

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: STATISTICS  
Code No.: MTH 255-4  
Program: FORESTRY, GEOLOGY, PULP & PAPER, WATER RESOURCES  
Semester: THREE or FOUR  
Date: JUNE, 1984  
Author: W. MAKI

New: Revision

APPROVED

  
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Chairperson

Date c^

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CALENDAR DESCRIPTION

STATISTICS  
Course Name

MTH 255-4  
Course Number

PHILOSOPHY/GOALS:

This course will help the student to develop an understanding of statistical techniques and procedures. They would be able to carry out basic statistical tasks and better understand the use of statistics in industry.

METHOD OF ASSESSMENT (GRADING METHOD):

The students will be assessed by tests. These tests will include periodic tests based upon blocks of subject matter and may, at the instructor's discretion include unannounced surprise tests on current work and/or a final test on the whole course. A letter grade will be based upon a student's weighted average of his test results. See also the mathematics department's annual publication "To The Mathematics Student" which is presented to the students early in each academic year.

TEXTBOOK(S)

"Statistics and Probability in Modern Life", 3rd Edition, Newmark  
(Saunders Publishing)

TOPIC	PERIODS	TOPIC DESCRIPTION	REFERENCE
		<u>Introduction</u> - definition, development and scope of statistics	pp. 3-18
		<u>Descriptive Statistics</u> - quantitative and qualitative data - discrete and continuous variables - frequency tables, histograms, frequency polygon, cumulative frequency polygon	pp. 21-62
		<u>Measures of Location &amp; Variation</u> - summation notations - means and weighted mean - median, mode - range, variance mean deviation - standard deviation	pp. 65-108
		<u>Probability</u> - meaning and types of probability - probability computations - permutations - combinations dependent and independent events - (Omit Bayes Theorem)	pp. 112-196
	12	<u>Probability Distributions</u> - definition, binomial distribution only and its mean and standard deviation - normal distribution and normal approximation of the binomial - (Omit Poisson and Hypergeometric)	pp. 214-304

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TOPIC	PERIODS	TOPIC DESCRIPTION	REFERENCE
		<u>Sampling</u> - sampling methods. Central Limit Theorem	pp. 309-334
		<u>Estimation</u> - interval estimate of means and proportions, sample size	pp. 341-372
		<u>Linear Regression &amp; Correlation</u> - method of least squares, scatter diagrams, coefficient of correlation, standard error	pp. 422-462