

I. COURSE DESCRIPTION:

Using skills developed in Assembly and fabrication of detailed Components, to 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 Assembly

Potential 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 Assurance

Potential 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. IPT Metal Trades Handbook
2. Provided handout materials
3. Impact Resistant Safety Glasses (CSA Approved)
4. High Cut (6 inch min) Safety Work Boot (CSA Approved)
5. Weld Gloves (CSA Approved)

V. EVALUATION PROCESS/GRADING SYSTEM:

Part 1 - NOTES:

1. Late hand in penalties will be 10% per day. Assignments will not be accepted past one week late unless there are extenuating and legitimate circumstances.
2. If a student misses a test/lab he/she must have a valid reason (i.e. medical or family emergency – documentation shall be required). In addition, the instructor MUST be notified PRIOR to the test or lab sitting. If this procedure is not followed the student will receive a mark of zero on the test/lab with no make-up option.
3. Re-writes are NOT allowed for any written assignment, quiz or test.
4. Repeats are NOT allowed for any shop test.
5. 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
- 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:

<i>Factor</i>	<i>Value</i>
Shop Assignments	100%
Platform	35%
Stair	35%
Handrail	30%
Attendance	-1% per Unexcused Hour
Late	-1% per Late
Shop Clean-up	-1% per Incident

The following semester grades will be assigned to students:

<i>Grade</i>	<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%	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.

VII. COURSE OUTLINE ADDENDUM:

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