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*For additional information, please contact the Dean, School of Community Services, Interdisciplinary Studies, Curriculum & Faculty Enrichment
(705) 759-2554, Ext. 2737*

I. COURSE DESCRIPTION:

In hands-on environment CICE students, with assistance from a Learning Specialist, will learn blueprint reading, geometric dimensioning and tolerancing (G.D. & T.) and be introduced to AutoCAD. The course will commence with basic skill development in blueprint reading. These skills shall be applied to the machinist's trade and related areas. New information has been added to explain computer-aided design, new dimensioning practices, and assembly drawing interpretation. Using common shop terminology, industrial prints will be interpreted. G.D. & T. includes reading dimensional drawings in fractions, decimals and in metric units. AutoCAD is taught so that upon completion students can create computerized, mechanical drawings.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the CICE student, with the assistance of a Learning Specialist will demonstrate the basic 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, fasteners**
Potential 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 reading**
Potential 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

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 in D2L and on the portal form part of this course outline.

Addendum:

Further modifications may be required as needed as the semester progresses based on individual student(s) abilities and must be discussed with and agreed upon by the instructor.

CICE Modifications:**Preparation and Participation**

1. A Learning Specialist will attend class with the student(s) to assist with inclusion in the class and to take notes.
2. Students will receive support in and outside of the classroom (i.e. tutoring, assistance with homework and assignments, preparation for exams, tests and quizzes.)
3. Study notes will be geared to test content and style which will match with modified learning outcomes.
4. Although the Learning Specialist may not attend all classes with the student(s), support will always be available. When the Learning Specialist does attend classes he/she will remain as inconspicuous as possible.

A. Tests may be modified in the following ways:

1. Tests, which require essay answers, may be modified to short answers.
2. Short answer questions may be changed to multiple choice or the question may be simplified so the answer will reflect a basic understanding.
3. Tests, which use fill in the blank format, may be modified to include a few choices for each question, or a list of choices for all questions. This will allow the student to match or use visual clues.
4. Tests in the T/F or multiple choice format may be modified by rewording or clarifying statements into layman's or simplified terms. Multiple choice questions may have a reduced number of choices.

B. Tests will be written in CICE office with assistance from a Learning Specialist.***The Learning Specialist may:***

1. Read the test question to the student.
2. Paraphrase the test question without revealing any key words or definitions.
3. Transcribe the student's verbal answer.
4. Test length may be reduced and time allowed to complete test may be increased.

C. Assignments may be modified in the following ways:

1. Assignments may be modified by reducing the amount of information required while maintaining general concepts.
2. Some assignments may be eliminated depending on the number of assignments required in the particular course.

The Learning Specialist may:

1. Use a question/answer format instead of essay/research format
2. Propose a reduction in the number of references required for an assignment
3. Assist with groups to ensure that student comprehends his/her role within the group
4. Require an extension on due dates due to the fact that some students may require additional time to process information
5. Formally summarize articles and assigned readings to isolate main points for the student
6. Use questioning techniques and paraphrasing to assist in student comprehension of an assignment

D. Evaluation:

Is reflective of modified learning outcomes.