

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE<sub>f</sub> ONTARIO

COURSE OUTLINE

Course Title: MACHINE DESIGN

Code No.: MCH 307

Program: MECHANICAL TECHNOLOGY

Semester: FIVE

Date: SEPTEMBER 1987

Author: COLIN RISING

New:                      Revision: <sup>X</sup>

APPROVED: *J.P. Crozetta*  
Chairperson

**ff-** 0? - ^  
Date

**MACHINE DESIGN**

**MCH 307**

**Course Name**

**Course Number**

PHILOSOPHY/GOALS;

To have the student aware of, and able to solve fundamental problems of design with respect to: lubrication, bearings, stress concentrations, their causes and applicable theories, and stress analysis.

METHOD OF ASSESSMENT (GRADING METHOD):

"A", "B", "C" & "X"

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

**TESTS:**

- a. There will be a minimum of one week's 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 teacher.
- 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 for a student to be eligible to write a make-up test.
- f. The maximum grade 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 according 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	70%
Assignments	20%
Attitude	10%

**TEXTBOOK(S):**

Mechanical Engineering Design - Shigley (McGraw-Hill)

**REFERENCE TEXT:**

"Design of Machine Elements" - Spotts (Prentice-Hall)

"Design of Machines Elements" - Faires (McMillan)

"Machine Design" - Myatt (McGraw-Hill)

**TOPICS:**

Lubrication

Journal Bearings

Anti-Friction Bearings

Stress Analysis

Compound Stress

Complex Stress

Mohos Circle of Stress