SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: COMPUTER APPLICATIONS I (APPLIED STATISTICS)

Code No.: FOR 356-4

Program: FISH & WILDLIFE TECHNOLOGY/FOREST MANAGEMENT TECHNOLOGY

Semester: V

Date: JANUARY, 1988

Author: ERWIN GOERTZ

New: _____ Revision: X

APPROVED: _____ March 8/88
Chairperson Date

CALENDAR DESCRIPTION

COMPUTER APPLICATIONS I — COURSE NAME

FOR 356-4 — COURSE NUMBER

PHILOSOPHY/GOALS:

This course is designed to meet the statistical needs of students in Fish and Wildlife and Forest Management. Hypothesis testing, chi-square, analysis of variance, correlation and regression, as well as multiple regression analysis will be considered. Emphasis will be placed on solving problems in the student's own specialty using the MINITAB statistical package on the mainframe computer.

METHOD OF ASSESSMENT

Evaluation will be based on lab assignments as well as written tests. Assignments will make up 25% of the final grade and will consist of analysis involving pocket calculators and the MINITAB statistical package. Some assignments will be completed and handed in during class time.

There will be three (3) tests throughout the semester, each valued at 25% for a total of 75%. Tests may include a written theory portion as well as data analysis using the computer terminals.

Regular attendance is necessary in that any student missing an in-class assignment or test without a legitimate reason will receive an "I" grade in that test or assignment. Students receiving "I" grades on three tests and/or assignments will receive an "R" grade in the course.

GRADES

A+ - 85 - 100%
A - 75 - 80%
B - 65 - 74%
C - 55 - 64%

NOTE: There will be no rewrite at the end of the semester

EQUIPMENT REQUIRED:

An electronic calculator is mandatory for classroom and testing purposes.

TEXT:

There will be no formal text for the course, however students should consult one of the references below for additional information.

Levin, R.I. and Rubin, D.S. 1980. Applied Elementary Statistics, Prentice-Hall Inc., Engelwood Cliffs, N.J. 07632

Sanders, D.H., Murph, A.F. and Eng, R.J. 1980. Statistics: A Fresh Approach. McGraw-Hill Book Company, Toronto.

Snedecor, G.W. and Cochran, W.G. 1967. Statistical Methods, 6th edition. Iowa State University Press, Ames. 593 p.

Ryan, B.R., Joiner, B.L. and Ryan, T.A. 1985. Minitab Handbook, PWS Publishers, Boston, Massachusetts.

COURSE OUTLINE

TOPIC NO.	NO. OF PERIODS	TOPIC DESCRIPTION
1	1	- introduction to course - statistical terminology - tools of the trade - introduction to MINITAB
2	1	- describing data - plotting data
3	1	- describing the measures of central tendency - arithmetic mean, median, mode - weighted mean - effect of coding data
4	1	- measures of dispersion and variability - range, mean deviation, variance, standard deviation, coefficient of variation
5	2	- testing for goodness of fit - chi-square goodness of fit - statistical significance - errors and bias
6	2	- contingency tables - chi-square analysis - statistical significance - errors and bias
7	2	- normal distribution - symmetry and kurtosis - proportions of a normal distribution - distribution of means

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OPIC NO.	NO. OF PERIODS	TOPIC DESCRIPTION
8	3	- one sample hypotheses - two-tailed hypotheses concerning mean - one-tailed hypotheses concerning mean - confidence limits - variability about the mean
9	2	- two sample hypotheses - testing for differences between two variances - testing for differences between two means - confidence intervals for means
10	2	- paired sample hypotheses - paired sample t-test - confidence limits
11	2	- analysis of variance - confidence limits, sample size
12	4	- correlation and regression - fitting a straight line - multiple regressions, residuals and transformations