



## COURSE OUTLINE: MTF209 - PROJECT PLAN/INSTALL

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Approved: Corey Meunier, Chair, Technology and Skilled Trades

<b>Course Code: Title</b>	MTF209: PROJECT PLANNING AND INSTALLATION
<b>Program Number: Name</b>	4051: METAL FABRICATION
<b>Department:</b>	IRONWKR APPR./WELDING RELATED
<b>Academic Year:</b>	2022-2023
<b>Course Description:</b>	This course will teach students how to map out the requirements needed for the successful implementation of projects. A variety of jobs will be presented including both small and large or complex ones will be covered. Students will develop skills in material estimates required for projects, as well as timeline and labour resource estimates, including the number of hours required to complete jobs undertaken. Pre-job planning for installations in the field or on-site will also be covered.
<b>Total Credits:</b>	3
<b>Hours/Week:</b>	3
<b>Total Hours:</b>	42
<b>Prerequisites:</b>	There are no pre-requisites for this course.
<b>Corequisites:</b>	There are no co-requisites for this course.
<b>Vocational Learning Outcomes (VLO's) addressed in this course:</b>	<p><b>4051 - METAL FABRICATION</b></p> <p>VLO 1 Interpret blueprints and produce basic drawings and bills of materials.</p> <p>VLO 4 Create and use patterns and templates using common layout and measuring tools.</p> <p>VLO 6 Develop project plans relating to component and sub-assembly production.</p> <p>VLO 7 Complete all work in compliance with health and safety legislation and prescribed organizational practices and procedures to ensure safety of self and others.</p> <p>VLO 8 Work responsibly and effectively in accordance with government safety regulations, manufacturer's recommendations and approved industry standards.</p>
<b>Essential Employability Skills (EES) addressed in this course:</b>	<p>EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.</p> <p>EES 3 Execute mathematical operations accurately.</p> <p>EES 4 Apply a systematic approach to solve problems.</p> <p>EES 5 Use a variety of thinking skills to anticipate and solve problems.</p> <p>EES 6 Locate, select, organize, and document information using appropriate technology and information systems.</p> <p>EES 7 Analyze, evaluate, and apply relevant information from a variety of sources.</p> <p>EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others.</p> <p>EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.</p>



EES 10 Manage the use of time and other resources to complete projects.  
 EES 11 Take responsibility for ones own actions, decisions, and consequences.

**Course Evaluation:**

Passing Grade: 50%, D

A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.

**Other Course Evaluation & Assessment Requirements:**

1. Late hand in penalties will be -10% per day.
2. If a student misses a test, 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 sitting. If this procedure is not followed the student will receive a mark of zero on the test with no make-up option.
3. Re-writes are NOT allowed for any written assignment, quiz or test.
4. Course attendance is mandatory. Any student that is not present for the first 3 classes in each course, will be deemed to have not completed the required safety orientation for the course and will not be permitted to continue. One percent (1 %) per hour will be deducted from the final course grade for unexcused\* absence. Any unexcused attendance beyond 15% of the total allocated course hours will result in the student receiving a failing grade for the course.

Valid reasons would include:

Doctors note  
 Family Death or Serious Illness supported by a written note.

Unexcused absence\* will be determined in a case by case basis by the instructor of each course.

**Books and Required Resources:**

IPT`s Metal Trades & Welding  
 Publisher: IPT Publishing & Training Ltd.

Kit: ILM Post-Secondary Package by Alberta Government  
 Publisher: AK Graphics, Sault College Print Shop

**Course Outcomes and Learning Objectives:**

Course Outcome 1	Learning Objectives for Course Outcome 1
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	<ol style="list-style-type: none"> <li>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</li> <li>2. Determine workspace requirements.            Sufficient space requirements            Availability            Accessibility            Safe working area            Adequate lighting            Appropriate ventilation and air flow            Equipment allocation and set-up</li> </ol>



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.

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

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



**Evaluation Process and Grading System:**

<b>Evaluation Type</b>	<b>Evaluation Weight</b>
Project 1	20%
Project 2	20%
Project 3	20%
Project 4	20%
Rigging Test	20%

**Date:**

June 27, 2022

**Addendum:**

Please refer to the course outline addendum on the Learning Management System for further information.

