

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: MUNICIPAL ADMINISTRATION AND SERVICES

CODE NO.: CIV 110-4 **SEMESTER:** IV

PROGRAM: CIVIL ENGINEERING

AUTHOR: JOHN K. THEIL

DATE: SEPTEMBER 1989 **PREVIOUS OUTLINE DATED:** JUNE 1988

APPROVED: _____
Chairperson Date

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TOTAL CREDIT HOURS: 45

PREREQUISITE(S): HYD 220 HYDRAULICS

I. PHILOSOPHY/GOALS:

To introduce the basic principles and procedures for the design and construction of water distribution, sanitary sewers, and storm drainage systems.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will be able to:

- 1) Apply the basic principles of hydraulics and hydrology applicable to water distribution, waste water collection, and storm drainage systems.
- 2) Describe conventional water and wastewater treatment methods.
- 3) Identify and apply water quality criteria and treatment requirements for ground and surface waters.
- 4) Select appropriate materials for piping and appurtenances.
- 5) Prepare system layouts and perform basic designs of water and sewer systems.

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III. TOPICS TO BE COVERED:

	<u>TOPICS</u>	<u>HOURS</u>
1	Hydraulics	10
2	Hydrology	4
3	Water and Wastewater Treatment	4
4	Water Distribution System	7
5	Sanitary Sewer System	7
6	Storm Drainage	6
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		38
	Review	2
	Interim/Final Examinations	5

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IV. METHOD OF EVALUATION:

Assignments/Exercises	20%
Interim Tests 2 @ 20%	40%
Final Examination	40%

Grading:

A+ = 90 - 100%
A = 80 - 89%
B = 70 - 79%
C = 60 - 69%

A passing grade will be based on a minimum composite grading of 60%. Students obtaining a composite grading of 55 to 59% may be allowed to complete a supplementary examination.

V. REQUIRED STUDENT RESOURCES:

TEXTBOOK(S):

Hammer, Mark J.; Water and Wastewater Technology, Second Edition; John Wiley and Sons.

VI. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY BOOK SECTION:

REFERENCES::

Ministry of the Environment; Guidelines For the Design of Water Storage Facilities, Water Distribution Systems, Sanitary Sewage Systems and Storm Sewers; Government Bookstore, 880 Bay Street, Toronto.