



## 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>Semesters/Terms:</b>	19F
<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>	45
<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>  Please refer to program web page for a complete listing of program outcomes where applicable.	<b>4051 - METAL FABRICATION</b> VLO 1 Interpret blueprints and produce basic drawings and bills of materials. VLO 4 Create and use patterns and templates using common layout and measuring tools. VLO 6 Develop project plans relating to component and sub-assembly production. 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. VLO 8 Work responsibly and effectively in accordance with government safety regulations, manufacturer's recommendations and approved industry standards.
<b>Essential Employability Skills (EES) addressed in this course:</b>	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. EES 3 Execute mathematical operations accurately. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 7 Analyze, evaluate, and apply relevant information from a variety of sources. EES 10 Manage the use of time and other resources to complete projects. EES 11 Take responsibility for ones own actions, decisions, and consequences.
<b>Course Evaluation:</b>	Passing Grade: 50%, D
<b>Other Course Evaluation &amp; Assessment Requirements:</b>	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)



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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:

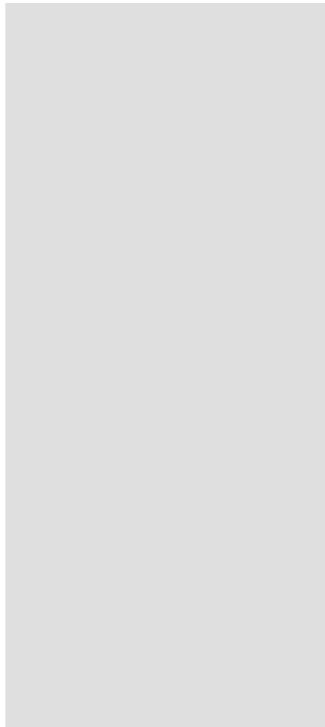
Doctors note

Family Death or Serious Illness supported by a written note.

**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.               <ul style="list-style-type: none"> <li>Dimensions</li> <li>Estimation of time, materials and equipment</li> <li>Fabrication sequence</li> <li>Communication with supervision</li> <li>Outside contracts</li> <li>Parts to be machined</li> <li>Schedule</li> </ul> </li> <li>2. Determine workspace requirements.               <ul style="list-style-type: none"> <li>Sufficient space requirements</li> <li>Availability</li> <li>Accessibility</li> <li>Safe working area</li> <li>Adequate lighting</li> <li>Appropriate ventilation and air flow</li> <li>Equipment allocation and set-up</li> <li>Material handling availability</li> <li>Environmental hazards</li> <li>Overhead hazards</li> <li>Work process flow</li> </ul> </li> <li>3. Identify labor availability.               <ul style="list-style-type: none"> <li>Competency</li> <li>Certification</li> </ul> </li> <li>4. Identify specified power supply and welding processes.               <ul style="list-style-type: none"> <li>Power availability</li> <li>Equipment maintenance</li> <li>Consumables requirement and availability</li> <li>Consumable and material storage</li> </ul> </li> <li>5. Establish sequence of assembly.               <ul style="list-style-type: none"> <li>Sub-assembly</li> <li>Final assembly</li> <li>Stability of components</li> <li>Supports</li> <li>Shipping orientation</li> <li>Fasteners</li> </ul> </li> <li>6. Apply quality control.</li> </ol>





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-coordinating 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:** July 25, 2019

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

