

Class “C” Drinking Water Operators Training

Common Course Syllabus

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I. COURSE NAME AND DESCRIPTION, CREDIT:

CLASS “C” DRINKING WATER OPERATORS TRAINING

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.

Upon completion of this course and passing the final exam with a minimum grade of 70, the student will be qualified to sit for the Florida DEP Class C Drinking Water Operators license exam. A certificate of completion will be awarded to those passing the course, a copy of this must be submitted to FDEP in order to sit for the exam.

A license can only be issued after completion of 2080 hours of on the job training in the Drinking Water Treatment field, and successful passing of this course and the State FDEP exam.

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.

ASSESSMENT

Quiz, end of course exam

Quiz, end of course exam

Quiz, end of course exam

Quiz, end of course exam

Students will practice effective oral and written communications skills.
Students will identify and apply the guidelines of plant maintenance.

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 camera and microphone and 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 Seventh 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 Seventh 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 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#www) <http://www.dep.state.fl.us/water/rulesprog.htm#www>

X. COURSE SCHEDULE: Reflects 3 hours per class day

| 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 |

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| 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 | Laboratory Procedures | Chapter 9 Vol. 1 |
| Day 19 | Quiz | Chapters 6-9 Vol. 1 |
| Day 20 | Rules, Regulations, and Safety | Chapter 1 Vol. 2 |
| Day 21 | Rules, Regulations, and Safety | Chapter 1 Vol. 2 |
| Day 22 | Softening | Chapter 2 Vol. 2 |
| Day 23 | Softening | Chapter 2 Vol. 2 |
| Day 24 | Specialized Treatment | Chapter 3 Vol. 2 |
| Day 25 | Specialized Treatment | Chapter 3 Vol. 2 |
| Day 26 | Fluoridation | Chapter 4 Vol. 2 |
| Day 27 | Fluoridation | Chapter 4 Vol. 2 |
| Day 28 | Membrane Treatment | Chapter 5 Vol. 2 |
| Day 29 | Membrane Treatment | Chapter 5 Vol. 2 |
| Day 30 | Quiz | Chapters 1-5 Vol. 2 |
| Day 31 | Process Waste Disposal | Chapter 6 Vol. 2 |
| Day 32 | Instrumentation and Control | Chapter 7 Vol. 2 |
| Day 33 | Plant Maintenance | Chapter 8 Vol. 2 |
| Day 34 | Plant Maintenance | Chapter 8 Vol. 2 |
| Day 35 | Quiz | Chapters 6-8 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 |