SAULT COLLEGE OF APPLIED ARTS * TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: MACHINE DESIGN

Code No.: MCH 306-6

Program: MECHANICAL TECHNOLOGY

Semester: SIX

Date: JANUARY 1986

Author: C- Rising

New: **Revision:** x

APPROVED:

Chairperson **Date**

MACHINE DESIGN — MCH 306

Course Name — Course Number

PHILOSOPHY/GOALS:

lb have the student conversant with and able to solve fundamental problems of desig and particular respect to: special structural members, screw threads, fasteners, gears, clutches, brakes, couplings, joints, flexible elements and springs.

METHOD OF ASSESSMENT (GRADING METHOD):

A
B
C
I
R

Grading will be on logical solutions, layout, sketches, diagrams, and general tidiness of presentation.

TESTS

a) There will be a minimum of one weeks notice for tests.
b) Tests will be held at intervals throughout the semester.
c) In the event of a student being absent for a test, he/she will be given an opportunity to write a test of similar content at a time suitable to the instructor.
d) If a student fails a test, an opportunity will be given to that student to write a make-up test at a time designated by the teacher,
e) An 80% attendance record is required in order for a student to be eligible to write a make-up test.
f) The maximum grade that a student will be given for a make-up test will be a "C".

ASSIGNMENTS

a) All assignments must be handed in for marking on the specified date and time.
b) Grades for assignments handed in late will be reduced accordingly to the degree of lateness.
c) Late assignments will not be accepted if they are submitted after those that were submitted on time have been marked.
d) The marking of assignments may be on a random basis.

DISTRIBUTION OF MARKS:

Tests	65%
Assignments	25%
Attitude	10%
	100%

TEXTBOOKS:

Mechanical Engineering Design - Shigley - McGraw-Hill Publishing Go.

REFERENCE TEXTS:

Gear Handbook - Dudley - McGraw-Hill Publishing Go.
Design of Machine Element - Spotts - Prentice-Hall Publishing Go.
Design of Machine Element - Faires - McMillan Publishing Go.
Machine Design - Myatt - McGraw-Hill Publishing Co.

TOPICS

- Mohrs Circle of Stress
- Beam Deflection (Graphical Integration)
- Strain Energy
- Castigliano
- Curued Beams
- Screw Threads (Fasteners)
- Gears

*- Clutches, Brakes and Couplings
*- Belt Drives
*- Springs

* These topics to be covered to varying degrees of difficulty depending on time availability.

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