pass/No Pass Only

WATR-740 Wells, Pumps and Motors (formerly WATR-140)
3 Units (LEC 48-54)

This course will provide students with a basic knowledge of domestic water wells, water booster pumps, pump theory, electric motor theory and design. Water well design regulations and abandonment will be discussed as well as maintenance procedures in the field and in the shop. The class will cover the various types of pumps used in the water industry and discuss the various uses and maintenance issues for each style of pump. (formerly WATR 140)

Not transferable

WATR-790 Basic Waterworks Mathematics (formerly WATR-090)
2 Units (LEC 32-36)

This course is an introduction to the mathematics used in water industry. Students will learn the basic formulas and functions needed to calculate area, volume, instantaneous flow, chemical dosage and other related problems. (formerly WATR 090)

Not transferable

WATR-795 Wastewater Technology Math
2 Units (LEC 32-36)

This course prepares students for the quantitative and algebraic questions typically encountered on wastewater collections and wastewater treatment operations licensing examinations. Topics include, but are not limited to, unit conversion, volume, velocity, flow rates, chemical dosages, process control, and solids handling.

Not transferable