SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: HYDROLOGICAL FIELD WORK

Code No.: HYD 100-5

Program: WATER RESOURCES ENGINEERING TECHNOLOGY

Semester:

Date: SEPTEMBER TO DECEMBER 1983

Author: JOHN K. THEIL

New: Revision:

APPROVED:

Chairperson Date

CALENDAR DESCRIPTION

Hydro!ogical Field Work	HYP 100-5
Course Name	Course Number

PHILOSOPHY/GOALS:

The student will be able to:

1. Conduct reconnaisance and traverse surveys, prepare survey field notes, make computations, plot traverses, interpret topographic mapping, and compute watershed areas.

2. Understand the hydrologic cycle and determine measurements of precipitation, stream flow and evaporation.

3. Understand the occurrence and transmission of ground water.

METHOD OF ASSESSMENT (GRADING METHOD):

Field work and assignments	30%
Mid term examination	25%
Final examination	45%

Grading

A	80 - 100%
B	70 - 79%
C	60 - 69%
D	50 - 59%

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

REFERENCES:

" Hydrology and Quality of Water Resources
by M.J. HammaTand K.A. MacKic'han
John Wiley & Sons

- Handbook on The Principles of Hydrology
by Donald M. Gray, Editor-in-Chief"
Water Information Center, Inc.

HYDROLOGICAL FIELD WORK

HYD 100-5

COURSE OUTLINE

1. Compass and map utilization

   1.1 Declination, bearing, azimuths
   1.2 Familiarization with the instruments (compass, level)
   1.3 Computations
   1.4 Methods of field traversing
   1.5 Exercises in plotting traverse

2. Introduction to hydrology

   2.1 Introduction to water resources engineering
   2.2 Hydrological cycle
   2.3 Precipitation

3. Measurements

   3.1 Preciptation measurements
   3.2 FLow-rate measurements
   3.3 Evaporation measurements

4. Groundwater investigation

   4.1 Occurrence of groundwater
   4.2 Geologic formations (aquifers)
   4.3 Hydrological mapping maps

5. Graphs

   5.1 Topographic maps
   5.2 Computation of the area of watershed
   5.3 Presentation of graphs