

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

COURSE OUTLINE

Course Title: MECHANICAL DRAWING & DESIGN  
Code No.: DRF 215-5  
Program: MECHANICAL DRAFTING TECHNICIAN  
Semester: FOUR  
Date: JANUARY 1986  
Author: C. Rising

New: \_\_\_\_\_ Revision: X

APPROVED:

J.P. Arzuffo  
Chairperson

\_\_\_\_\_ Date

MECHANICAL DRAWING & DESIGN

Course Name

DRF 215

Course Number

PHILOSOPHY/GOALS:

To develop in the student an ability to:

- Read and check drawings, including an analysis of applied tolerances. Determine by calculation the stresses induced by interferences fits and their effects.
- Understand the basic principles of lubrication and its importance.
- Relate to bearing terminology, the use of bearings and calculations relative to basic bearing design.
- Design shafts for various applications.
- Analyze and produce drawings of the motion obtained by various mechanisms.
- Work from given specification to solve a simple mechanical design problem.

METHOD OF ASSESSMENT:

A Grading will be on logical solutions, layout, sketches, diagrams,  
B drawings, general tidiness of presentation and time factor.  
C  
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R

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 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) A 90% 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 according to the degree of lateness.
- c) Late assignments will not be accepted if they are submitted after those that were submitted on time and have been marked.
- d) The marking of assignments may be on a random basis.

DISTRIBUTION OF MARKS:

|             |     |
|-------------|-----|
| Tests       | 70% |
| Assignments | 20% |
| Attitude    | 10% |

TEXTBOOK:

Engineering Drawing & Design - Jensen - Helsel

REFERENCE TEXTS:

Mechanical Engineering Handbook - Kent  
Machinery Handbook  
C.S.A. Drawing Standards  
Mechanical - Foures & Keawin  
Worms & Worn Gears - Boston Gear  
Principles of Mechanical Design - Parr  
Manufacturers Catalogs  
Bearing Technical Journal

TOPICS:

Checking & Reading Drawings  
Tolerance - Fits - Limits - Stacking  
Plain Bearings - Lubrication etc.  
Shaft Design  
Simplification of Design  
Mechanicisms  
Design Projects