

Class “B” Drinking Water Operators Training

Common Course Syllabus

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I. COURSE NAME AND DESCRIPTION, CREDIT:

CLASS “B” WATER OPERATORS TRAINING CERTIFICATE OF COMPLETION

This course prepares the student for the Class “B” Drinking Water License State Exam, as well as, provides the student with the operational skills necessary to safely operate and maintain advanced drinking water treatment facilities. Topics to be covered include problem solving, safety practices and mathematical calculations relating to water treatment process control. Additional topics covered include teamwork, communication, motivation and evaluation. Successful completion of this course: requires a grade of 70 or better as evidenced by the final exam; culminates in the receipt of a certificate of completion; and satisfies the Florida Department of Environmental Protection’s course prerequisite for taking the State Drinking Water Class “B” Exam. This course will be a combination of lecture, demonstration, and plant visitation.

II. PREREQUISITES FOR THIS COURSE:

- Possession of a valid Class “C” Drinking Water License, or successful completion of a Class “C” Drinking Water Operators course.
- Possession of a High School Diploma or GED.

III. GENERAL COURSE INFORMATION: Topic Outline

- Operator Responsibilities
- Filtration
- Laboratory Procedures
- Membrane Treatment
- Drinking Water Regulations
- Plant Supervision

IV. LEARNING GOALS AND ASSESSMENT:

At the conclusion of this course, students will be able to demonstrate the following course competencies:

LEARNING GOALS

- Students will identify, evaluate and solve problems related to plant operations and water treatment.
- Students will recognize the need for and apply appropriate safety procedures.
- Students will apply team building, communication, and motivational skills.
- Students will identify the legal requirements of local and federal legislation such as, drinking water regulations.
- Students will recognize the importance of practicing effective laboratory procedures.
- Students will practice effective oral and written communications skills.
- Students will identify and apply the guidelines of plant maintenance.

ASSESSMENT

- Quiz, end of course exam
- Quiz, end of course exam
- Quiz, end of course exam
- Quiz, end of course exam
- Quiz, end of course exam
- Quiz, end of course exam
- Quiz, end of course exam

V. STUDENT REQUIREMENTS:

- Students are required to attend all classes, and any scheduled plant visitations.
- The Minimum attendance is 106 class hours, any less will result in an incomplete and no certificate will be issued.
- **The student is responsible for knowing all materials covered during any absence.**
- The student is required to complete all assigned reading and writing assignments.
- During this course, there will be four quizzes, one pre-final, and one final exam.
- Exams will be given at assigned class start times.
- The time limit for chapter quizzes will vary.
- The time limit for the final exam is 3 hours.
- Each student must have a functioning computer equipped with a working Video camera and microphone and or headset

VII. GRADING POLICY:

- Each student's final course average will be weighted as follows: Quizzes 10 %; Final Exam 90%
- A minimum grade of 70 on the final is required to pass the class and receive a certificate of completion.
- Scoring Range:
A: 90 – 100 B: 80 – 89 C: 70 -79 D: 60 – 69 F: Below 60

VIII. REQUIRED COURSE MATERIALS:

“Water Treatment Plant Operation (A Field Study Training Program)”; Volume 1 Sixth Edition. Office of Water Programs, College of Engineering and Computer Science, California State University, Sacramento.

“Water Treatment Plant Operation (A Field Study Training Program)”; Volume 2 Sixth Edition. Office of Water Programs, College of Engineering and Computer Science, California State University, Sacramento.

“Utility Management (A Field Study Program)”; Office of Water Programs, College of Engineering and Computer Science, California State University, Sacramento.

VIV. ADDITIONAL RESOURCES:

Water Distribution System Operation and Maintenance (A Field Study Training Program)”; Volume 1, Fifth Edition; Office of Water Programs, College of Engineering and Computer Science, California State University, Sacramento.

“Water Distribution System Operation and Maintenance (A Field Study Training Program)”; Volume 2, Fifth Edition; Office of Water Programs, College of Engineering and Computer Science, California State University, Sacramento.

The Florida Department of Environmental Protection Web site for Rules and Regulations. [Florida DEP Water Resource Management Rules by Program](http://www.dep.state.fl.us/water/rulesprog.htm#ww) <http://www.dep.state.fl.us/water/rulesprog.htm#ww>

X. COURSE SCHEDULE:

Class Day	Topic	Required Reading
Day 1	Intro to Water Treatment	Chapter 1 Vol. 1
Day 2	Source Water, Reservoir management, and Intake Structures	Chapter 2 Vol. 1
Day 3	Source Water, Reservoir management, and Intake Structures	Chapter 2 Vol. 1
Day 4	Coagulation and Flocculation	Chapter 3 Vol 1
Day 5	Coagulation and Flocculation	Chapter 3 Vol. 1
Day 6	Sedimentation	Chapter 4 Vol. 1
Day 7	Sedimentation	Chapter 4 Vol. 1
Day 8	Filtration	Chapter 5 Vol. 1
Day 9	Filtration	Chapter 5 Vol. 1

Day 10	Quiz	Chapters 1 – 5 Vol. 1
Day 11	Disinfection	Chapter 6 Vol. 1
Day 12	Disinfection	Chapter 6 Vol. 1
Day 13	Disinfection	Chapter 6 Vol. 1
Day 14	Corrosion Control	Chapter 7 Vol. 1
Day 15	Corrosion Control	Chapter 7 Vol. 1
Day 16	Taste and Odor Control	Chapter 8 Vol. 1
Day 17	Laboratory Procedures	Chapter 9 Vol. 1
Day 18	Quiz	Chapters 6-9 Vol. 1
Day 19	Rules, Regulations, and Safety	Chapter 1 Vol. 2
Day 20	Rules, Regulations, and Safety	Chapter 1 Vol. 2
Day 21	Softening	Chapter 2 Vol. 2
Day 22	Softening	Chapter 2 Vol. 2
Day 23	Specialized Treatment	Chapter 3 Vol. 2
Day 24	Specialized Treatment	Chapter 3 Vol. 2
Day 25	Fluoridation	Chapter 4 Vol. 2
Day 26	Fluoridation	Chapter 4 Vol. 2
Day 27	Membrane Treatment	Chapter 5 Vol. 2
Day 28	Membrane Treatment	Chapter 5 Vol. 2
Day 29	Quiz	Chapters 1-5 Vol. 2
Day 30	Process Waste Disposal	Chapter 6 Vol. 2
Day 31	Instrumentation and Control	Chapter 7 Vol. 2
Day 32	Plant Maintenance	Chapter 8 Vol. 2
Day 33	Management	Chapter 9 Vol.2
Day 34	Management	Chapter 9 Vol. 2
Day 35	Quiz	Chapters 6-9 Vol. 2
Day 36	Course Review	All covered materials
Day 37	Pre-final	All covered materials
Day 38	Course Review	All covered materials
Day 39	Final Exam	All covered materials