

Environmental Water Technology

EW1003, CAREER PATHWAYS IN WATER INDUSTRIES, 3 hours.

This course is designed to inform and encourage students to pursue an environmental career by introducing them to a wide range of occupations in the water utility field and training them in basic science and processes involved with the operation of small water operations systems.

EW1013, OPERATION AND MAINTENANCE OF WATER TREATMENT PLANTS, 3 hours.

Introduces students to various types of water treatment systems. Local, state, and federal regulations will also be covered.

EW1022, HYDRAULICS FOR WTPO, 2 hours.

Provides students with necessary mathematical skills and an understanding of hydraulics necessary to the operation of water operations systems.

EW1032, LABORATORY METHODS FOR WTPO, 2 hours.

Provides students with necessary laboratory skills & an understanding of standard methods necessary for compliance with NPDES guidelines.

EW1046, OCCUPATIONAL EXPERIENCE FOR WTPO, 6 hours.

Provides students with work related experience pertinent to the operation of a water treatment plant.

EW1053, UTILITY ORGANIZATION AND ADMINISTRATION, 3 hours.

Provides students with management theories and a detailed survey of utilities management functions.

EW1062, PRINCIPLES OF UTILITY FINANCING, 2 hours.

Provides students with the basic principles of financing publicly owned utilities, including rate structures, accounting principles, and budget preparation.

EW1072, UTILITY MANAGEMENT SKILL DEVELOPMENT, 2 hours.

Provides students with experiences in managerial functions such as planning, organizing, conflict resolution, decision-making, and evaluation.

EW1086, OCCUPATIONAL EXPERIENCE - UTILITIES MANAGEMENT, 6 hours.

Provides students with pertinent work-related experiences in utilities management.

EW1113, OPERATIONS AND MAINTENANCE OF WATER DISTRIBUTION SYSTEMS, 3 hours.

Introduces students to various water distribution systems. Local, state and federal regulations will also be covered.

EW1122, HYDRAULICS FOR WATER DISTRIBUTION SYSTEMS, 2 hours.

Provides students with necessary mathematical skills and an understanding of hydraulics necessary to the operation of distribution systems.

EW1132, DISTRIBUTION HYDRAULIC PUMPING CONTROL, 2 hours.

Introduces students to water distribution operations, pumps & pumping systems and controls necessary for safe & efficient operations.

EW1146, OCCUPATIONAL EXPERIENCE FOR WATER DISTRIBUTION SYSTEMS, 6 hours.

Provides students with work related experience pertinent to the distribution system.

EW1150, SMALL W & WW SYSTEMS, 1 hour.

EW1151, SMALL W & WW SYSTEMS, 1 hour.

This workshop is designed to meet the needs of managers and operators of small municipally owned Water & Wastewater systems for small communities or districts that serve a limited number of customers.

EW1211, WATER CERTIFICATION, 1 hour.

The focus of this workshop is to present a general overview of water regulations, standard operating procedures, and general information to assist professionals in preparing for the Kansas State Certification exam. Information provided in this workshop is geared to accentuate professionals taking the Class I and II exams, yet this will provide a good review for those taking Class III & IV exams.

EW1213, ADVANCED OPERATION & MAINT. OF WATER TREATMENT PLANT OPERATORS, 3 hours.

This class is structured for water operators, collection system operators, utility supervisors and any person that

desires to work in the wastewater field. It covers operation and maintenance of wastewater plants, as well as assists in the preparation for state certification.

EW1222, ADVANCED LAB METHODS FOR WATER TREATMENT PLANT OPERATORS., 2 hours.

This course introduces students to various types of water treatment systems. Local, state and federal regulations will also be covered.

EW1232, ADVANCED HYDRAULICS WATER TREATMENT PLANT OPERATORS, 2 hours.

This course provides students with the necessary mathematical skills and an understanding of hydraulics necessary to the operation of water operations systems.

EW1246, ADVANCED OCCUPATIONAL EXPERIENCE FOR WATER TREATMENT PLANT OPERATORS, 6 hours.

Provides students with work experience related to water treatment plants.

EW1251, DISTRIBUTION SYSTEM, 1 hour.

This course examines the methods and operation of a water distribution system and related state and federal regulations.

EW1261, CROSS CONNECTIONS CONTROL, 1 hour.

Provides students understanding of cross connection control. This course is repeatable for multiple credits.

EW1262, C C & BACKFLOW PREVENTION, 2 hours.

Our 4-day course covers all the "Need to Know" criteria established by the American Backflow Protection Association (ABPA). In addition, our course covers Kansas rules and regulations. Items that are covered include: hydraulics of backflow, back siphonage, and back pressure; types of cross connections, case histories, cross connection control programs; devices and assemblies.

EW1301, SURFACE WATER TREATMENT, 1 hour.

This course covers the various treatment processes related to surface water. It also covers regulations including the Enhanced Surface Water Treatment Rule.

T This course is approved by the Kansas Board of Regents for System Wide Transfer among all Kansas public postsecondary institutions offering an equivalent course. Additional courses may also be eligible for transfer. Please visit the FSCC Registrar to learn more. *Offered on demand only. +Offered in 1 to 3 hour increments.

EW1413, OPERATION AND MAINTENANCE OF WASTEWATER COLLECTION SYSTEMS, 3 hours.

Introduces students to various wastewater collection systems. Local, state, and federal regulations will also be covered.

EW1422, HYDRAULICS OF COLLECTION SYSTEMS, 2 hours

Provides students with necessary mathematical skills and an understanding of hydraulics necessary to the operation of collection systems.

EW1432, COLLECTION SYSTEM ADMINISTRATION, 2 hours.

Introduces students to the organization and administration of collection systems.

EW1446, OCCUPATIONAL EXPERIENCE FOR WASTEWATER COLLECTION SYSTEM OPERATORS, 6 hours.

Provides students with work related experience pertinent to the wastewater collection system.

EW2013, OPERATION AND MAINTENANCE OF WASTE WATER PLANTS, 3 hours.

Introduces students to various wastewater treatment plants. Local, state and federal regulations will also be covered.

EW2022, PHYSICS FOR WWTP, 2 hours.

Provides students with necessary mathematical skills and an understanding of physics necessary to the operation of wastewater treatment plants.

EW2032, LABORATORY METHODS FOR WWTP, 2 hours.

Provides students with basic laboratory skills needed to operate a wastewater treatment plant.

EW2046, OCCUPATIONAL EXPERIENCE FOR WWTP, 6 hours.

Provides students with work related experience pertinent to the wastewater treatment plant.

EW2053, PUMP AND PUMPING SYSTEMS, 3 hours.

Provides students with maintenance procedures and efficient operating practices for various types of pumps and piping systems within water and wastewater systems

EW2062, GENERAL MAINTENANCE PROCESS, 2 hours.

Provides students with general

maintenance procedures necessary to operate water & wastewater treatment systems.

EW2072, GENERAL MAINTENANCE THEORY, 2 hours.

Provides students with the theory necessary for the understanding of various maintenance procedures in water and wastewater treatment systems.

EW2086, OCCUPATIONAL EXPERIENCE FOR MAINTENANCE PERSONNEL, 6 hours.

Students with work related experience pertinent to utilities maintenance.

EW2113, ADVANCED WW PLANT OPERATIONS, 3 hours.

This comprehensive course uses a variety of educational approaches to improve learning. Classes will consist of lectures, discussion, hands-on application, field trips and other related methods to encourage students to gain the most from their time.

EW2122, ADVANCED MATH FOR WWTP, 2 hours.

This course provides students with the necessary mathematical skills and an understanding of hydraulics necessary to the operation of water operations systems.

EW2132, CHEM AND BIO PROC WTPO, 2 hours.

This course examines the chemical and biological testing necessary for the efficient operation of a water treatment plant in depth.

EW2146, FIELD STUDY FOR WWTP, 6 hours.

This course will provide students with work related experience with wastewater treatment processes.

EW2151, ACTIVATED SLUDGE PROCESS, 1 hours.

This workshop is designed to meet the needs of managers and operators of municipally owned wastewater systems for communities or districts they serve.

EW2211, WASTEWATER CERTIFICATION PREP, 1 hour.

Prepares students for the state wastewater treatment plant operator certification examination. This course is repeatable for multiple credits.

EW2231, LABORATORY - D.O. AND B.O.D., 1 hour.

Provides students with the applications and testing procedures associated with dissolved oxygen (DO) and biochemical oxygen demand (BOD) testing in the wastewater treatment plant.

EW2251, WASTEWATER STABILIZATION PONDS, 1 hour.

Provides student with theory and operation of various types of wastewater stabilization ponds, including anaerobic, aerobic, facultative, and oxidation ponds. This course is repeatable for multiple credits.

EW2311, CURRENT TOPICS, 1 hour.

The object of this workshop is to provide discussion topics for operators in water treatment and wastewater treatment. In addition the workshop will provide information that will be helpful preparing operators for certification and testing through KDHE.

EW2701, SAFETY AND MATH WORKSHOP, 1 hour.

This workshop is designed to meet the needs of managers and operators of municipally owned wastewater systems for communities or districts they serve. Safety subject matter will cover topics such as infectious diseases, disinfection safety, confined spaces, Material Safety Data Sheet (MSDS), fire prevention, electrical safety, lock-out tag out. Attendees will learn a variety of math skills and how and why to calculate each area including: tank and pipe volumes in cubic feet and gallons, disinfection dosage rate pounds per day, pumping and flow rates, velocity and pressure in psi and ft/head, detention time - horsepower, surface loading rate, Weir overflow rate in gallons/capita/day, temperature conversions, removal efficiency percentage volatile solids, conversion formulas, and common abbreviations.

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