COMMON COURSE OUTLINE: Course discipline/number/title: BU 1520: Welding and Equipment Repair

A. CATALOG DESCRIPTION
   1. Credits: 1
   2. Hours/Week: 2
   3. Prerequisites (if any): Enrollment in the BUM Program or instructor permission.
   4. Co-requisites (if any): None
   5. MnTC Goals (if any): NA

   This course allows students to weld various projects using Oxy-Acetylene (GTAW, GMAW, SMAW). Skills will include braze welding, metal cutting, using shears, plasma cutters, and flame cutters.

B. DATE LAST REVISED (use current date): October 2013

C. OUTLINE OF MAJOR CONTENT AREAS:
   1. Welding Safety
   2. Machine Setup
   3. Proper Electrode
   4. GMAW
   5. SMAW
   6. GTAW
   7. Oxy/acetylene welding
   8. Metal Cutting
   9. Joint Makeup

D. LEARNING OUTCOMES (GENERAL): The student will be able to perform basic operations in the lab to:
   1. Make various welds.
   2. Cut metal.
   3. Make proper joints for welding.
   4. Braze weld.
   5. Set up a SMAW machine.
   6. Set up a GTAW machine.
   7. Set up a GMAW machine.
   9. Use various shop equipment.
   10. Operate a metal break.

E. LEARNING OUTCOMES (MNTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:
   1. Cut and weld various steel projects via GTAW, SMAW, and GMAW
   2. Braze weld project

G. RCTC CORE OUTCOME(S) ADDRESSED:
   - Communication
   - Critical Thinking
   - Global Awareness/Diversity
   - Civic Responsibility
   - Personal/Professional Accountability
   - Aesthetic Response

H. SPECIAL INFORMATION (if any):
   1. Protective gear will be required in this lab based course