COMMON COURSE OUTLINE: Course discipline/number/title: BU 1631: Electrical Lab I

A. CATALOG DESCRIPTION
1. Credits: 3
2. Hours/Week: 6
3. Prerequisites (if any): Admission into BUM Program, Completion all of BUM I courses with a grade of “C” or above; MATH 1015 or placement test into MATH 0098 and MATH 1016
4. Co-requisites (if any): None
5. MnTC Goals (if any): NA

This course covers the basic theory, operation, and practical applications of industrial electronics, electric motors, AC-DC circuits and general wiring diagrams in commercial applications. In this course students will also learn motor control requirements including: control symbols, line diagrams, wiring diagrams, inlays, contacts, and starters.

B. DATE LAST REVISED (use current date): January, 2014

C. OUTLINE OF MAJOR CONTENT AREAS:
1. Low-voltage practice boards
2. Low-voltage motor starters
3. Transistors, diodes, and other electrical components
4. Single-phase and three-phase motors

D. LEARNING OUTCOMES (GENERAL): The student will be able to:
1. Identify electronic symbols.
2. Identify transistor elements.
3. Test transistors.
4. Construct a SCR DC power control circuit.
5. Determine capacitor start motor characteristics.
6. Identify control circuits.
7. Connect two-wire control circuit.
8. Connect three-wire control circuits.
9. Connect time-delay-on energizer timer circuit.
10. Exhibit safe work habits.

E. LEARNING OUTCOMES (MNTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:
Grades will be based on a percentage of the total possible points from all graded activities.

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

H. SPECIAL INFORMATION (if any):
Attendance is critical.