



COURSE OUTLINE: MTF101 - BLUEPRINT READING

Prepared: Dave Holley

Approved: Martha Irwin - Dean

Course Code: Title	MTF101: APPLIED BLUEPRINT READING
Program Number: Name	4051: METAL FABRICATION 4053: WELDING TECHNIQUES
Department:	IRONWKR APPR./WELDING RELATED
Academic Year:	2025-2026
Course Description:	Perform drawings, common views, and basic drafting and sketching operations as applied to the welder/fabricator programs.
Total Credits:	3
Hours/Week:	3
Total Hours:	42
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
This course is a pre-requisite for:	MTF130, MTF140
Vocational Learning Outcomes (VLO's) addressed in this course:	<p>4051 - METAL FABRICATION</p> <p>VLO 1 Interpret blueprints and produce basic drawings and bills of materials.</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>4053 - WELDING TECHNIQUES</p> <p>VLO 1 Perform work responsibly and in compliance with the Occupational Health and Safety Act.</p> <p>VLO 2 Interpret engineering drawings and blueprints and produce basic graphics as required by industry.</p> <p>VLO 3 Recognize and understand use of welding symbols.</p> <p>VLO 4 Use layout and fabrication processes typical to the industry to determine correct form with accuracy.</p> <p>VLO 5 Select appropriate tools and devices to perform mathematical calculations and technical measurements for successful completion of a project.</p>
Essential Employability Skills (EES) addressed in this course:	<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 6 Locate, select, organize, and document information using appropriate technology</p>



and information systems.

- EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others.
- EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.
- 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:

CWB Post Secondary Package by CWB Education
Publisher: CWB Group

IPT's Guide To Blueprint Interpretation by Grant E. Jacobs
Publisher: IPT Publishing & Training Ltd.

Drafting Supplies available at bookstore

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
Perform drawings, common views and basic drafting and sketching operations as applied to the	Learning Objectives #1: 1.1. Identify the alphabet of lines 1.2. Explain the purpose of drawings



	<p>welder/fabricator programs and explain the features of joint types, positions and welding symbols as applied to welder/fabricator programs.</p> <p>Course Outcomes: 1. Read and interpret drawings 2. Identify shapes, drawings and drawing equipment 3. Interpret Welding Symbols</p>	<p>1.3. Identify elements and information found on drawings 1.4. Interpret symbols, views and sections used on drawings 1.5. Identify SI metric and imperial dimensioning</p> <p>Learning Objectives #2:</p> <p>2.1. Describe the principals of scale drawings 2.2. Describe the principals of perspective, oblique and isometric drawings 2.3. Describe and sketch orthographic projection 2.4. Describe dimensioning rules 2.5. Develop an orthographic drawing to scale 2.6. Describe drawing tools 2.7. Describe the parts of geometric shapes and angles 2.8. Apply layouts</p> <p>Learning Objectives #3:</p> <p>3.1. Explain the purpose of welding symbols 3.2. Define weld symbol, welding symbol and supplementary symbols 3.3. Interpret weld symbols and welding symbols 3.4. Identify the dimensioning of welding symbols 3.5. Interpret non-destructive testing symbols</p>
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Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Drawing Assignments	80%
Tests	20%

Date:

July 9, 2025

Addendum:

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

