



Developer and Owner – WWOTC

**Online Course – Instructor Led
Advanced Water Treatment**

April 3-4, 2023 (1:00-5:00 AST)

Course Objective / Description

The objective of this course is to provide participants with training in advanced water treatment plant processes. The course material will provide a cursory review of conventional water treatment. This will be followed by a description and explanation of new and emerging water treatment technologies including advanced oxidation processes (AOPs) such as ozonation, hydrogen peroxide and ultraviolet radiation. Granular activated carbon filtration and the four methods of membrane filtration: MF, UF, NF and RO will also be described along with their purpose, operation and effectiveness.

What will be covered:

- Emerging water quality issues
- Conventional water treatment processes
- Advanced water treatment processes
- Schematic diagram of advanced water treatment plant
- AOPs: ozonation, ultraviolet radiation and hydrogen peroxide
- AOP health and safety concerns and recommended PPE
- Granular activated carbon filtration
- Membrane filtration: MF, UF, NF, RO
- Lead residues corrosion control

| Lesson | Description | Contact Hours |
|---------------|------------------------------|----------------------|
| Lesson 1 | Global Water Resources | 0.25 |
| Lesson 2 | Early Water Systems | 0.25 |
| Lesson 3 | Conventional Water Treatment | 0.75 |
| Lesson 4 | Advanced Water Treatment | 0.75 |
| | Break | 0.25 |
| Lesson 5 | Activated Carbon | 0.75 |
| Lesson 6 | Ozone Disinfection | 0.5 |
| Lesson 7 | Ultraviolet Disinfection | 0.5 |
| | Lunch | 0.5 |
| Lesson 8 | Membrane Filtration | 1.0 |

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| Lesson 9 | Advanced Oxidation Processes | 0.5 |
| | Break | 0.25 |
| Lesson 10 | Advanced Oxidation Processes | 0.5 |
| Lesson 11 | Summary and Conclusions | 1.0 |
| | Exam | 0.5 |
| | Total Instruction/Contact Time: | 7.0 |

CEU: 0.7

Advanced Water Treatment

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Name: _____

Company: _____

Company Mailing Address _____

City, Province: _____ Postal Code: _____

Phone: _____ Email: _____

ACWWA Membership #: _____ WEF Membership #: _____

If no membership number is listed, you will be invoiced as a non-member. See pricing below.

Fee for ACWWA or WEF Members & Employees of UTILITY Members

Course: $\$355.00 + \$53.25 \text{ HST (15\%)} = \408.25

Fee for Non – Members

Course: $\$380.00 + \$57.00 \text{ HST (15\%)} = \437.00

Invoices will be sent to the address listed above.

PO number to be included on the invoice _____

Payment can be made by Visa, Master Card or cheque.

Card Holder's Name _____

Credit Card Number _____ Expiry _____

Signature _____

Email address for credit card receipt _____

Cheques should be made payable to:
ACWWA
 PO Box 28141 · Dartmouth, NS · B2W 6E2
 Phone 902-434-6002 Fax 902-435-7796