

I. COURSE DESCRIPTION:

Using skills developed in Fabrication 1 & 2 demonstrate the skills to assemble various structures using bending, forming, shaping, tacking and welding procedures.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. *Plan and Set-up Workspace***Potential Elements of the Performance:****Shop Preparation**

- Locate and set up sufficient space for work to take place
- Plan a safe work environment
- Ensure lighting is adequate
- Describe appropriate ventilation and air flow requirements
- Ensure proper material handling
- Identify overhead hazards
- Ensure and plan for proper work process flow

2. *Job Planning and Timetable***Potential Elements of the Performance:****Develop Job Plan**

- Respond to verbal production request
- Develop working sketch for project
- Identify materials required
- Produce accurate material cut list
- Calculate cost estimate for labor and material
- Estimate job start and completion dates

3. *Jigs and Fixtures***Potential Elements of the Performance:****Develop jigs and fixtures.**

- Critical dimensions
- Datum locations
- Material selection
- Fabrication
- Clamping
- Forming and shaping
- Part removal
- Accessibility

4. Product AssemblyPotential Elements of the Performance:

Assemble components and sub assemblies.

- Sequence of assembly
- Alignment
- Seam alignment tools
- Jigs and fixtures
- Tack welds
- Fasteners
- Bracing

5. Quality AssurancePotential Elements of the Performance:

Job completion

- Ensuring weld sizing and location
- Removing any sharp edges
- Cleaning slag and weld splatter
- Quality assurance inspection

III. TOPICS:

1. Plan and Set-up Workspace
2. Job Planning and Timetable
3. Jigs and Fixtures
4. Product Assembly
5. Quality Assurance

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

1. Metal Trades Handbook

V. EVALUATION PROCESS/GRADING SYSTEM:

Part 1 - Notes:

1. Re-writes are NOT allowed for any written assignment, quiz or test.
2. Repeats are NOT allowed for any shop test
3. Course attendance is mandatory. One percent (1 %) per hour will be Deducted from the final course grade for unexcused* absence.

[Any absence without a written, valid reason will be deemed unexcused.]

Valid reasons would include:

- Doctor's note
- Apprenticeship Ministry note
- Family Death or Serious Illness supported by a written note.

Part 2 - Final Course Grades:

The final course grade will be determined by means of the following list of weighted factors:

Factor	Value
Shop Assignments	100%
Attendance	-1% per Unexcused Hour
Late	-1% per Late
Shop Clean-up	-1% per Incident

The following semester grades will be assigned to students:

Grade	Definition	Grade Point Equivalent
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:

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.

VII. COURSE OUTLINE ADDENDUM:

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