Prepared: Dave Holley Approved: Corey Meunier

Course Code: Title	MTF131: FABRICATION 1
Program Number: Name	4051: METAL FABRICATION
Department:	IRONWKR APPR./WELDING RELATED
Semester/Term:	17F
Course Description:	Plan and perform practical fitting projects in accordance with government safety regulations, manufacturer`s recommendations, and approved industry standards.
Total Credits:	3
Hours/Week:	3
Total Hours:	45
This course is a pre-requisite for:	MTF201, MTF211
Vocational Learning Outcomes (VLO's): **Please refer to program web page for a complete listing of program outcomes where applicable.**	**4051 - METAL FABRICATION** #1. Interpret blueprints and produce basic drawings and bills of materials. #2. Apply knowledge of various welding and metal cutting techniques and theories to produce components and sub-assemblies. #3. Prepare materials by utilizing fabrication machinery and equipment. #4. Create and use patterns and templates using common layout and measuring tools. #6. Develop project plans relating to component and sub-assembly production. #7. Complete all work in compliance with health and safety legislation and prescribed organizational practices and procedures to ensure safety of self and others. #8. Work responsibly and effectively in accordance with government safety regulations, manufacturer's recommendations and approved industry standards.
Essential Employability Skills (EES):	#2. Respond to written, spoken, or visual messages in a manner that ensures effective communication. #3. Execute mathematical operations accurately. #4. Apply a systematic approach to solve problems. #5. Use a variety of thinking skills to anticipate and solve problems. #10. Manage the use of time and other resources to complete projects. #11. Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	Passing Grade: 50%, D

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
Family Death or Serious Illness supported by a written note.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Angle Cope	15%
Beam Cope	15%
Channel Cope	15%
Cutting Project	10%
Flange Cut	15%
Pipe Miter	15%
Plate Fit Up Project	15%

Course Outcomes and Learning Objectives:

Course Outcome 1.

A trades curriculum that has been designed to provide students with a combination of theoretical knowledge and hands on skill in relation to the safe planning and performing practical fitting projects in accordance with government safety regulations, manufacturer`s recommendations and approved industry standards.

Learning Objectives 1.

1. Plan and Set Up A Workspace.

Potential Elements of the Performance:
- Locate and set up sufficient space for work to take place
- Plan a safe work environment
- Ensure lighting is adequate
- Describe appropriate ventilation and air flow requirements
- Ensure proper material handling
- Identify overhead hazards
- Ensure and plan for proper work process flow

2. Select Materials From Specifications.

Potential Elements of the Performance:
- Understand the importance of heat numbers
- Identify the components of receiving documentation
- Identify structural shapes
- Identify bolts, nuts and washers

	3. Demonstrate Structural Fitting Techniques. Potential Elements of the Performance: • Understand the difference between actual and nominal dimensions • Understand symbols for structural shapes • Describe the importance of access holes • Identify the importance of following proper code references • Identify stiffener details • Describe the purpose of end plates • Explain the proper use of hole punch guides 4. Perform Assigned Practical Fitting Projects. Potential Elements of the Performance: • Demonstrate the ability to perform cutting and fitting exercises all or part of which may be used in one or more structural projects • Beam • Layout a 45 and 90 degree cope • Cut parts • Fit parts tack parts together • Channel • Layout a 45 and 90 degree cope • Cut parts • Fit parts tack parts together • Angle • Layout a 45 and 90 degree cope • Cut parts • Fit parts tack parts together • Box construction project • Layout parts • Bend • Fit parts • Tack parts • Elbows • Layout • Cut parts • Fit parts • Tack parts • Pipe projects • Use wrap from layout and pattern development • Form lateral branch • Form tee connection • Layout parts • Cut parts • Fit parts • Tack parts
Date:	Monday, December 18, 2017
	Please refer to the course outline addendum on the Learning Management System for further information.