COURSE OUTLINE: MTF140 - BLUEPRINT READ ADVAN

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Approved: Greg Mapp, Chair, Aviation Technology - Flight

Course Code: Title	MTF140: BLUEPRINT READING - ADVANCED
Program Number: Name	4051: METAL FABRICATION 4053: WELDING TECHNIQUES
Department:	IRONWKR APPR./WELDING RELATED
Semesters/Terms:	21W
Course Description:	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.
Total Credits:	3
Hours/Week:	3
Total Hours:	45
Prerequisites:	MTF101
Corequisites:	There are no co-requisites for this course.
Substitutes:	MTF130
This course is a pre-requisite for:	MTF207, MTF238
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**4051 - METAL FABRICATION** VLO 1 Interpret blueprints and produce basic drawings and bills of materials. VLO 4 Create and use patterns and templates using common layout and measuring tools. VLO 6 Develop project plans relating to component and sub-assembly production. 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. VLO 8 Work responsibly and effectively in accordance with government safety regulations, manufacturer's recommendations and approved industry standards.
Essential Employability Skills (EES) addressed in this course:	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. EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication. EES 3 Execute mathematical operations accurately. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 10 Manage the use of time and other resources to complete projects.

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.

	EES 11 Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	
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**
Interpret blueprints, produce basic drafting drawings and bills of material.	1. Interpret dimensioning systems, methods and tolerances to determine true object sizes and shapes. - Notes and specifications - Dimensioning - Holes - Threads - Welding symbols - Welding procedures and specifications, notes - Testing methods 2. Produce manual detail drawings from engineered structural and plate fabrication drawings. - Applicable codes - Elevation data - Structural shapes - Structural connections - Center line position - Hole patterns - Gauge 3. Interpret pressure vessel and associated piping drawings. - Applicable codes - Quarter line - Seam orientation - Radial locations - Non-radial locations - Circumferential center line - Dished and radioed heads

	- Miscellaneous attachments - Non-pressure parts - Pipe drawing types - Pipe and their schedules - 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:

Evaluation Type	Evaluation Weight
Drawing Assignments	60%
Quizzes	40%

Date: June 11, 2020

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