

THEA 27 Fundamentals of Lighting**Units:** 3.0 **Hours:** 3.0 Lecture

This course involves the study and execution of stage lighting with emphasis on equipment, control, color and their relationship to design. (C-ID: THTR 173)

THEA 29 History of American Musical Theatre**Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU-GE:C1, IGETC:3A, GAV-GE:C1, GAV-GE:C2

A survey of the influential artists who produce, write, direct and perform on America's musical stages. Course surveys 17th Century to Present.

THEA 30 Dance Appreciation**Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU-GE:C1, GAV-GE:C1

Students will explore dance from an aesthetic, historic, and cultural point of view. Students will examine the elements of dance including body, space, time, and dynamic qualities and develop a vocabulary with which to analyze and write critically about dance. Dance will be explored in many of its genres including social dance, jazz dance, ballet, modern, and dance from cultures around the globe. Attendance at a live dance performance is required.

THEA 31 Improvisation**Units:** 2.0 **Hours:** 1.0 Lecture and 3.0 Laboratory**Transferable:** CSU

Improvisation is a Theatre Course designed to provide the student training in body movement, voice techniques, stage presence, spontaneity, acting techniques and character development.

THEA 98 Special Topics**Units:** .5 TO 3.0 **Hours:** .5 TO 3.0 Lecture

Special topics courses examine current problems or issues of interest to students within a specific discipline area. For topical content information, consult with the appropriate department chairperson. For transfer status, check with a counselor. This course may have the option of a letter grade or pass/no pass.

WATER RESOURCES MANAGEMENT**WTRM 101 Introduction to Water, Wastewater Technology****Units:** 3.0 **Hours:** 3.0 Lecture

This course constitutes an introduction to Water-Wastewater- Distribution Industry. Topics include industry careers, required certifications, hydrologic cycle, watersheds, water/wastewater treatment methods, valves and equipment, as well as industry standard math formulas and conversion factors. ADVISORY: Eligible for Mathematics 205.

WTRM 102 Beginning Water, Wastewater, Distribution Math**Units:** 3.0 **Hours:** 3.0 Lecture

This course covers basic math concepts used in the water- wastewater-distribution industry. Topics include industry standard formulas, conversion factors, fractions, decimals, percentages, ratios, area and volume. ADVISORY: Eligible for Mathematics 205.

WTRM 103 Introduction to Electrical and Instrumentation Processes**Units:** 3.0 **Hours:** 3.0 Lecture

Introduction to basic electrical theory, applications, common uses and real world examples of control systems and instrumentation used in water distribution, water, and wastewater treatment plants including switches, relays, alarms, motors, instrumentation, valve actuators, computers and communications. ADVISORY: WTRM 101 Introduction to Water-Wastewater Technology; WTRM 102 Beginning Water-Wastewater Mathematics.

WTRM 104 Motors and Pumps, Operation and Maintenance**Units:** 3.0 **Hours:** 3.0 Lecture

Theory of pumps and motors, identification of problems encountered, causes of problems, corrective solutions and repair procedures. Implementation of maintenance programs including scheduling and record keeping. ADVISORY: WTRM 101 Introduction to Water-Wastewater Technology; and WTRM 102 Beginning Water-Wastewater Mathematics.

WTRM 105 Water Distribution 1**Units:** 3.0 **Hours:** 3.0 Lecture

This is a comprehensive course that teaches basic principles of operation and maintenance of a water distribution system. It course covers the sources of water; principles of design; installation, operation and maintenance of pipes, pumps, valves, meters, and other regulated hydraulic units. Operation and maintenance safety considerations are emphasized. This course is designed to prepare the student to take the State of California Water Distribution Operator exam. ADVISORY: WTRM 101 Introduction to Water-Wastewater Technology; WTRM 102 Beginning Water-Wastewater Mathematics.

WTRM 106 Beginning Water Treatment Plant Operation**Units:** 3.0 **Hours:** 3.0 Lecture

This is a comprehensive course that teaches basic principles of operation and maintenance of water treatment plant. The course covers sources of water; public health aspects of water supply; physical and bacteriologic standards of water quality; types of water treatment plants, water treatment procedures, operation, storage and distribution. This course is designed to prepare the student to take the State of California Water Treatment Operator exam. (T1, T2) ADVISORY: WTRM 101 Introduction to Water/Wastewater Technology; WTRM 102 Beginning Water/Wastewater Mathematics.

WTRM 107 Beginning Wastewater Treatment Operations**Units:** 3.0 **Hours:** 3.0 Lecture and .0 Laboratory

This course covers an introduction to the operations and maintenance of a wastewater treatment facility. Topics include industry careers, certifications, advanced wastewater treatment methods, valves and equipment, as well as industry standard math formulas and conversion factors. ADVISORY: Eligible for Math 205.

WTRM 108 Water Distribution 2**Units:** 3.0 **Hours:** 3.0 Lecture

Designed as the second part of an integrated sequence of two courses covering water distribution systems. Enables students to gain a more comprehensive understanding of the operation and maintenance of waterworks distribution system, including advanced calculations, management, safety and emergency response issues. Contemporary issues facing the water and wastewater industry are also explored in depth. This course is part of a series required for eligibility to take the State certification examinations; supports certification examinations for CDPH grade levels D3, D4 and D5. ADVISORY: WTRN 105 Water Distribution 1; WTRM 102 Beginning Water/Wastewater Mathematics.

WTRM 109 Advanced Water Treatment Plant Operation

Units: 3.0 Hours: 3.0 Lecture

This course focuses on advanced water quality control and treatment with emphasis on state regulations, EPA regulations, advanced mathematics and water chemistry. The course will include an in-depth study of treatment plant processes and their relation to current water quality regulations. This course will be helpful to those preparing for the CDPH Grade T3 and T4. ADVISORY: WTRM 102 Beginning Water/Wastewater Mathematics; WTRM 106 Beginning Water Treatment Plant Operation.

WTRM 111 Advanced Wastewater Treatment Plant Operation

Units: 3.0 Hours: 3.0 Lecture

This course is designed to familiarize students with advanced wastewater treatment systems, including secondary and tertiary treatment, solids handling, disinfection, reclamation of wastewater, as well as laboratory study. The course prepares students for the CSWRB Wastewater Treatment Plant Operator examinations. ADVISORY: WTRM 101 Introduction to Water/Wastewater Technology; WTRM 107 Beginning Wastewater Treatment Operation.

WTRM 112 Applied Hydraulics

Units: 3.0 Hours: 3.0 Lecture

Study of the hydraulics necessary in the operation of water and maintenance plants and systems. Consideration of the types of pumps used in water/wastewater service, their operational characteristics, required maintenance and the problems common to their use. ADVISORY: WTRM 101 Introduction to Water/Wastewater Technology; WTRM 102 Beginning Water/Wastewater Mathematics.

WTRM 113 Beginning Wastewater Collection

Units: 3.0 Hours: 3.0 Lecture

This course covers the proper installation, inspection, operation, maintenance and repair of wastewater collection systems. It provides the knowledge and skills required to effectively operate and maintain collection systems. This course also provides knowledge as to why collection systems affect treatment facilities and how they have a significant impact on the operation and maintenance costs and effectiveness of these systems. ADVISORY: WTRM 101 Introduction to Water/Wastewater Technology; WTRM 102 Beginning Water/Wastewater Mathematics.

WTRM 114 Laboratory Analysis for Water, Wastewater

Units: 3.0 Hours: 3.0 Lecture

This course is designed to support and understanding and application of water quality laboratory basics in a practical setting. It prepares students to perform chemical, physical and bacteriological examination of water and wastewater. ADVISORY: WTRM 102 Beginning Water/Wastewater Mathematics or Eligible for Mathematics 205.

WTRM 132 Advanced Water Distribution

Units: 3.0 Hours: 3.0 Lecture

This advanced level course prepares students for work in a highly skilled or supervisory position in the operation of a water distribution system. It prepares the student to take the State of California Water Distribution Operator exam at D3, D4, and D5 levels. ADVISORY: WTRM 105 Water Distribution 1, WTRM 108 Water Distribution 2, WTRM 102 Beginning Water/Wastewater Mathematics.

WTRM 133 Water Conservation

Units: 3.0 Hours: 3.0 Lecture

This course provides technical and practical information in water use efficiency, the need for and major components of comprehensive water conservation programs and the role of the water conservation coordinator in the public water supply industry. Topics include: customers and their water uses, water sustainability factors, regulatory agencies and careers/opportunities in the field of water management. This class will help the student prepare for the AWWA Grade 1 Water Conservation Practitioner Certification.

WTRM 134 Industrial Wastewater and Stormwater Management

Units: 4.0 Hours: 4.0 Lecture

This course is designed to provide an overview of water/ wastewater regulations with an emphasis on local, state, and federal regulatory standards. The study of the principles of wastewater and stormwater management including hydrology, water distribution, wastewater collection, stormwater management, and safe drinking water issues will be covered along with an introduction to the one water management concept.

WTRM 190 Occupational Work Experience, Water, Wastewater Technology

Units: 1.0 TO 4.0 Hours: 3.3 TO 16.7 Laboratory

Occupational work experience for students who have a job related to their major. A training plan is developed cooperatively between the employer, college and student. (P/NP grading) 75 hours per semester paid work = 1 unit. 60 hours non-paid (volunteer) work per semester = 1 unit. Student repetition is allowed per Title 5 Section 55253. Minimum 2.00 GPA REQUIRED: Declared vocational major.

WTRM 210 Advanced Water / Wastewater / Distribution Math

Units: 3.0 Hours: 3.0 Lecture

This course is a continuation of the Beginning Water/Wastewater Mathematics course WTRM 202 and covers advanced math concepts used in the Water/Wastewater/Distribution industry. Topics include industry standard formulas, conversion factors, MCRT, SVI, waste/return, horsepower, well drawdown, capacitance, yield, belt press cake/filtrate, SDI, sludge age, gas production and digestion rates. Previously listed as WTRM 110. ADVISORY: Math 205 Elementary Algebra and WTRM 202 Beginning Water/Wastewater Mathematics.

WTRM 215 Leadership and Supervision in the Water Industry

Units: 3.0 Hours: 3.0 Lecture

Leadership and supervisory aspects of public agencies and investor-owned utilities, including organization, decision-making, coordination, communication and public relations. Personnel supervision, including coaching, training, evaluation, discipline, team building, morale and grievances. Safety programs, as well as encouragement of safe conditions, actions and attitudes is also covered. This course was previously listed as WTRM 115. ADVISORY: WTRM 201 Introduction to Water/Wastewater Technology.

WTRM 216 Advanced Wastewater Collections

Units: 3.0 Hours: 3.0 Lecture

This course provides an in-depth understanding of the components of wastewater collection systems and includes the design, operation, monitoring, maintenance and repair of lift pump stations as well as equipment maintenance, safety/survival systems, administration and organization principles. This course was previously listed as WTRM 116. ADVISORY: WTRM 201: Introduction to Water/Wastewater Technology, WTRM 213: Beginning Wastewater Collections

WTRM 217 Water Use Efficiency Practitioner

Units: 3.0 Hours: 3.0 Lecture

This course focuses upon the efficient use and conservation of water in the following contexts: overall supply and demand; utility operations and measures; residential uses and measures; commercial, institutional uses and measures; and landscape uses and measures. This course was previously listed as WTRM 117.

WTRM 218 Introduction to Occupational Health and Safety

Units: 3.0 Hours: 3.0 Lecture

This course covers the fundamentals of the health and safety associated with water treatment, distribution and waste water treatment operations. Subjects covered include introduction to safety, confined space, lock-out-tagout, respiratory protection, heat stress, fall protection and traffic control. Each section will satisfy existing Cal/OSHA and other water industry related training requirements. This course was previously listed as WTRM 118.

WTRM 219 Industrial Wastewater Management and Treatment**Units:** 3.0 **Hours:** 3.0 Lecture

Industrial Wastewater Management and Treatment reviews various industries and their associated wastewater. The course introduces the characteristics of wastewater such as pH, total suspended solids, total dissolved solids, etc., and then reviews basic treatment methods that are used to remove the particular characteristic from the water. By the end of the course, students will be able to design a wastewater treatment plant by developing block flow diagrams which utilize basic treatment methods to achieve the desired wastewater quality. ADVISORY: WTRM 201: Introduction to Water/Wastewater Technology, WTRM 207: Beginning Wastewater Treatment Plant Operation

WTRM 220 Pollution Prevention and Storm Water Management**Units:** 3.0 **Hours:** 3.0 Lecture

Pollution Prevention and Storm Water Management reviews methods and regulations to prevent pollutants from reaching the waters of our rivers, streams and aquifers. It reviews methods of reducing pollutants in industrial wastewater, water reuse and water recycling. Additionally, it reviews the methods and regulations for storing hazardous wastes and materials. Lastly, it reviews the general storm water permits for municipalities, industry and construction. At the end of this course, the student will have a fundamental knowledge of how to reduce pollution in our wastewater through effective water and process management, as well as appropriate hazardous materials and waste storage. This course also covers the implementation of methods required by the State's general permits to prevent pollution from entering storm water runoff. ADVISORY: WTRM 201: Introduction to Water/Wastewater Technology; WTRM 207: Beginning Wastewater Treatment Plant Operation. This course was previously listed as WTRM 120.

WTRM 221 Mechanical Maintenance**Units:** 3.0 **Hours:** 3.0 Lecture

This course is designed to familiarize students with the basic principles of mechanical equipment design, installation, operation, maintenance, repair, overhaul and replacement. The course emphasizes understanding the value of preventative maintenance techniques such as equipment monitoring, lubrication analysis, machine alignment and scheduled overhaul. ADVISORY: WTRM 201: Introduction to Water/Wastewater Technology. This course was previously listed as WTRM 121.

WTRM 235 Pollution Prevention**Units:** 3.0 **Hours:** 3.0 Lecture

Study of the raw materials and chemicals used in industry and the changes that occur as they move through the industrial process. Topics include: regulations, the materials balance concept of inventory, the importance of waste minimization/pollution prevention, and residential waste generation/reduction/prevention. This course has the option of a letter grade or pass/no pass.

WTRM 236 OSHA Construction Industry Safety Course**Units:** 1.0 **Hours:** 1.0 Lecture

This course covers OSHA standards and requirements as they apply to the construction industry and teaches safety awareness which helps in recognizing and reducing the risk of job site hazards. Emphasis will be on hazard identification, avoidance, control and prevention. Students who successfully complete this course will receive their 10-hour Construction safety course completion certificate/card. This course is a pass/no pass course.

All courses listed here are part of Gavilan College's approved curriculum.
All courses are not offered every semester. Check the Class Schedule for current offerings.

All Noncredit classes are open entry / exit.

NONCREDIT CLASSES

All courses are free of charge. Registration will take place in the Admissions and Records Office or on site at the first class meeting.

For more information, contact the Noncredit Office at (408) 852-2824.

ALLIED HEALTH (NURSING)

AH 743 Healthier Living Through Tobacco Cessation**Units:** .0 **Hours:** 2.0 Lecture

This course is designed to provide the opportunity to obtain valuable education, support, and build the skills necessary to quit tobacco and live a healthier lifestyle. This course will also serve as a preventative measure for those who are considering smoking or using other tobacco related products. Discussion will focus on developing healthy coping skills, learning healthy lifestyle alternatives to smoking, and learning strategies such as Behavioral Modification Techniques and the use of Nicotine Replacement Therapy to help stop smoking. The physiological effects of tobacco on the human body will also be discussed. The course will be offered in both English and Spanish.

AH 793 Personal and Career Development**Units:** .0 **Hours:** 1.0 TO 10.0 Laboratory

A wide variety of lectures on general themes offered to students throughout the academic year who want short-formatted content to augment their personal, academic and career development. General themes to be explored are: Communication, Interpersonal Skills, Pre-employment, Decision-Making, Financial Literacy, Career and Personal Development and Self-Management with Nutrition. This noncredit course is a combination of lecture, self-assessments, group activities and individual modules.

COMPUTER SCIENCE & INFO SYSTEMS

CSIS 638 Assistive Computer Technology Lab**Units:** .0 **Hours:** 1.0 TO 6.0 Laboratory

Under the direction of the faculty in the High Tech Center, students will receive assistance with the application of their specialized software, and/or hardware to the classes in which they are currently enrolled. This course is designed for students with disabilities. Open entry/Open exit.

ENGLISH

ENGL 747 Film and Literacy**Units:** .0 **Hours:** 1.0 Lecture

This course utilizes film to build college-level reading, writing, and critical thinking skills.

ENGL 748 Development of Writing Skills**Units:** .0 **Hours:** 1.0 Laboratory

A series of workshops and directed learning activities allowing individuals to study specific writing strategies and points of grammar and punctuation use. Individuals develop a plan of study as suggested by instructor recommendation and diagnostic assessment.