

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: SURVEYING
Code No.: SUR 235
Program: ARCHITECTURAL TECHNICIAN/CIVIL ENGINEERING TECHNICIAN
Semester:
Date: JANUARY, 1987
Author: S. LENCO

New: Revision ^

APPROVED:


Chairperson

yCCjA^

^^^Of'-^/
EaEe"

CALMDAR DESCRIPTION

SURVEYING

SUR 235

Course Name

Course Number

PHILOSOPHY/GOALS:

The student will enhance his/her ability to use the level, the steel tape and transit. In addition the student will be introduced to traverse surveying and computations, stadia, surveying, topographic mapping, and construction surveying.

METHOD OF ASSESSMENT

Assignments	25/^(
Short Quizzes (in class)	1C^(
Mid semester Tests	2%
Final Semester Test	4C^(
	T O ^

A 80^ - 100^

B 70^ - 79^

C 59^ - 695^

R Repeat

X A temporary grade, limited to situations with extenuating circumstances, giving a student additional time to complete the requirements for the course. Note it is only used at the end of the semester.

1) Minimum acceptable grade is 60^

2) Your assignments will carry equal weight and you will be notified one week in advance prior to handouts. Late submissions will be penalized in the following fashion:

1 day late - loss of 205^

2 day late - loss of 10?5

3 day late - loss of 1C^

NO ASSIGNMENTS will be accepted on the 4th day.

5) The in-class short quizzes will be given as the study lesson lends itself applicable. Each quizz will carry equal weight.

4) Homework problems are assigned during lecture and the solution to selected problems is descussed subsequently. They are not graded.

5) If at the end of the sanester your overall average of the combined assignments, short quizzes, mid semester test and final test is below 59^ then it will be up to the instructor whether you receive an "R" repeat or a re-write. The criteria, employed for arriving at that decision is class attendance class participation, *anel W-i}^ Oi/er"*l> i>cor^*

6) In case a re-write is granted it will be permitterd only once, and will be subjected to the following conditions:

- a. it will cover the entire semesters course outline
- b. the maximiam obtainable grade is 60^
- c. the re-write grade weight is 100^ not 40^, therefore excluding the assignments, mini quizzes and mid semester test from your overall average.

PREREQUISITE: SUR 101

TEXT: Surveying: Principles and Applications
Barry P. Kavanagh
Reston, Virginia, 1984

ARCHITECTURAL TECHNICIAN/CIVIL ENGINEERING TECHNICIAN
SEMESTER 2

SUR 235 - %

TOPIC NO.	TOPIC INFORMATION
1.	<u>Leveling</u> <ul style="list-style-type: none">- Differential leveling- Leveling using different levels- Sources of error and necessary precautions
2.	<u>Linear measurements</u> <ul style="list-style-type: none">- Types of measurements- Accuracy and precision of measurements- Taping methods and procedures- Corrections for tapes of incorrect length
3.	<u>Angles bearings and azimuths</u> <ul style="list-style-type: none">- Meridians- Horizontal angles- Bearings- Azimuths- Bearing calculations- Azimuth calculations
4.	<u>Engineers transit and theodolite</u> <ul style="list-style-type: none">- Types of transits and theodolites- Instrument set up- Uses made of the transit
5.	<u>Traverse computations</u> <ul style="list-style-type: none">- Type of traverses- Angular closure- Latitudes and departures- Precision and accuracy of traverse- Traverse adjustments- Coordinate computations- Area computations

Cont 'd

TOPIC NO :

TOPIC INFORMATION

- | | |
|----|---|
| 6. | <u>Topographic Surveying</u> <ul style="list-style-type: none">- Definitions- Theory of stadia- Reduction of field stadia notes- Field procedure- Plotting of stadia topography |
| 7» | <u>Survey drafting and computation</u> <ul style="list-style-type: none">- Cross sections, areas and volumes- Area, computations.- Contour interpolation |
| 8. | <u>Field Exercises</u> <ul style="list-style-type: none">- Differential leveling- Traverse- Chaining- Topographic surveying- Contour plotting |
| 9« | <u>Construction surveying</u> <ul style="list-style-type: none">- layout of grade lines for roads- Layout for sewer line and grade |