SAULT COLLEGE
of Applied Arts and Technology
Sault Ste. Marie

COURSE OUTLINE

SUR 201-4

Surveying

r S V i S S d May. 1979 by G. Cameron

SUR 200-'+
SUR 201-^

SAULT COLLEGE OP APPLIED ARTS AND TECHNOLOGY

SAULT STB. MARIE

CIVIL ENGINEERING TECHNICIANS

COURSE OP STUDY - SURVEYING - SEMESTER 3 AND SEMESTER ^

The Semester 3 and Semester 4 Surveying courses are designed to augment and expand the basic areas of study covered in the Semester 1 and Semester 2 courses. Specialized topics such as traverse survey computations, highway curves, and astronomy are studied with a view to practical field usage. Fundamental concepts are stressed rather than purely theoretical aspects. Modem surveying instruments, techniques of making field measurements, methods of notekeeping, office computations and plan preparation are discussed bearing in mind that the technician will be concerned primarily with the practicail application of the principles involved.

TIME

SEMESTER 3 - SUR 200-^

^ hours per week, lecture, laboratory and field,

SEMESTER ^ - SUR 201-4

4 hours per week, lecture, laboratory and field.

TEXT

Sault College - SURVEYING NOTES
Sault College Bookstore

REVISED MAY, 1979

SAULT COLLEGE OF APPLIED ARTS AND TBCHNOLOGY
SAULT STE, MARIE

CIVIL ENGINEERING TECHNICIANS
COURSE OF STUDY OUTLINE - SURVEYING - SUR 201-4 - SEMESTER 4

Topic No.	Hours	Topic Information
1.	16	HIGHWAY CURVES Circular curves defined, alignment and stationing, geometry of the circle, the parts of a simple curve, derivation and application of curve formulae, methods of locating curve on the ground, use of curve tables, special curve problems.
2.	10	VERTICAL CURVES Review grade lines and gradients, grad(line intersections, vertical parabolic curves, types and application, length of vertical curve, computation of offsets from grade line, curve elevations, location and elevation of high or low point on curve, field procedure for vertical curve layout,
3.	10	PRACTICAL ASTRONOMY Astronomy defined, the celestial-sphen terrestial latitude and longitude, Polaris observation for azimuth, use of the "Star Card**, azimuth of reference line, effect of meridian convergence, field observations.
i*.		ADJUSTMENT OP SURVEYING INSTRUMENTS Review precision and accuracy, the importance of correct instrviment adjustment tests for maloustment, neutralizing instrum< errors in field usage.
5.		SPECIALIZED SURVEYING EQUIPMENT The subtense bar, use of traversing equipment, electronic distance measurement, maintenance of surveying equipment.
	12	PRACTICAL FIELD PROBLEMS Trigonometric leveling, curve stakeout setting batter boards, electronic distance measurement.

REVISED MAY, 1979

9I3LI0GRAPKY - RS?E°SNCg: TEXTS

1. Philip Kiasaa - SURVEYING^ PRACTICE - Third Edition
McCraw-fiiii 5OOK Company.

i. . Philip Kissam - SURVEYING INSTRUME?frS AND VETHODS
McGraw-Hill -IOOK Company.

3. Philip Kissam - SUR'/^ING ?0R CIVIL ENGINEERS
McGraw-Hill 3ooK Company

U.. Paricer and McGuire - SIMPLIFIED SITE ENGINEERING
John Wiley and Sons.

5. Davis and ?ooxe - SURVEYING. THEORY AND PRACTICE
McGraw-Hill Sooic Company.

6. Breed and Hosmer - ELEMENTARY SURVEYING
John Wiley and Sons,

7. Rubey, Lonnell and Todd - ENGINEERING SUR'AEYS
The .Macaillan Corapany.

a. Moffitt and Bouchard - SURVEYING - Sixth Edition
Intext Educational Publishers.

9. 3rinker and Wolf - ELEMENTARY SURVEYING - Sixth Edition
iZ?-A Diin-Donr.elley Publisher.

10. McConnac - SURVEYING
Prentice Hall inc.

Ives - HIGH'rfAY CURVES
Jonn Wiley and Sons.

12. Hicicerson - ROUTS SURVEYS AND DESIGN
McGraw-Hill 3ooK Company.

13. Meyer - ROUTE SUR'^YING
Intext Saucational Publishers.

lii. Herubin - PRINCIPLES OP SURVEYING - Second Edition
Resxon ruolisning Company, Inc.

15. Nassau - PRACTICAL ASTRONOMY
McGraw - Hill 3oolc Company.

15. A_llan - SIX PLACE TABLES
McGraw-Hill booic Company.

17. aruhns - A NEW MANUAL OP LOGARITyi'S
Charles T. Powner Co.

13. Ives - NATURAL TRIGONOMETRIC ?UNCTIQ?<S
Jonn Wilpy and Sons.

OVIL ENGINEERING TECHNICIAN

MARKING SYSTEM- SURVEYING

CRITERIA EMPLOYED FOR ASSESSMENT PURPOSES

I. TOTAL ASSIGNMENT. PROJECT, AND TEST ASSESSMENT. ENTIRE SEMESTER.

LA rS SUBMtSS/ONS WILL NOT BE ACCSPTED UNLESS PRIOR CONSULTA TION WI TH INSTRUCTOR DISCLOSES UNUSUAL DIFFICULTY.

2. ATTENDANCE

ATTENDANCE WILLBE RECORDED AT THE BEGINNING OF EACH CLASS SESSION.

LATE ARRIVALS WILL BE MARKED ABSENT.

CHRONIC LATE ARRIVALS WILL BE REFUSED ADMITTANCE.

AND A POOR ATTENDANCE RECORD WILL WORK TO THE DETRIMENT OF THE STUDENT WHERE A BORDER LINE SITUA TION IS ENCQUN TERED.

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	MID SEMESTER TEST	FINAL SEMESTER TEST
25MARKS	35 MARKS	40 MARKS

EXAMPLE

12 ASSIGNMENTS - 1200 MARKS POSSIBLE
- ASSUME 960 MARKS ATTAINED

.-. -5i5_ X 25 = 20
' 1200

MID SEMESTER TEST.
- ASSUME A GRADE OF 78 ATTAINED

$\frac{78}{100}$ X 35 « 27

FINAL SEMESTER TEST
- ASSUME AGRADE0F3S ATTAINED

.-. ^ X 4 0 O 4

.-. 20+27-t. 34 sSI.ORA GRADE OF "B"

NUMERICnL EQUIVALENTS

SO-•74 C

TS-•84 B

aS-lOO A

INCOMPLETE GRADES

1. REPEAT ASSIGNMENTSORTESTS TOCARRYAMAXIMUM POSSIBLE GRAOEOFSO.

2. MID SEMESTER TEST MAY BE REPEATED ONCE ONLY. FINAL SEMESTER TEST REWRITES WILL BE SCHEDULED ONLY DURING THE PRESCRIBED MAKEUP PERIOD. FAILURE TO ATTAIN A SATISFACTORY GRADE THEREIN WILL REQUIRE REPEATING THE COURSE. SATISFACTORY COMPLETION, SEMESTER 3, WILL BE A PREREQUISITE FOR ENTRY, SEMESTER 4.