

Agenda: Water Treatment Operator 3

In Partnership with American Water Works Association



This online eLearning course is being offered in partnership with American Water Works Association.

Summary - WTO Level 3 offers a unique combination of advanced process troubleshooting knowledge and introductory preparation for supervisory responsibilities. This course will also help students learn how to manage employees and the legal obligations for regulatory compliance. This course will take a minimum of 12-18 hours per week of online learning activities for five weeks.

Estimate to Complete - 60 hours

Week 1 - Week 1 reviews many of the topics covered in WTO 1 and WTO 2 in greater detail. Treatment trains are discussed along with physical and chemical treatment processes. Disinfection is reviewed. A deeper dive into hydraulics takes place with a focus on pressure, head, head loss, and associated calculations. Following hydraulics, pumping systems are evaluated including calculations, components and pumping curves. Monitoring treatment processes concludes this week.

Week 2 - Week 2 examines regulations including the Safe Drinking Water Act. Water sources, groundwater and surface water, are discussed. Options to dispose of residuals are provided. Operator responsibilities and media relations are reviewed. The week concludes with a focus on safety.

Week 3 - Week 3 reviews the following processes: aeration, activated carbon adsorption, and ion exchange. The distribution system will be discussed. Maintenance of water treatment systems including water stability and electricity are also key topics during this week.

Week 4 - Lime softening is featured in the first half of Week 4 with a presentation and a demonstration of calculations. Membrane processes and related membrane fouling are discussed followed by pump hydraulics.

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Week 5 - Meters are the first topic in Week 5 with a demonstration of associated calculations. Emerging issues are identified. SCADA is reviewed and is followed by a discussion regarding instrumentation, alarms, recordkeeping and troubleshooting the system. The week concludes with a course review to prepare for the final assessment.

Final Assessment - Students need to answer 70% of the questions correct to pass the final assessment and receive credit for the Water Treatment Operator 3 course.

WTO 3: End of Course Survey (not included in est. 60 hours) - After passing the final assessment, students are directed to an end of course survey to evaluate the learning experience and provide license information to ensure the information in the LMS is correct.

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Estimate to Complete - 60 hours

Module Title	Average Time to Complete
Week 1	12 hours
Week 2	12 hours
Week 3	12 hours
Week 4	12 hours
Week 5	12 hours
Final Assessment	1 hour
WTO 3: End of Course Survey (not included in est. 60 hours)	Not applicable