

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

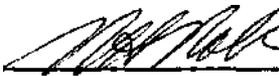
SAULT STE. MARIE, ONTARIO

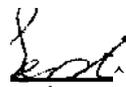
COURSE OUTLINE

Course Title: MATHEMATICS
Code No.: MTH 151-3
Program: HEAVY EQUIPMENT DIESEL
Semester: TWO
Date: JUNE 1983
Author: D. TROWBRIDGE

New: X Revision

APPROVED:


Chairperson


Date ^{r^} f m3

MATHEMATICS
MTH 151-3
HEAVY EQUIPMENT DIESEL

CALENDAR DESCRIPTION

MATHEMATICS
Course Number

MTH 151-3
Course Name

PHILOSOPHY/GOALS:

When the student has successfully completed this course he will have an understanding of the material listed elsewhere. The intention is to give the student sufficient background to solve work related problems.

METHOD OF ASSESSMENT (GRADING METHOD):

Three major tests during the semester

Test 1 on topics 1, 2, 3

Test 2 on topic 4

Test 3 on topics 5, 6, 7

Additional short tests may be given.

TEXTBOOK(S):

Practical Problems in Mathematics for Vehicle Technicians
by George Moore

OBJECTIVES:

The basic objective is for the student to develop an understanding of the methods studied, knowledge of the facts presented and an ability to use these in the solution of problems. For this purpose, exercises are assigned. Tests will reflect the sort of work contained in other assignments. The level of competency demanded is the level required to obtain an overall passing average on the tests. The material to be covered is listed on the following page.

MATHEMATICS
MTH 151-3
HEAVY EQUIPMENT DIESEL

| TOPIC NO. | PERIODS | TOPIC DESCRIPTION | REFERENCES |
|-----------|---------|---|---------------------------------------|
| 1 | 6 | Review Fractions and Decimals Reducing terms Finding common denominator Adding and subtracting fractions and mixed numbers Conversions between common fractions and decimals Arithmetic with fractions | Moore Unit 1-16 |
| | 5 | <u>Percent</u> Percents and common fractions Solving for Percentage or base or rate Interest, discount and sales tax problems | Moore Unit 17-23 |
| | 4 | <u>Conversion of Units</u> Linear Units Area and volume Metric system Angular measurement | Moore Unit 24-27 |
| | 12 | <u>Algebra Fundamentals</u> Signed numbers, including addition, subtraction, and multiplication Repeated factors Operations with exponent Evaluating formulas Solving linear equations in one unknown Solving proportions Gear and pulley problems | Moore Unit and Manuscript 30-35 |
| | 7 | <u>Geometry</u> Points, lines, angles, circles, circumference, area, triangles, polygons, perimeters, surface areas, volumes and weights | Moore Unit and Manuscript 28-38 |

MATHEMATICS
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| TOPIC NO. | PERIODS | TOPIC DESCRIPTION | REFERENCES |
|-------------|---------|---|---|
| | | <u>Trigonometry</u> Defimtions of trig functions Use of tables and calculator Right Tri angl es Solution of Equiateral and isosceles tri angl es using right tri angl es <u>Shop Problems</u> In co-operation with major subject instructors, suitable shop problems will be discussed Topics might include engine displacement and hydraulic piston forces. | Manuscript Moore Unit 35-40 |
| TOTAL HOURS | | 44 | |