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DOC.. #370

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: STATISTICS

Code No.: MTH 255-4

Program: PULP & PAPER, WATER RESOURCES

Semester: THREE

Date: MAY 1988

Author: D. HEGGART

New: Revision:

APPROVED:
        Chairperson   Da *^!yz< ?/m*

CALENDAR DESCRIPTION

STATISTICS   MTH 255-4-WRT/PPE

COURSE NAME   COURSE NUMBER

PHILOSOPHY/GOALS:

This course will help the student to develop an understanding of
statistical techniques and procedures by solving statistical problems.
The student will be able to carry out basic statistical tasks and
better understand the use of statistics in industry. An introduction
to Minitab software will help the student make use of the computer to
complete statistical problems.

METHOD OF ASSESSMENT (GRADING METHOD);

Grades:

The student's final mark for this course will be based on the
following:

        Assignment, Quizzes, Term Tests   60%
        Final Exam (2 Parts)   40%

Grades reported on your transcript are based on an average of test
scores on the following basis:

                    A+ = 90 - 100%
                    A = 80 - 89%
                    B = 70 - 79%
                    C = 60 - 69%

A term test will be held at the end of each major segment of the
course.

All tests are scheduled in advance. Hence attendance is mandatory.
Unexcused absence from a test will result in a mark of zero for that
test. A student may be prevented from attending a test by illness or
bereavement. Upon return to classes, the student must see the
instructor at the end of the first class attended to arrange a time
and place for a make up test. In addition, if the absence is due to
illness, the student must present a note from the student's doctor or
from the College nurse.

TEXTBOOK:

"Statistics and Probability in Modern Life", 4th Edition, Newmark
(Saunders Publishing)

Minitab Handbook. RJR

MTH255-4-WATER RESOURCES/PULP AND PAPER

TOPIC	PERIODS	TOPIC DESCRIPTION	REFERENCE
1	1	<u>Introduction</u>	pp. 3-18
		- definition, development and scope of statistics	
2	5	<u>Descriptive Statistics</u>	pp. 21-62
		- quantative and qualitative data - discrete and continuous variables - frequency tables, histograms, frequency polygon, cumulative frequency polygon - Minitab applications - Histogram, Stem & Leaf, Dot Plot Box Diagram	
3	8	<u>Measures of Location & Variation</u>	pp. 65-108
		- summation notations - means and weighted mean - median, mode - range, variance mean deviation - standard deviation - Minitab applications	
4	8	<u>Probability</u>	pp. 112-196
		- meaning and types of probability - probability computations - permutations - combinations dependent and independent events - (Omit Bayes Theorem)	
5	12	<u>Probability Distributions</u>	pp. 214-304
		- definition, binomial distribution, mean and standard deviation - normal distribution and normal approximation of the binomial - (Omit Poisson and Hypergeometric) - Minitab introduction and assignment	

MTH255-4-STATISTICS FOR WATER RESOURCES/PULP & PAPER

TOPIC	PERIODS	TOPIC DESCRIPTION	REFERENCE
6	5	<u>Sampling</u> - sampling methods, Central Limit Theorem - Minitab application(s)	pp. 309-334
7	8	<u>Estimation</u> - interval estimate of means and proportions/ sample size - Minitab application(s)	pp. 341-372
8	8	<u>Linear Regression & Correlation</u> - method of least squares, scatter diagrams, coefficient of correlation, standard error - Minitab applications	pp. 422-462

Two hours per week are scheduled in the terminal room for Minitab applications. Extra hours will be required to complete assignments.