COMMON COURSE OUTLINE:  Course discipline/number/title:  WELD 1005: GTAW-Gas Tungsten Arc Welding (TIG Welding)

A.  CATALOG DESCRIPTION
1.  Credits: 3
2.  Hours/Week: 6 hours lab
3.  Prerequisites (Course discipline/number):  MATH 1015 or test into MATH 0098
4.  Corequisites (Course discipline/number):  WELD 1001, WELD 1002, WELD 1003, WELD 1004, WELD 1006
5.  MnTC Goals (if any):  NA

This course will teach the different types of Tungsten Inert Gas welding. The Student will learn proper set up, usage and shut down of equipment. Student will learn proper selection of electrodes, gases and equipment needed for welds. Student will demonstrate puddle control, bead with filler usage and various joint welds with different metal alloys.

B.  DATE LAST REVISED (Month, year):  December, 2012

C.  OUTLINE OF MAJOR CONTENT AREAS:
1.  Tungsten Inert Gas Welding
2.  Equipment set up, usage and shut down
3.  Safety
4.  Quality Assurance

D.  LEARNING OUTCOMES (GENERAL): The student will be able to:
1.  Demonstrate proper start-up, set-up, adjustment and shutdown of equipment.
2.  Demonstrate and identify different parts of welding equipment and repair.
3.  Identify and demonstrate different types of welding wire and usage.
4.  Demonstrate proper stringer bead, lap joint, butt weld and fillet weld in the horizontal, vertical and overhead positions.
5.  Demonstrate safe practices when working with compressed gasses including usage and storage and proper use of equipment.
6.  Demonstrate proper use of safety procedures, PPE and appropriate apparel.
7.  Demonstrate safe practices (PPE-Personal Protection Equipment) around compressed gasses and their storage.

E.  LEARNING OUTCOMES (MNTC):  NA

F.  METHODS FOR EVALUATION OF STUDENT LEARNING:
1.  Daily Lab Assignments
2.  Midterm 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