

Class “C” Drinking Water Operators Training

Common Course Syllabus

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I. COURSE NAME AND DESCRIPTION, CREDIT:

CLASS “C” WATER OPERATORS TRAINING CERTIFICATE OF COMPLETION

This course prepares the student for the Class “C” Drinking Water License State Exam, as well as, provides the student with the practical skills necessary to safely operate and maintain various drinking water treatment systems and appurtenances. Topics to be covered include operational problem solving, plant safety and maintenance. Additional topics covered include operational procedures and mathematical calculations relating to water treatment process control. Successful completion of this course: requires a grade of “C” 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 “C” Exam. The course will be a combination of lecture, demonstration, and plant visitation.

II. PREREQUISITES FOR THIS COURSE:

- Possession of a High School Diploma or GED.

III. GENERAL COURSE INFORMATION: Topic Outline

- Plant Operations
- Hydrologic Cycle
- Filtration
- Lime Softening
- Chlorination
- Laboratory Procedures
- Membrane Treatment
- Drinking Water Regulations

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 use the appropriate strategies to solve problems related to plant operations and water treatment.

Students will apply appropriate safety procedures.

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

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 and one final exam.
- Exams will be given at assigned class start times.
- The time limit for chapter quizzes is one hour.
- The time limit for the final exam three hours.

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

VIV. ADDITIONAL RESOURCES:

"Water Distribution System Operation and Maintenance (A Field Study Training Program)"; Volume 1 Seventh 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#www) <http://www.dep.state.fl.us/water/rulesprog.htm#www>

X. COURSE SCHEDULE:

Class Day	Topic	Required Reading
Day 1	The Plant Operator / Water Sources and Treatment	Chapter 1 / Chapter 2
Day 2	Reservoir Management and Intake Structures	Chapter 3
Day 3	Reservoir Management and Intake Structures	Chapter 3
Day 4	Coagulation and Flocculation	Chapter 4
Day 5	Sedimentation	Chapter 5
Day 6	Sedimentation	Chapter 5
Day 7	Quiz / Filtration	Chapters 1-5 / Chapter 6
Day 8	Filtration	Chapter 6

Class Day	Topic	Required Reading
Day 9	Disinfection	Chapter 7
Day 10	Disinfection	Chapter 7
Day 11	Corrosion Control	Chapter 8
Day 12	Taste and Odor Control	Chapter 9
Day 13	Taste and Odor Control	Chapter 9
Day 14	Plant Operations	Chapter 10
Day 15	Plant Operation	Chapter 10
Day 16	Quiz / Laboratory Procedures	Chapters 6-10 / Chapters 11, 21 vol. 2
Day 17	Laboratory Procedures	Chapters 11, 21 vol. 2
Day 18	Treatment Plant Math	Appendix
Day 19	Treatment Plant Math	Appendix
Day 20	Iron and Manganese Control	Chapter 12
Day 21	Fluoridation	Chapter 13
Day 22	Softening	Chapter 14
Day 23	Softening	Chapter 14
Day 24	Specialized Treatment (THM's and Arsenic Removal)	Chapter 15
Day 25	Quiz/ Membrane Treatment	Chapters 11-15, 21 vol. 2 and Appendix/ Chapter 16
Day 26	Membrane Treatment	Chapter 16
Day 27	Plant Visit	Burnt Store RO
Day 28	Process Waste Disposal	Chapter 17
Day 29	Plant Maintenance / Instrumentation and Control	Chapter 18 / Chapter 19
Day 30	Safety	Chapter 20
Day 31	DEP Rules and Regulations	Handout
Day 32	DEP Rules and Regulations	Handout
Day 33	Quiz / Course Review	Chapters 16-20, Handout/ All Covered Materials
Day 34	Course Review	All Covered Materials
Day 35	Course Review	All Covered Materials
Day 36	Final Exam	All Covered Materials