

I. COURSE DESCRIPTION:

This course is intended to provide the students with basics as related to the operation of water and wastewater systems. The basics as related to topics including: conversions, math, chemistry, hydraulics, electricity will be discussed first. It will be followed by topics on support systems mainly pertaining to pumps and motors and processes in water distribution and water treatment and wastewater collection and wastewater treatment. At the end of the course students will be fully prepared to write the entry level certification examination.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Standards of measure and units conversions
2. Explain and describe water regulation
3. Make area and volume calculations as related to water and wastewater units and devices
4. Define the terms in water and wastewater operations
5. Apply the principles of hydraulics to find flow rates, pressures and pumping head and power
6. Identify the basic principles of and recognize the importance of disinfection of water.
7. Define electrical terms: current, emf, and resistance and describe the relation between them
8. Describe the parameters of water quality and sampling for compliance and process control
9. Describe the basic principles of safety as applied to water and wastewater operations.
10. Describe the main processes employed in water and wastewater treatment.
11. Explain the processes and equipment employed in water distribution and wastewater collection systems.

III TOPICS:

1. Units And Math
2. Basic Hydraulics
3. Electricity
4. Chemistry Basics
5. Water Quality and Sampling
6. Support Systems
7. Safety
8. Legislation

- 9. Water Treatment
- 10. Water Distribution
- 11. Wastewater Collection
- 12. Wastewater Treatment

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

All online

V. EVALUATION PROCESS/GRADING SYSTEM:

Final mark in the course will be based on the following:

Test I	15%
Test II	15%
Test III	15%
Test IV	15%
Final Exam	40%

The final test will be written online in a proctored environment, preferably at your registering college or a college near your home.

Your registering college will convert the percentage grade to the letter grade

VI. SPECIAL NOTES:

If you are a student with a disability please identify your needs to the tutor and/or the Centre for Students with Disabilities at your registering college.

Students, it is your responsibility to retain course outlines for possible future use to support applications for transfer of credit to other educational institutions.

Course outline amendments: The Professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources