

San Bernardino Valley College  
Curriculum Approved: 11/23/2009  
Board Approval: 01/21/2010  
Unique course Identification Number: CCC000513864  
TOP Code: 0958.00 - Water and Wastewater Tech

## **I. CATALOG DESCRIPTION:**

### **A. Department Information:**

Division: Applied Technology, Transportation & Culinary Arts

Department: WATER SUPPLY TECHNOLOGY

Course ID: WST095 A-Z

Course Title: Special Topics in Water Technology

Units: 0.25 - 2

Lecture: 0.25 - 2 contact hour(s) per week

Min: 4 - 4.5 contact hours per semester

Max: 32 - 36 contact hours per semester

Prerequisite: None

### **B. Catalog Description:**

These short seminars are offered to provide training in topics of timely, special, unusual interest or which are not contained in the regular course offerings in Water Technology. They are specifically designed for employees who are currently working in the field of water distribution/treatment or wastewater collection/treatment.

### **C. Schedule Description:**

These short seminars are offered to provide training in topics of timely, special, unusual interest or which are not contained in the regular course offerings in Water Technology. They are specifically designed for employees who are currently working in the field of water distribution/treatment or wastewater collection/treatment.

## **II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1**

## **III. COURSE OBJECTIVES FOR STUDENTS:**

**Upon successful completion of the course the student should be able to:**

- A. Answer questions on the topic(s) discussed in the seminar
- B. Prepare and present an oral or a written report using the information obtained in the seminar
- C. Explain the topics/issues presented in the seminar; include the analysis of options and justification of recommendations

## **IV. COURSE CONTENT:**

Course content varies with subject content of each seminar. A separate outline for each

topic will be filed in the Science Division and the Office of the Vice President of Instruction.

Many of the problems in the field of water technology revolve around comprehension, control, design, and operation of interconnected systems used for production, distribution and redistribution of water. This complex system has social, economical, technological and regulatory/legal aspects. The basic aim of this interdisciplinary series of short seminars is to present a suite of ideas and theories to help understand the complex system used for production of good quality drinking water. Course content of each seminar will be different. The following are representative of seminar topics.

- A. **Regulatory Updates:** This seminar covers updates in the state and federal laws that affect the production and distribution of water. Some of the laws which will be discussed are the Safe Drinking Water Act, Title 22, Enhanced Coagulation, Disinfectant/Disinfection By Product Rules, Clean Water Act, and National Pollutant Discharge Elimination System (NDPES) compliance. Possession of D2 or T2 license recommended.
- B. **Operational Updates:** This seminar focuses upon practical operational criteria such as backflow protection techniques, valve replacement procedures, unidirectional flushing, treatment optimization, and other topics. Possession of D2 or T2 license recommended.
- C. **Safe Handling of Chlorine:** The seminar covers properties of chlorine and chlorine compounds, chlorine containment and safe handling procedures for operating personnel. Theoretical and practical methods of handling and feeding chlorine into public work supplies as required by various private and governmental agencies will be stressed. Possession of D2 or T2 license recommended.
- D. **Review of Groundwater Rule(GWR):** The seminar will discuss the requirements promulgated by the GWR. It will include critical elements of Sanitary Survey, and "Trigger Monitoring" or corrective action required if coliforms are detected, treatment which can reliably provide 4-log(99.99%) inactivation or removal of viruses. State and federal corrective mandates with respect to Hepatitis A and Norovirus, E. Coli, Enterococci, Shigella and Coliphage Bacteria will be discussed.

## V. METHODS OF INSTRUCTION (May include any, but do not require all, of the following):

- A. Lecture
- B. Guest speakers
- C. Class and/or small group discussion
- D. Use of films, videotapes, or other media
- E. Use of written materials: texts, journals, etc.
- F. Classroom demonstrations
- G. Guided practice
- H. Instructor generated handouts

## VI. TYPICAL OUT-OF-CLASS ASSIGNMENTS:

- A. Reading assignments are required and may include (but are not limited to) the following:

Read articles relevant to the topic of the seminar to prepare for a discussion during the

seminar.

- B. Critical thinking assignments are required and may include (but are not limited to) the following:

Using whiteboard, chart(s), illustration(s), or graph(s), discuss and explain 2-3 key concepts discussed in the seminar to the members of your group.

- C. Writing assignments are required and may include (but are not limited to) the following:

Write a one page paper that relates to the content of the seminar.

## **VII. METHODS OF EVALUATION**

- A. Class participation
- B. Examinations
- C. Homework
- D. Presentations (oral or visual)
- E. Written papers or reports
- F. Quizzes
- G. Cumulative finals or certifications

## **VIII. TYPICAL TEXT(S):**

Reference material will vary depending on the subject of the seminar.

## **IX. OTHER SUPPLIES REQUIRED OF STUDENTS:**

- A. None