SAULT COLLEGE OF *APPLIED ARTS & TECHNOLOGY*

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: APPLIED MECHANICS

CODE NO.: MCH 200-3

PROGRAM: Civil Technicians

SEMESTER: Two

DATE: January 1987

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NEW: *REVISION:* x

APPROVED: ^S.L Chozetta

Chairperson

SJ/WS

Date

APPLIED MECHANICS — *Course Nome*

MCH 200-3 — *Course Number*

PHILOSOPHY/GOALS: The objective of this course is to introduce the student to a number of fundamental concepts of dynamics which should prove useful to the civil technician student.

METHOD OF ASSESSMENT (GRADING *METHOD):*

See attached sheet titled GRADE REQUIREMENTS

TEXTBOOK(S): Introduction to Mechanics
by Irving J. Levinson

OBJECTIVES:

GRADE REQUIREMENTS

MCH200

APPLIED MECHANICS
(Civil Technicians)

Your final grade in MCH200 will be determined on the basis of four tests to be administered during the semester. Each test will examine your knowledge of a number of topics and will be administered within one week of completing those topics. The topics covered in each of the four tests are as follows.

Test #1 _____ Topic Number I

Test #2 _____ Topic Number II

Test #3 _____ Topic Number III

Test #4 _____ Topic Number TV

The four tests are of equal weight (i.e. each of the four tests is worth 25% of your final grade). As a result, provided you have received a passing grade in each of the four tests, your final grade will simply be an average of your four test results. In order to obtain your letter grade the following percentage-letter grade equivalents will be used.

A^+	90% - 100%	(Consistently outstanding achievement)
A	76% - 89%	(Outstanding achievement)
B	66% - 75%	(Consistently above average achievement)
C	55% - 65%	(Satisfactory or acceptable achievement)
X or R	0% - 54%	(Incomplete or Repeat)

If your final average is below 55%, or if you have received a failing grade in one or more of the unit tests, whether you receive an X (Incomplete) or an R (Repeat) grade is entirely at the instructor's discretion. The decision will be based upon your final average (e.g. 32% would result in an R grade while 50% might result in an X grade); your attendance during the semester; your attitude while in the classroom; your perceived level of effort during the semester; etc..

In any case, should you find yourself with an X grade at the end of the semester, in order to upgrade your mark to a passing grade you will be required to write a make-up examination covering the entire course content. Should you receive a passing grade on the make-up examination (55% or higher) your X grade will be upgraded. The best you can do after receiving an X grade as a result of a failing average is a C! If you were required to write the make-up examination as a result of having failed one test you may substitute the exam result for this test result.

Prior to administering any test, you will be notified a full week in advance. Should you for any reason not be able to be in attendance on a day for which a test has been scheduled it is your responsibility to notify the instructor prior to the test! If your reasons are acceptable a date will be set during which you may write a substitute test for the one you have missed.

G. Disano, January 1988

COURSE OUTLINE

* MCH 200-3

APPLIED MECHANICS

(Civil Technicians)

Suggested Text: Introduction to Mechanics by Irving J. Levinson

TOPIC NO.	*PERIODS*	*TOPIC DESCRIPTION*	*REFERENCE*
I		Motion - types of motion - scalar and vector quantities - distance and displacement - speed and velocity - uniform motion - non-uniform motion - acceleration - uniformly accelerated motion - falling bodies - acceleration due to gravity - the motion of projectiles - normal acceleration	Chapter 9
II		Force and Motion - Newton's second law of motion - mass and weight - force - dynamic equilibrium - accelerating forces - horizontal and vertical motion - Newton's third law of motion - inertia-force method of analysis	Chapter 11
III		Work, Energy and Power - the concept of work - work done by constant and variable forces - elastic springs - energy - kinetic energy - potential energy - conservation of energy - power - efficiency	Chapter 12

continued ....

Rotational Motion

*• angular displacement
- revolutions, degrees and radians
- angular velocity
- angular acceleration
- relationship between linear and angular motion
- moment of inertia of bodies
- kinetic energy of rotation
- torque •»
- angular momentum

G. Disano, January 1987