



## COURSE OUTLINE: MTF235 - PATTERN & TEMPLATE 2

Prepared: Dave Holley

Approved: Corey Meunier, Chair, Technology and Skilled Trades

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| <b>Course Code: Title</b>   | MTF235: PATTERN AND TEMPLATE DEVELOPMENT 2   |
| <b>Program Number: Name</b>   | 4051: METAL FABRICATION  |
| <b>Department:</b>  | IRONWKR APPR./WELDING RELATED  |
| <b>Semesters/Terms:</b>   | 22W  |
| <b>Course Description:</b>  | In this course students will be taught how to develop and 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.  |
| <b>Total Credits:</b>   | 3  |
| <b>Hours/Week:</b>  | 3  |
| <b>Total Hours:</b>   | 45   |
| <b>Prerequisites:</b>   | MTF207   |
| <b>Corequisites:</b>  | There are no co-requisites for this course.  |
| <b>Substitutes:</b>   | MTF200   |
| <b>Vocational Learning Outcomes (VLO's) addressed in this course:</b> | <b>4051 - METAL FABRICATION</b><br>VLO 1 Interpret blueprints and produce basic drawings and bills of materials.<br>VLO 4 Create and use patterns and templates using common layout and measuring tools.<br>VLO 6 Develop project plans relating to component and sub-assembly production.<br>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.<br>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 3 Execute mathematical operations accurately.<br>EES 4 Apply a systematic approach to solve problems.<br>EES 5 Use a variety of thinking skills to anticipate and solve problems.<br>EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others.<br>EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.<br>EES 10 Manage the use of time and other resources to complete projects.<br>EES 11 Take responsibility for one's own actions, decisions, and consequences.                                      |
| <b>Course Evaluation:</b>   | Passing Grade: 50%, D  |

In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2021-2022 academic year.



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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 a combination of theoretical knowledge and practical (hands on) skill related to the development and creation of patterns and templates. | Develop patterns and templates employing triangulation method.<br>oblique cones<br>oblique cones with elliptical elements<br>rectangle to round<br>rectangle to elliptical<br>reducing elbows<br>hoppers and chutes<br>mismatched shapes<br>truncated shapes<br><br>Use mathematical problem solving techniques to support the development of patterns.<br>square to round<br>tapered rectangular shapes<br>tapered conical shapes<br>trigonometry<br>ratio and proportion<br>Pythagorean theorem |

**Evaluation Process and Grading System:**

| Evaluation Type | Evaluation Weight |
|-----------------|-------------------|
| 45 Lateral      | 20%               |

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|                  |     |
|------------------|-----|
| Mismached Shapes | 20% |
| Oblique Cone     | 20% |
| Reducing Elbow   | 20% |
| Tru Wye          | 20% |

**Date:** January 6, 2022

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

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