

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: Wastewater Operator-in-Training Certification Preparation

CODE NO. : OEL860 **SEMESTER:**

AUTHOR: *Subhash Verma, P. Eng.*

DATE: 13 07 22 **PREVIOUS OUTLINE DATED:** 10 05 17

APPROVED: "Ted Newbery"

Chair

July 2013
DATE

TOTAL CREDITS: 4

PREREQUISITE(S): None

COURSE HOURS: 60

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For additional information, please contact, Continuing Education

(705) 759-2554, Ext. 2612

I. COURSE DESCRIPTION:

This course is intended to provide the students with basics as related to the operation of wastewater collection and treatment 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 *wastewater collection* and *wastewater treatment*. At the end of the course students will be fully prepared to write the operator in training certification examination of the Ontario Ministry of Environment.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course students will be able to demonstrate the ability to:

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

Term Test I	20%
Term Test II	20%
Term Test III	20%
Final Test	40%

Note:

- 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 grad
- To be eligible to write tests, you must be posting your findings and comments related to activities suggested at the end of each lesson using the discussion link **Participation**.

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.