

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: APPLIED MECHANICS

Code No.: MCH 128-3 Semester: THREE

Program: MACHINE SHOP

Author: NORM TRIPLETT

Date: JUNE, 1990 Previous Outline Dated:

APPROVED: **JK4 ,**
Chairperson

Date **^ A III**

APPLIED MECHANICS

MCH 128-3

Course Name

Course Number

45

Total Credit Hours

Prerequisite(s):

I. PHILOSOPHY/GOALS:

This course is a basic introduction to some of the principles upon which Mechanical Engineering Design is based. It is required that the students apply themselves to the end that this course will compliment the practical application of Machine Shop Practice.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will:

- 1) Increase his/her ability to solve problems mathematically.
- 2) Have a greater appreciation for forces in play within machines,
- 3) Develop a skill for solving mathematical problems graphically.
- 4) Have a good basic foundation for further studies in mechanical areas.

III. TOPICS TO BE COVERED:

- 1) Forces; mathematical and graphical problem solving
- 2) Turning effect of a force: moments, couples and levers
- 3) Stress and strain: tensile/compressive strength, modulus of elasticity
- 4) Work, energy and power: type of energy, transfer of energy, force-distance graphs
- 5) Friction: coefficient, laws, work done by friction, as a reaction
- 6) Machines: mechanical advantages, velocity ratio, law of machines.

EVALUATION METHOD:

- 1) The course outline and objectives are available for student perusal.
- 2) Classes will be conducted combining lecture, demonstration and labs.
- 3) A final grade will be awarded based on the average of tests given during the semester.
- 4) In the event a student has two or more "I" grades and an average mark below 60%, he/she will be required to write a final examination. The results of this final will result in either a "C" grade or an "R".
- 5) GRADES: A - 85% + = Consistently outstanding achievement
B - 70% + = Consistently above average achievement
C - 55% + = Average or acceptable achievement
- 6) Tests will be announced one week in advance.
- 7) All students are expected to complete assignments on time, be punctual, regular attenders. , . -;•!*