COURSE OUTLINE: MTF209 - PROJECT PLAN/INSTALL

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Approved: David Orazietti, Dean, Environment, Technology, and Business

Course Code: Title	MTF209: PROJECT PLANNING AND INSTALLATION
Program Number: Name	4051: METAL FABRICATION
Department:	IRONWKR APPR./WELDING RELATED
Semesters/Terms:	21F
Course Description:	This course will teach students how to map out the requirements needed for the successful implementation of projects. A variety of jobs will be presented including both small and large or complex ones will be covered. Students will develop skills in material estimates required for projects, as well as timeline and labour resource estimates, including the number of hours required to complete jobs undertaken. Pre-job planning for installations in the field or on-site will also be covered.
Total Credits:	3
Hours/Week:	3
Total Hours:	45
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
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 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 6 Locate, select, organize, and document information using appropriate technology and information systems. EES 7 Analyze, evaluate, and apply relevant information from a variety of sources. 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.

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.

	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:	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 demonstrating the knowledge required to plan for a project from beginning, through to completion, understand and explain the process of safe site installation of components and assemblies	1. Study shop drawings and specifications. Dimensions Estimation of time, materials and equipment Fabrication sequence Communication with supervision Outside contracts Parts to be machined Schedule 2. Determine workspace requirements. Sufficient space requirements Availability Accessibility Safe working area Adequate lighting Appropriate ventilation and air flow Equipment allocation and set-up

		Material handling availability Environmental hazards Overhead hazards Work process flow 3. Identify labor availability. Competency Certification 4. Identify specified power supply and welding processes. Power availability Equipment maintenance Consumables requirement and availability Consumable and material storage 5. Establish sequence of assembly. Sub-assembly Final assembly Stability of components Supports Shipping orientation Fasteners 6. Apply quality control. Follow applicable procedures Identify related codes Inspection Corrective action 7. Determine workplace hazards. Electrical hazards Fume extraction Housekeeping Coated surfaces Worker training 8. 9. Estimate project progress. Degree of completion Expected date of completion Ordering and receipt of materials and consumables Co-coordinating any additional equipment requirements Identify rigging and material handling techniques. Cranes and crane types Crane signals Slings and chokers Rigging safety Wire rope clips, shackles and hooks Knots

Evaluation Process and Grading System:	<table><tr><th>Evaluation Type</th><th>Evaluation Weight</th></tr><tr><td>Project 1</td><td>20%</td></tr><tr><td>Project 2</td><td>20%</td></tr><tr><td>Project 3</td><td>20%</td></tr><tr><td>Project 4</td><td>20%</td></tr><tr><td>Rigging Test</td><td>20%</td></tr></table>
Date:	September 17, 2021
Addendum:	Please refer to the course outline addendum on the Learning Management System for further information.