



COURSE OUTLINE: MTF201 - FABRICATION 2

Prepared: Dave Holley

Approved: Corey Meunier, Chair, Technology and Skilled Trades

Course Code: Title	MTF201: FABRICATION 2
Program Number: Name	4051: METAL FABRICATION
Department:	IRONWKR APPR./WELDING RELATED
Semesters/Terms:	20F
Course Description:	Prepare fabrication and detail materials by utilizing machinery and equipment in accordance with government regulations, manufacturer's recommendations and specifications, and approved industry standards.
Total Credits:	5
Hours/Week:	5
Total Hours:	75
Prerequisites:	MTF131
Corequisites:	There are no co-requisites for this course.
This course is a pre-requisite for:	MTF231, MTF236
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 2 Apply knowledge of various welding and metal cutting techniques and theories to produce components and sub-assemblies.</p> <p>VLO 3 Prepare materials by utilizing fabrication machinery and equipment.</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>
Essential Employability Skills (EES) addressed in this course:	<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 ones own actions, decisions, and consequences.</p>
Course Evaluation:	<p>Passing Grade: 50%, D</p> <p>A minimum program GPA of 2.0 or higher where program specific standards exist is required</p>

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 2020-2021 academic year.



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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.

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
Demonstrate the ability to utilize shop machinery and equipment to safely prepare fabrication and detail materials.	<ol style="list-style-type: none">1. Demonstrate safe operation of fabrication machinery. Ironworkers Shears Benders Drilling machines Fitting tools2. Operate thermal cutting processes to generate shapes. Freehand shape cutting Oxy/Fuel torches3. Assemble components and sub assemblies. Sequence of assembly Alignment Jigs and fixtures Tack welds Fasteners Bracing4. Develop jigs and fixtures. Critical dimensions Datum locations Material selection Fabrication Clamping Forming and shaping Part removal Accessibility5. Demonstrate complex assembly techniques.

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Prepared joint data
 Proper seam alignment on vessels
 Tack location and process
 Temporary restraint
 Pipe diameter alignment
 Oblique pipe intersections
 Structural intersections / HSS intersections
 Tightening sequence / bolting
 Alignment of multi-segment cones
 Standard tolerance of structural shapes
 Pre-welding requirements
 Accessibility of weld joints
 Ongoing third party checks
 Accommodation of part variation while maintaining overall dimensions
 Alignment and dimensions using heat or mechanical means
 Trial assembly of completed sub-components

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Project 1	25%
Project 2	25%
Project 4	25%
Projects 3	25%

Date:

September 2, 2020

Addendum:

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

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