

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ONTARIO**



**COURSE OUTLINE**

**COURSE TITLE:** ASSEMBLY FABRICATION

**CODE NO. :** MTF211 **SEMESTER:** Three

**PROGRAM:** Metal Fabrication Technician

**AUTHOR:** Steve Witty

**INSTRUCTOR:**

**DATE:** September 2016 **PREVIOUS OUTLINE DATED:** September 2015

**APPROVED:** *"Corey Meunier"* May 2016

**CHAIR** **DATE**

**TOTAL CREDITS:** FIVE

**PREREQUISITE(S):** MTF 131

**HOURS/WEEK:** FIVE

**Copyright ©2016 The Sault College of Applied Arts & Technology**  
*Reproduction of this document by any means, in whole or in part, without prior written permission of Sault College of Applied Arts & Technology is prohibited.*  
**For additional information, please contact Corey Meunier, Chair**  
**Technology & Skilled Trades**  
**(705) 759-2554, Ext. 2610**

- I. **COURSE DESCRIPTION:** Curriculum based on demonstrating the knowledge and skills required to complete a fitting and assembly project from the stages of planning and preparation through to final assembly and welding while following applicable industry standards and codes.

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

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

1. ***Prepare a job for welding.***

- Fabrication sequence
- Essential tools and equipment demands
- Joint preparation
- Understanding of related codes
- Basic job requirements

2. ***Determine the requirements for jigs, fixtures and bracing.***

- Jig requirements
- Basic jig construction
- Welding fixtures
- Use and need for bracing

3. ***Assemble fabrications and detail components.***

- Understand basic fabrication assembly techniques
- Assemble parts and fittings in correct sequence
- Understand the importance of accuracy in the assembly of detailed components

4. ***Tack weld, fit and position fabricated and detailed parts.***

- Understand the importance of tack weld size and placement
- Demonstrate the ability to follow proper fitting requirements as outlined in a detailed procedure
- Demonstrate the understanding of proper fit-up tolerances

5. ***Assemble components.***

- Demonstrate the ability to perform a final assembly on a fabrication project to acceptable industry standards and codes

III **TOPICS:**

1. Prepare a job for welding.
2. Make Jigs, Fixtures and Bracing.
3. Assemble fabrications and detail components.
4. Tack weld, fit and position fabricated and detailed parts.
5. Assemble components.

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

- IPT Metal Trades Handbook
- Provided handout materials
- Impact Resistant Safety Glasses (CSA Approved)
- High Cut ( 6 inch min ) Safety Work Boot ( CSA Approved)
- Weld Gloves ( CSA Approved)

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

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.

Valid reasons would include:

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

**Final Course Grade:**

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

<b>Factor</b>	<b>Value</b>
Shop Assignments	100 %
(1 assignment 50%)	
(2 assignments 25% each)	
Attendance	-1% per Unexcused Hour
Late	-1% per Late
Shop Clean-up	-1% per Incident

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%	
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.	

If a faculty member determines that a student is at risk of not being successful in their academic pursuits and has exhausted all strategies available to faculty, student contact information may be confidentially provided to Student Services in an effort to offer even more assistance with options for success. Any student wishing to restrict the sharing of such information should make their wishes known to the coordinator or faculty member.

## **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.

***Electronic devices and cell phones are not permitted in labs.***

**VII. COURSE OUTLINE ADDENDUM:**

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