

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: ASSEMBLY FABRICATION
CODE NO. : MTF211 **SEMESTER:** Three
PROGRAM: Metal Fabrication Technician
AUTHOR: Steve Witty
DATE: September 2012 **PREVIOUS OUTLINE DATED:** January 2012
APPROVED:

"Corey Meunier"

CHAIR

DATE

TOTAL CREDITS: FIVE
PREREQUISITE(S): MTF 131
HOURS/WEEK: FIVE

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For additional information, please contact Corey Meunier, Chair
Technology & Skilled Trades
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- 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) Safety Work Boot (CSA Approved)
- Weld Gloves (CSA Approved)

V. EVALUATION PROCESS/GRADING SYSTEM:

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.

If a student misses a test/lab he/she must have a valid reason (i.e. medical or family emergency – documentation may 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.

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.

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:

<i>Factor</i>	<i>Value</i>
Shop Assignments	65 %
Practical Tests	35 %
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	<u>Definition</u>	<i>Grade Point Equivalent</i>
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.	

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.