



## COURSE OUTLINE: MTF140 - BLUEPRINT READ ADVAN

Prepared: Dave Holley

Approved: Corey Meunier, Chair, Technology and Skilled Trades

<b>Course Code: Title</b>	MTF140: BLUEPRINT READING - ADVANCED
<b>Program Number: Name</b>	4051: METAL FABRICATION 4053: WELDING TECHNIQUES
<b>Department:</b>	IRONWKR APPR./WELDING RELATED
<b>Semesters/Terms:</b>	19W
<b>Course Description:</b>	This course builds upon the skills developed in the first level of blueprint reading. Students will learn more in-depth practices related to the reading of isometric and orthographic blueprints and complex drawings of structures needing to be built, repaired or modified, that involve welding and fitting.
<b>Total Credits:</b>	3
<b>Hours/Week:</b>	3
<b>Total Hours:</b>	45
<b>Prerequisites:</b>	MTF101
<b>Corequisites:</b>	There are no co-requisites for this course.
<b>Substitutes:</b>	MTF130
<b>This course is a pre-requisite for:</b>	MTF207, MTF238
<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 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication.</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 10 Manage the use of time and other resources to complete projects.</p> <p>EES 11 Take responsibility for one's own actions, decisions, and consequences.</p>



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**Course Evaluation:****Other Course Evaluation & Assessment Requirements:**

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.

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

Valid reasons would include:

Doctors note

Court 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
Interpret blueprints, produce basic drafting drawings and bills of material.	<ol style="list-style-type: none"> <li>1. Interpret dimensioning systems, methods and tolerances to determine true object sizes and shapes.               <ul style="list-style-type: none"> <li>- Notes and specifications</li> <li>- Dimensioning</li> <li>- Holes</li> <li>- Threads</li> <li>- Welding symbols</li> <li>- Welding procedures and specifications, notes</li> <li>- Testing methods</li> </ul> </li> <li>2. Produce manual detail drawings from engineered structural and plate fabrication drawings.               <ul style="list-style-type: none"> <li>- Applicable codes</li> <li>- Elevation data</li> <li>- Structural shapes</li> <li>- Structural connections</li> <li>- Center line position</li> <li>- Hole patterns</li> <li>- Gauge</li> </ul> </li> <li>3. Interpret pressure vessel and associated piping drawings.               <ul style="list-style-type: none"> <li>- Applicable codes</li> <li>- Quarter line</li> <li>- Seam orientation</li> <li>- Radial locations</li> <li>- Non-radial locations</li> <li>- Circumferential center line</li> <li>- Dished and radioed heads</li> <li>- Miscellaneous attachments</li> <li>- Non-pressure parts</li> <li>- Pipe drawing types</li> <li>- Pipe and their schedules</li> </ul> </li> </ol>



- Pipe fittings
- Types of valves
- Symbols to identify piping systems components
- 4. Produce bills of materials from a variety of drawings.
- Structural
- Vessels
- Piping
- Plate

**Evaluation Process and Grading System:**

<b>Evaluation Type</b>	<b>Evaluation Weight</b>	<b>Course Outcome Assessed</b>
Drawing Assignments	60%	
Quizzes	40%	

**Date:**

July 31, 2018

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

