

I. COURSE DESCRIPTION:

Curriculum based on demonstrating the knowledge required to plan for a project from beginning, through to completion, understand and explain the process of safe site installation of components and assemblies

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Study shop drawings and specifications.

- Dimensions
- Estimation of time, materials and equipment
- Fabrication sequence
- Communication with supervision
- Outside contracts
- Parts to be machined
- Schedule

2. Determine workspace requirements.

- Sufficient space requirements
- Availability
- Accessibility
- Safe working area
- Adequate lighting
- Appropriate ventilation and air flow
- Equipment allocation and set-up
- Material handling availability
- Environmental hazards
- Overhead hazards
- Work process flow

3. Identify labor availability.

- Competency
- Certification

4. Identify specified power supply and welding processes.

- Power availability
- Equipment maintenance
- Consumables requirement and availability
- Consumable and material storage

5. **Establish sequence of assembly.**
 - Sub-assembly
 - Final assembly
 - Stability of components
 - Supports
 - Shipping orientation
 - Fasteners

6. **Apply quality control.**
 - Follow applicable procedures
 - Identify related codes
 - Inspection
 - Corrective action

7. **Determine workplace hazards.**
 - Electrical hazards
 - Fume extraction
 - Housekeeping
 - Coated surfaces
 - Worker training

8. **Estimate project progress.**
 - Degree of completion
 - Expected date of completion
 - Ordering and receipt of materials and consumables
 - Co-coordinating any additional equipment requirements

9. **Identify rigging and material handling techniques.**
 - Cranes and crane types
 - Crane signals
 - Slings and chokers
 - Rigging safety
 - Wire rope clips, shackles and hooks
 - Knots

III. TOPICS:

1. Interpret shop drawings.
2. Determine workspace requirements in regards to safety and work efficiency.
3. Understand the importance of labor availability.
4. Identify required power supply and welding process compatibility.
5. Understand fabrication and assembly sequence importance.
6. Use, follow and understand quality control implementation.
7. Identify common workplace hazards.
8. Understand the importance of estimating the progress of a project.
9. Understand basic material handling fundamentals.

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

- **IPT “Metal Trades” Handbook**

V. EVALUATION PROCESS/GRADING SYSTEM:**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.

Valid reasons would include:

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

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>	<i>Value</i>
Factor	Value	
Section 1 Project:		20%
Section 2 Project:		20%
Section 3 Project:		20%
Section 4 Project:		20%
Rigging Test 1:		20%
Attendance		-1% per Unexcused Hour
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%	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:

Electronic Devices, cell phones are not permitted in classroom.

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.