THEA 17B   Television and Video Workshop  
Units: 3.0  Hours: 2.0 Lecture and 3.0 Laboratory  
Transferable: CSU; GAV-GE:C1  
Emphasis placed on production and post-production techniques in video production. Student knowledge and skills are increased by participating in live to tape projects. This course is also listed as MCTV 17B. ADVISORY: Completion of Theatre Arts 17A.

THEA 19   Acting and Voice for TV / Film / Media  
Units: 3.0  Hours: 2.0 Lecture and 3.0 Laboratory  
Transferable: CSU, UC; GAV-GE:C1  
Theory and practice of acting, performance and development of voice, articulation and pronunciation for TV, film and media. Learning experiences include project in broadcasting, reporting, commercials, public service announcements (PSA), comedy and drama. This course has the option of a letter grade or pass/no pass. Also listed as MCTV 19.

THEA 20   Introduction to Scriptwriting  
Units: 3.0  Hours: 3.0 Lecture  
Transferable: CSU; CSU-GE:C1  
An introductory course on script development and writing for film, television and electronic media. Emphasis on preparing scripts in proper formats, conceptual and stylistic issues related to writing fiction and non-fiction scripts. This course has the option of a letter grade or pass/no pass. ADVISORY: English 250

THEA 21   Mexican Dance and Folklore  
Units: 1.0 TO 2.0  Hours: 1.0 Lecture and .0 TO 3.0 Laboratory  
Transferable: CSU, UC; GAV-GE:C1, F  
Selected regional dances of Mexico, taught for technical and cultural understanding. Emphasis is given to the origin, development and styling of the material. Students are afforded the opportunity of appearing in performances. May be repeated until a maximum of 8 units are accrued.

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

AE 600   Vocational Training I  
Units: .0  Hours: .0 Lecture and 30.0 Laboratory  
Transferable: No  
Pre-vocational skills for adults with impaired cognitive functioning. Entry level work preparation is emphasized. Skills taught include basic work routine orientation, communication skills, job ability assessment, and self-management skills.

AE 602   Vocational Training III  
Units: .0  Hours: .0 Lecture and 30.0 Laboratory  
Transferable: No  
Practical training and on-the-job work experience for students with disabilities. This course also provides preparation for entry level employment utilizing a number of work alternatives and settings.

AE 603   Vocational Training IV  
Units: .0  Hours: 3.0 Laboratory  
Transferable: No  
AE 603 is a job readiness course which provides opportunities for individuals with disabilities to participate in service-learning activities and job readiness training leading to job development and placement in a community setting.

AE 605   Vocational Training VI  
Units: .0  Hours: .5 Lecture and 1.0 Laboratory  
Transferable: No  
This course is designed for students with disabilities. The purpose of this course is to improve the student's ability to participate in the community, by increasing independence through acquisition of survival vocabulary, structured practice in functional reading utilizing phonics and content recognition, and increased enjoyment in reading for pleasure. Students will read stories written or revised specifically for adults with limited reading skills.

AE 613   Independence Training IV  
Units: .0  Hours: .5 Lecture and 1.0 Laboratory  
Transferable: No  
This course is designed for students with disabilities. The purpose of this course is to improve the student's ability to build math competencies related to independence in daily living and the work site. The focus of the class is basic computation, consumer awareness, money management, banking and purchasing.

AE 636   Adapted Physical Education  
Units: .0  Hours: .0 Lecture and 3.0 Laboratory  
Transferable: No  
An individualized program of adapted physical education activities designed to meet the needs of students who have physical limitations or disabilities. The course assists in the development and appreciation of physical activity as a regular planned contribution to one's overall well-being. This course is for the non-matriculating student, is not graded and is without college credit. ADVISORY: Students must be able to document a physical disability.

WATER RESOURCES MANAGEMENT

WTRM 101   Introduction to Water / Wastewater Technology  
Units: 3.0  Hours: 3.0 Lecture  
Transferable: CSU  
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  
Transferable: CSU  
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  
Transferable: CSU  
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  
Transferable: CSU  
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  
Transferable: CSU  
This is a comprehensive course that teaches basic principles of operation and maintenance of a water distribution system. It 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  
Transferable: CSU  
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  
Transferable: CSU  
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  
Transferable: CSU  
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, B4 and D5. ADVISORY: WTRM 105 Water Distribution 1; WTRM 102 Beginning Water/Wastewater Mathematics.

WTRM 109  Advanced Water Treatment Plant Operation  
Units: 3.0  Hours: 3.0 Lecture  
Transferable: CSU  
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 110  Advanced Water / Wastewater / Distribution Math  
Units: 3.0  Hours: 3.0 Lecture  
Transferable: CSU  
This course is a continuation of the Beginning Water/Wastewater Mathematics course WTRM 102 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. ADVISORY: Math 205 Elementary Algebra and WTRM 102 Beginning Water/Wastewater Mathematics.

WTRM 111  Advanced Wastewater Treatment Plant Operation  
Units: 3.0  Hours: 3.0 Lecture  
Transferable: CSU  
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 Plant Operation.

WTRM 112  Applied Hydraulics  
Units: 3.0  Hours: 3.0 Lecture  
Transferable: CSU  
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  
Transferable: CSU  
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  
Transferable: CSU  
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 115  Supervision  
Units: 3.0  Hours: 3.0 Lecture  
Transferable: CSU  
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. ADVISORY: WTRM 101 Introduction to Water/Wastewater Technology.

WTRM 116  Advanced Wastewater Collections  
Units: 3.0  Hours: 3.0 Lecture  
Transferable: CSU  
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. ADVISORY: WTRM 101: Introduction to Water/Wastewater Technology; WTRM 113: Beginning Wastewater Collections.

WTRM 117  Water Use Efficiency Practitioner  
Units: 3.0  Hours: 3.0 Lecture  
Transferable: CSU  
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.
WTRM 118  Introduction to Occupational Health and Safety  
Units: 3.0  Hours: 3.0 Lecture  
Transferable: CSU  
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, lockout-tagout, respiratory protection, heat stress, fall protection and traffic control. Each section will satisfy existing Cal/OSHA and other water industry related training requirements.

WTRM 119  Industrial Wastewater Management & Treatment  
Units: 3.0  Hours: 3.0 Lecture  
Transferable: CSU  
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 101: Introduction to Water/Wastewater Technology, WTRM 107: Beginning Wastewater Treatment Plant Operation.

WTRM 120  Pollution Prevention and Storm Water Management  
Units: 3.0  Hours: 3.0 Lecture  
Transferable: CSU  
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 stormwater 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 stormwater runoff. ADVISORY: WTRM 101: Introduction to Water/Wastewater Technology, WTRM 107: Beginning Wastewater Treatment Plant Operation.

WTRM 121  Mechanical Maintenance  
Units: 3.0  Hours: 3.0 Lecture  
Transferable: CSU  
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 101: Introduction to Water/Wastewater Technology.

WTRM 190  Occupational Work Experience / Water / Wastewater Technology  
Units: 1.0 TO 4.0  Hours: 5.0 TO 20.0 Laboratory  
Transferable: CSU  
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. May be taken for a maximum total of 16 units. Minimum 2.00 GPA REQUIRED: Declared vocational major.

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.

WTRM 180  Word Processing: see CSIS

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.

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