COMMON COURSE OUTLINE: Course discipline/number/title: BU 1500: Power Plant Theory

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

This course uses slides, lectures, discussions and worksheets. Students will study the theory and proper operations of Low and High pressure Boilers to include steam turbines and steam engine operations. Topics will include boiler types, designs, uses, steam systems, fittings and accessories.

B. DATE LAST REVISED (Month, year): January, 2015

C. OUTLINE OF MAJOR CONTENT AREAS:
   1. Types, Designs, Construction and uses of Boilers.
   2. Boiler systems.

D. LEARNING OUTCOMES (GENERAL): The student will be able to:
   1. Identify different Boiler types and uses.
   2. Describe the different Steam Systems and Appurtenances.
   3. Identify and describe Boiler Fittings and Accessories.
   4. Describe Water treatment procedures.
   5. Describe the water/steam/condensate cycle.
   6. Identify different steam traps and their locations.
   7. Describe Fuel combustion and EPA Regulations.
   9. Identify and Describe PPE care and use.

E. LEARNING OUTCOMES (MNTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:
   1. Class Worksheets
   2. Mid-Term Exam
   3. Final Exam

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

H. SPECIAL INFORMATION (if any): None