



**I. COURSE DESCRIPTION:**

This course will continue to build on the study of shop machines, with emphasis on the use of all the machines in the shop, tools in the mechanical shop and welding. Students will be required to plan, design and build projects as approved by the professor using tools, machinery and skills learned previously. Students will be placed into work groups simulating the work environment. Planning and Supervisory skills will be learned and practiced along with team skills to complete the required projects.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

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

**1. *Review shop safety policy.*****Potential Elements of the Performance**

- Identify and correct any shop safety hazards
- Practice equipment lock-out procedures
- Identify and apply WHMIS labels where needed
- Identify and correct other safety issues that arise.

**2. *Set up and operate all machines used in the shop.*****Potential Elements of the Performance**

- Safely operate all milling machines
- Safely operate all lathes
- Safely operate horizontal grinder
- Safely operate all drilling machines
- Safely assemble the complete project

**3. *Design, develop, draw, and make group projects using machine tools, equipment and safe shop practices.*****Potential Elements of the Performance:**

- Form student work groups that simulate the work environment in an actual shop
- Develop a project that can be built in the shop
- Produce detailed drawings for each component
- Produce complete assembly drawing
- Build the project using resources available

This project will be approved by the professor and suitable to be built in the school.

Students will continue to build confidence in using various shop tools and equipment by using all shop equipment in the work project.

**III. TOPICS:**

1. Review shop safety policy
2. Set up and operate all machines used in the shop.
3. Develop shop projects

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

- Machining Fundamentals textbook and workbook
- Scientific calculator
- High Cut (8") Safety Boots (CSA approved)
- Impact Resistant Safety Glasses (CSA approved)
- Coveralls or Shop Coat (not mandatory, but recommended to protect clothing)
- Hair net required when hair is below collar length (hair may also be put up underneath a ball cap)

**Please Note:**

Students are expected to wear safety equipment in the shop; failure to do so will result in denial to work in the shop on that occasion. While working in the shop do not wear rings, exposed jewelry or shorts.

**No Cell Phones are Permitted in The Classroom or Shops**

**V. EVALUATION PROCESS/GRADING SYSTEM:**

<i>Project Components</i>	<i>70%</i>
<i>Assembled Component</i>	<i>30% (Tested)</i>
<b><i>Total</i></b>	<b><i>100%</i></b>

The following semester grades will be assigned to students:

<b>Grade</b>	<b><u>Definition</u></b>	<b><i>Grade Point Equivalent</i></b>
A+	90 – 100%	4.00
A	80 – 89%	3.00
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:****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.