

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: DRAFTING AND BLUEPRINT READING

CODE NO. : DRF105 **SEMESTER:** ONE

PROGRAM: Mechanical Engineering Technician – Manufacturing
Mechanical Engineering Technology
Mechanical Techniques – Industrial Maintenance
(Millwright) and Machine Shop

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DATE: September 2013 **PREVIOUS OUTLINE DATED:** September 2012

APPROVED:

“Corey Meunier”

CHAIR

DATE

TOTAL CREDITS: TWO

PREREQUISITE(S):

HOURS/WEEK: TWO

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*For additional information, please contact Corey Meunier, Chair
Technology & Skilled Trades
(705) 759-2554, Ext. 2610*

I. COURSE DESCRIPTION:

The technician and tradesperson is required to receive and transfer technical information. Drawings and blueprints are used to transfer this information. Through practice the student will strengthen this skill, interpret and visualize this information found on the blueprints or drawings.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. *Drawing instruments*Potential Elements of the Performance:

- Identify drafting instruments
- Use drafting instruments correctly
- Use correct drafting techniques

2. *Orthographic Drawings*Potential Elements of the Performance:

- Interpret the information found in the title box
- Discuss the parameters of using one, two or three view orthographic drawings
- Understand first and third angle projections
- Draw with instruments, orthographic drawings
Transfer surfaces
- Correct missing or incomplete views

3. *Sketching techniques*Potential Elements of the Performance:

- Discuss the advantages of isometric sketching
- Discuss the advantages of oblique sketching
- Sketch isometric views
- Sketch oblique views

4. *Dimensioning and tolerances*Potential Elements of the Performance:

- Use proper symbols and lines
- Discuss dimensioning techniques
- Apply tolerance techniques
- Produce complete accurate scale drawings

5. Sectional views, machining particulars, fastenersPotential Elements of the Performance:

- Discuss and draw ,full, half and partial sections
- Identify different thread types on the drawing
- Use standard thread designations

6. Blueprint readingPotential Elements of the Performance:

- Read both detail and assembly drawings
- Recover the information required from assembly drawings
- Use the information found on detail drawings to check or reproduce a component.

III. TOPICS:

1. Instruments
2. Orthographic
3. Sketching techniques
4. Dimensioning and tolerances
5. Section views, particulars
6. Blueprint reading

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

“ Blueprint Reading for the Machine Trades” seventh edition,
By Russ Shultz and Larry Smith

Drafting Kit for DRF105 (available at the Campus Bookstore)

V. EVALUATION PROCESS/GRADING SYSTEM:

The following semester grades will be assigned to students:

| | |
|-------------|-------------------------------|
| Assignments | 70% |
| Final exam | 20% |
| Attendance | 10% (12/15) See special note |
| Total | 100% |

The following semester grades will be assigned to students:

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

Attendance:

A student who attends less than 80%(12) classes will receive a zero(0) for attendance.

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers will not be granted admission to the room.

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.

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part of this course outline.