

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



Sault College

COURSE OUTLINE

COURSE TITLE:

CAD DRAWINGS, SCHEMATICS,BLUEPRINTS

CODE NO. :

CAD 225

SEMESTER:

3

PROGRAM:

MECHANICAL

AUTHOR:

KARL UCHMANOWICZ

DATE:

SEPT 06

PREVIOUS OUTLINE DATED:

05

APPROVED:

DEAN

DATE

TOTAL CREDITS:

TWO

PREREQUISITE(S):

DRF 105

HOURS/WEEK:

TWO

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For additional information, please contact Colin Kirkwood, Dean
School of Technology, Skilled Trades, Natural Resources & Business
(705) 759-2554, Ext. 2688

I. COURSE DESCRIPTION: Sketches, schematics, diagrams, blueprints, are all used to convey information in the mechanical fields. This information is required to troubleshoot, repair or build mechanical components or systems. This course is intended to enhance the student's skills in this area.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Technical information requirements

Potential Elements of the Performance:

- discuss information needed for a mechanical project, inception to completion
- sketches
- flow diagrams
- schematics
- specifications
- construction drawings

2. Process piping

Potential Elements of the Performance:

- answer varied assigned questions using actual piping schematics and construction drawings

3. Isometric simplification

Potential Elements of the Performance:

- using process piping drawings and schematics produce assigned isometric views

4. Fluid power

Potential Elements of the Performance:

- identify common fluid power symbols, using fluid power schematics
- visually follow the flow of the working fluid using construction prints and schematics
- draw a simple fluid schematic using given information
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5. Job planning

Potential Elements of the Performance:

- Using construction prints and specification sheets find and select replacement parts for a planned maintenance procedure.

6. Geometric dimensioning and tolerancing (GDT)
Potential Elements of the Performance:
 - identify common GDT symbols
 - discuss application
 - with an actual mechanical component, take pertinent measurements and apply GDT standards
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III. TOPICS:

1. Technical information requirements
2. Process piping
3. Isometric simplification
4. Fluid power
5. Job planning
6. Geometric dimensioning and tolerancing

IV. REQUIRED RESOURCES/TEXTS/MATERIALS: Drafting Kit, measuring tool kit, (text)“ Blueprint reading for the machine trades”

V. EVALUATION PROCESS/GRADING SYSTEM:

TESTS	
Three term tests	90%
Assignments	10%
Total =	100%

<give breakdown of tests/assignments and their weights relative to calculating the final grade for the course>

The following semester grades will be assigned to students in postsecondary courses:

Grade	<u>Definition</u>	<i>Grade Point Equivalent</i>
A+	90 – 100%	
A	80 – 89%	4.00
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00

CR (Credit) Credit for diploma requirements has been

	awarded.
S	Satisfactory achievement in field /clinical placement or non-graded subject area.
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

VI. SPECIAL NOTES:

Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

<include any other special notes appropriate to your course>

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.