



## COURSE OUTLINE: MTF207 - PATTERN & TEMPLATE 1

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Approved: Corey Meunier, Chair, Technology and Skilled Trades

<b>Course Code: Title</b>	MTF207: PATTERN AND TEMPLATE DEVELOPMENT 1
<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 takes students through a step-by-step process on accurately laying out a template to be used for accurately completing projects. Techniques for the coping, bending, and rolling of metals are all covered. Each template is created using drafting and blueprint-reading skills for appropriately-sized templates as they relate to specific material size.
<b>Total Credits:</b>	2
<b>Hours/Week:</b>	2
<b>Total Hours:</b>	30
<b>Prerequisites:</b>	MTF140
<b>Corequisites:</b>	There are no co-requisites for this course.
<b>Substitutes:</b>	MTF135
<b>This course is a pre-requisite for:</b>	MTF235
<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 5 Use a variety of thinking skills to anticipate and solve problems.</p> <p>EES 10 Manage the use of time and other resources to complete projects.</p> <p>EES 11 Take responsibility for ones own actions, decisions, and consequences.</p>
<b>Course Evaluation:</b>	Passing Grade: 50%, D
<b>Other Course Evaluation &amp; Assessment Requirements:</b>	<p>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 (as determined by instructor).</p> <p>2. If a student misses a test/lab he/she must have a valid reason (i.e. medical or family</p>



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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.

\*[Any absence without a written, valid reason will be deemed unexcused.]\*

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
<p>Develop the ability to layout templates and patterns, through the interpretation of drawings, using common layout and measuring tools, applying shop formulas and performing calculations to ensure the accuracy and functionality to meet the tolerances specified in the blueprints and specifications of the manufactured item.</p>	<p>1. Identify the purpose and fundamentals of layout development.  Classes of geometric forms  Manual layout development</p> <p>2. Describe methods of pattern development.  Radial line  Parallel line  Mathematical</p> <p>3. Develop patterns for rectangular tapered shapes employing radial line development method.  Layout method for flat surfaces  Flat, angled (sloping) surfaces  Hoppers, shuts and pyramidal shapes  Truncated pyramidal shape  Verify accuracy</p> <p>4. Develop patterns for conical shapes employing radial line development.  ..... Concentric cones  Verify accuracy</p> <p>5. Develop patterns for cylindrical shapes employing parallel line development.  ..... Straight, round, rolled shells and tanks  Circular ducting  Circular elbows  Circular branches  Piping intersections  Verify accuracy</p> <p>6. Select materials for templates.  Paper  Cardboard  Wood  Metal</p> <p>7. Develop templates for checking flat and curved surfaces.  Radius  Diameter  Angles  Parallel bar  Squaring methods</p>



Verify accuracy

**Evaluation Process and Grading System:**

<b>Evaluation Type</b>	<b>Evaluation Weight</b>
Project 1	25%
Project 2	25%
Project 3	25%
Project 4	25%

**Date:**

July 25, 2019

**Addendum:**

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

