



Course Outline

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| Course Title | CWQA In-Class Service Technician's Course |
| Course Number | WXM8-1 |
| Course Hours | 5-8 |

Staff Approval List

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|---|----------------------------|
| Peter Cartwright, Jason Jackson, Claude Gauthier, Ric Harry | Faculty |
| Anne Baliva | Coordinator/ Administrator |
| Kevin Wong | Executive Director |

Prerequisites

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| Course Title | WXM0 CWQA Water Basics |
| Course Title | WXM1 CWQA Water Fundamentals |
| Course Title | WXM1-1 CWQA Water Fundamentals In- Class Session |
| Exam | WXM0 and WXM1 (Water basics exam and the CWT exam) |
| Course Title | WXM8- MEP Core Service |

Course Description

The following document is a draft outline of a suggested proficiency check intended for personnel servicing or maintaining water treatment systems.

The students will learn and practice:

Practical Aspects of Troubleshooting Common RO System Problems

The Practice Troubleshooting Common RO System Problems provides opportunities to practice troubleshooting common problems you might encounter

Practical Aspects of Troubleshooting Common Softener System Problems

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Practical Aspects of Troubleshooting Common Backwashing Filtration System Problems

The Practice Troubleshooting Common Backwashing Filtration System Problems provides opportunities to practice troubleshooting common problems

Practical Aspects of Troubleshooting Common Non-backwashing Filtration System Problems

The Practice Troubleshooting Common Non-backwashing Filtration System Problems provides opportunities to practice troubleshooting common problems

Practical Aspects of Troubleshooting Common Ozone or Chemical Injection System Problems

The Practice Troubleshooting Common Ozone or Chemical Injection System Problems provides opportunities to practice troubleshooting common problems

Course Learning Outlines

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| 1 | Understanding Why Equipment Can Fail (mechanical, chemistry, age) |
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| 2 | Diagnosing Failures |
| 3 | Field Testing Water and comparing to the current system's capabilities in field |
| 4 | Practical Aspects of Troubleshooting Common RO System Problems |
| 5 | Practical Aspects of Troubleshooting Common Softener System Problems |
| 6 | Practical Aspects of Troubleshooting Common Backwashing Filtration System Problems |
| 7 | Practical Aspects of Troubleshooting Common Non-backwashing Filtration System Problems |
| 8 | Practical Aspects of Troubleshooting Common Ozone or Chemical Injection System Problems |

Additional Learning Outcome Comments

Upon successful completion of the course the learner will be able to demonstrate that:
 Demonstrate the ability to recognize troubleshooting concerns in the field
 Demonstrate the ability to diagnose, analyze and evaluate problem equipment and recommend relevant solutions
 Repair and service of equipment
 Explain the application of water treatment equipment with respect to changing water chemistry.
 Field modify a water treatment system based on the inlet water quality and the desired water quality needs.

Learning Resources

All additional resources within course lectures, modules and/or assignments must adhere to the Canadian Copyright Act.

The student may be required to have an approved test kit, and safety equipment for the handling of chemicals and contaminated water. Care and safety protocols should be adhered to with handling samples and chemicals.

Assessment Requirements

Note: does not need to be all

| Assessment Task | % or P/F |
|---------------------|--|
| Applied Learning | 8 hours Practical and in class |
| Assignments | Water testing, system determination, system train evaluation |
| In-Class activities | 8 hours after the prerequisite course work is completed |
| Labs | In the MEP |
| Presentations | N/A |
| Quizzes | In the MEP |
| Tests | ??? |

Prior Learning and Assessment and Recognition (PLAR)

PLAR uses tools to help learners reflect on, identify, articulate, and demonstrate past learning which has been acquired through previous training, study, work and other life experiences and which is not recognized through formal transfer of credit mechanisms.

PLAR options include authentic assessment activities designed by faculty that may include challenge exams, portfolio presentations, interviews, and written assignments. Learners may also be encouraged and supported to design an individual documentation package that would meet the learning requirements of the course. Any student who wishes to have any prior learning acquired through life and work experience assessed, so as to translate it into course credit, may initiate the process by applying through the CWQA.

A copy of CWQA's PLAR policy is attached.

Student Success: Policies and Procedures

Mutually, faculty and learners will support and adhere to CWQA Academic Regulations, and Student Rights and Responsibilities. The following policies and guidelines have been developed to support the learning process.

Please click on the link for information about:

- Student Rights and Responsibilities
- Academic Regulations
- Guidelines for Professional Practice: Students and Instructors

Alternate accessible formats of learning resources and materials will be provided, on request. (AODA statement)

Program Standards:

The Authority Having Jurisdiction such as the Ontario Ministry of Training, Colleges and Universities oversees the development and the review of standards for regulated programs of instruction. CWQA adheres to these guidelines until such time as this program is mandated and recognized by O.MTCU. Each training delivery organization is required to ensure that its programs and program delivery are consistent with these standards, and must assist students to achieve these essential outcomes.

This course contributes to Program Standards as defined by the Alberta Safety Council and the Ontario Ministry of Training, Colleges and Universities (MTCU). Program standards apply to all similar programs of instruction offered by colleges across the province. Each program standard for a postsecondary program includes the following elements:

- Vocational standards (the vocationally specific learning outcomes which apply to the program of instruction in question);
- Essential employability skills (the essential employability skills learning outcomes which apply to all programs of instruction); and
- General education requirement (the requirement for general education in postsecondary programs of instruction that contribute to the development of citizens who are conscious of the diversity, complexity and richness of the human experience; and, the society in which they live and work).
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Collectively, these elements outline the essential skills and knowledge that a student must reliably demonstrate in order to complete the CWQA MEP program. For further information on the standards for your program, follow the MTCU link (www.tcu.gov.on.ca/pepg/audiences/colleges/progstan/)

Essential Employability Skills

| # | Description | Use (Y/N) |
|---|-------------------------------|-----------|
| 1 | Communicate clearly | Y |
| 2 | Respond to communication | Y |
| 3 | Use mathematical operations | Y |
| 4 | Solve problems systematically | Y |
| 5 | Anticipate and solve problems | Y |
| 6 | Document information | Y |

| | | |
|----|-------------------------------|---|
| 7 | Analyze information | Y |
| 8 | Respect diverse opinions | Y |
| 9 | Interact with groups or teams | Y |
| 10 | Manage time and resources | Y |
| 11 | Take responsibility for self | Y |