

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: SURVEYING AND MAPPING  
Code No.: SUR 120 '  
Program: WATER RESOURCES ENGINEERING TECHNOLOGY  
Semester: TWO  
Date: JUNE 17, 1983  
Author: G.M. CAJ4ERON

New:

Revision:

APPROVED:

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Date

SURVEYING AND MAPPING  
Course Name

sua 120  
Course Number

PHILOSOPHY/GOALS:

See preamble attached

METHOD OF ASSESSMENT (GRADING METHOD):

See attached

TEXTBOOK(S):

Surveying Notes, Sault College Book Store

MATER RESOURCES ENGINEERING TECHNOLOGY  
Marking System - Surveying

Semester 2

CRITERIA EMPLOYED FOR ASSESSMENT PURPOSES

1. TOTAL ASSIGNMENT, PROJECT AND TEST ASSESSMENT ENTIRE SEMESTER  
Late submissions will not be accepted unless prior consultation with instructor discloses unusual difficulty
  
2. Attendance  
-Attendance will be recorded at the beginning of each class  
-Late arrivals will be marked absent  
-Chronic late arrivals will be refused admittance.  
A poor attendance record will work to the detriment of the student where a border line situation is encountered

ASSIGNMENT, PROJECT AND TEST ASSESSMENT

Individual assignments, projects and tests will be assessed on a basis of 100 marks.  
-minimum acceptable grade = 60

BREAKDOWN

TOTAL SEMESTER = 100 marks  
  
Assignments 25 marks  
Mid-semester Tests 35 marks  
Final Semester Tests = 40 marks

EXAMPLE

8 Assignments at 100 marks each  
= 800 possible marks

Assume 640 marks attained

Therefore  $640 \div 8 = 80$

Mid-Semester test

Assume a grade of 74 marks attained  
Therefore  $74 \div 35 = 2.11$   
100

Final Semester test

Assume a grade of 82 attained  
Therefore  $82 \div 40 = 2.05$   
100

Therefore  $80 + 2.11 + 2.05 = 84.16$  or a grade of B

MARKING SYSTEM - Continued

INCOMPLETE GRADES

1. Repeat assignments or tests to carry a maximum possible grade of 60.
2. Mid-semester tests may be repeated only once. Final semester test rewrites will be scheduled only during the prescribed make-up period. Failure to attain a satisfactory grade therein will require repeating the course. Satisfactory completion, semester 2 will be a prerequisite for entry in semester 3.

Semester 3

Similar to above in all respects except as follows

Total Semester 3 Marks = 100 marks

Assignments = 25 marks

Mapping Project = 25 marks

Final Semester Test = 50 marks

Numerical Equivalents

60-74 = C

75-84 = B

85-100 = A

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

Water Resources Engineering Technology  
Course of Study Outline - Surveying and Mapping

The surveying and mapping course is designed to familiarize the student with the basic surveying principles and to provide field practice in the use of surveying instruments and the application of surveying methods. Emphasis is placed on surveying and mapping techniques uniquely inherent to water resource management.

TIME

Semester 2 - SUR 120-3

3 hour lecture (theory) and laboratory per week.

Semester 3 - SUR 120-3

3 hour lecture (theory) and laboratory per week.

TEXT

Sault College - Surveying Notes - Sault College Bookstore

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE

WATER RESOURCES Engineering Technology - Semester 2

Course of Study Outline - Surveying and Mapping - SUR 120-3

<u>Topic No.</u>	<u>Topic information</u>
1	Introduction, definitions of surveying types, kinds, and purposes of surveys kinds of Surveying measurements, accuracy and precision of measurement errors and mistakes.
2	<u>LEVELING</u> Introduction to leveling, methods of measuring differences in elevation terms and definitions, theory of direct leveling, form of field notes, leveling instruments and their use, leveling rods and related accessory equipment, sources of error and mistakes and necessary precautions field exercises.
3	<u>APPLICATIONS OF LEVELING</u> Profiles and their uses, methods of obtaining profile field data, plotting profiles from field notes, field exercises, grade lines and grade computations, giving grade in the field, contours and contour leveling plotting contours from field notes.
4	<u>ANGULAR MEASUREMENT AND DIRECTIONS</u> Terms and definitions, units of angular measurement, angular computations meridans, azimuths, and bearings; angles formed by lines of known direction, azimuths and bearings from field angles, magnetic compass surveying <u>TRANSITS AND THEODOLITES</u> Basic principles, types of transits and theodolites, general applications, handling and set-up, the transit vernier, sources of error and mistakes, field exercises

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE

WATER RESOURCES ENGINEERING TECHNOLOGY - SEMESTER 3

Course of study outline - Surveying and Mapping SUR 121-3

<u>Topic No.</u>	<u>Topic Information</u>
1	<u>LINEAR MEASUREMENT</u>  Terms and definitions, units of linear measurement, conversions, methods of measuring distances, steel tapes taping methods, notekeeping, reduction of field notes, errors and mistakes in taping, establishing a pacing standard, modern electronic distance meters.
2	<u>TRAVERSE SURVEYING</u>  Types of traverses, angular closures methods of traversing, stationing, mistakes and errors in traverse surveys latitudes and departures, standards of accuracy, coordinates of points in a survey.
3	<u>TOPOGRAPHIC MAPPING</u>  Freehand lettering, plotting traverse data with protractor and scale, plotting coordinates, plotting irregular boundaries, plotting topographic detail mapping from field notes.
4	<u>STADIA SURVEYING</u>  Definitions, theory of stadia surveying the applications and limitations of stadia surveying, notekeeping, reduction of stadia field notes, plotting stadia topography
5	<u>FIELD EXERCISES</u>  Transits and tape traverse survey, stadia survey.