BARSTOW COMMUNITY COLLEGE COURSE OUTLINE – IMMT 80B

Dept & Nbr: IMMT 80B **Abbrv Title: E & I Test Equipment**
Full Title: **E & I Test Equipment**
Old Number:

Title 5 Category: Associate Degree Applicable.
Certificate Applicable:

Units	**Course Hrs per Week**		**Nbr of Weeks**	**Course Hrs Total**	
Max: 1.0	Lecture	.75	18	Lecture	13.5
Min: 1.0	Lab	.25 x 54hrs		Lab	13.5
	Contact DHR	0.0		Contact DHR	0.0
	Contact Total	1.0		Contact Total	27.0
	Non-contact DHR	0.0		Non-contact DHR	0.0

Delivery method: Lecture and Online/Hybrid
Selected Topic: No
Grading: Option (A-F) (P/NP)
Concurrent Course: None.

Repeat Code: May be taken two times with a grade of less than "C".

Basic Skills: This is not a basic skills class.

CATALOG DESCRIPTION:
Designed to give the student the fundamental skills necessary to use testing equipment used in the field covered in his course are test instruments, troubleshooting, meter polarity, reading and converting scales, use of a frequency meter, and use of digital and analog meters.

PREREQUISITES: E & I Level 1

COREQUISITES: None.

RECOMMENDED PREPARATION: None.

CONTENT:
A: Test instruments
B: Troubleshooting
C: Meter polarity
D: Reading and converting scales
E: Use of a frequency meter
F: Use of digital and analog meters.

COURSE OBJECTIVES:

Upon success completion of this course the student will be able to:

1. Identify and explain the purposes of test instruments commonly used to test and troubleshoot E & I Equipment
2. Explain how to read and convert from one scale to another using the above test equipment
3. Explain the importance of proper meter polarity.
4. Define frequency and explain the use of a frequency meter.
5. Explain the difference between digital and analog meters.

COURSE-LEVEL STUDENT LEARNING OUTCOMES:

1. Under instructor supervision, measure the voltage in your classroom (hot to neutral and neutral to ground).

Assessment Method(s): Performance Evaluation.

- Communication.
- Critical Thinking.
- Global Awareness.
- Personal/Professional Development.

2. Under instructor supervision, use an ohmmeter to measure the values of various resistors

Assessment Method(s): Performance Evaluation.

- Communication.
- Critical Thinking.
- Personal/Professional Development.

3. Use a continuity tester to verify whether a lamp is burned out.

Assessment Method(s): Performance Evaluation.

- Communication.
- Critical Thinking.
- Personal/Professional Development.

B. Critical Thinking Tasks/Assignments:

Critical thinking assignments include (but are not limited to) the following:

1. Identify options for testing instruments used in Industrial Maintenance Electrical &Instrumentation.
2. Solve problems related to various testing requirements commonly found in E&I.

C. Measurement for Basis of Grades:

1. Substantial writing assignments, including:
   - Written homework

If course is degree applicable, substantial writing assignments in course are inappropriate because:

   - The course primarily involves skill demonstrations or problem solving.

2. Computational or non-computational problem-solving demonstration, including:
   - Exam(s)
   - Quizzes
   - Homework problems
3. Skill demonstration, including:
   - Class performance(s)
4. Objective examinations, including:
   - Multiple choice
   - Completion
5. Other
   - Attendance/Participation
   - Observation

REQUIRED READING, WRITING AND OTHER OUTSIDE-OF-CLASS ASSIGNMENTS:
Over an 18-week presentation of the course three hours of study are required for each unit of credit. Two hours of independent work done out of class are required for each hour of lecture. Outside of the regular class time the students in this class will be doing the following:

- Study
- Answer questions
- Skill Practice
- Required reading
- Problem solving activity or exercise
- Written work

BASIS FOR GRADES:

Writing Assignments	0 - 20%
Problem-Solving	0 - 20%
Skill Demonstrations	0 - 20%
Objective Examinations	0 - 20%
Attendance & Participation	0 - 20%
Other…….	%
TOTAL	**100%**

TEXTS/MATERIALS
Texts used in degree applicable courses contain college level materials. Representative examples: (Format text book listing as follows: Author, Title, Publisher, and Date)

Contren. Industrial Maintenance Electrical and Instrumentation Level II, Prentice-Hall 2008

For all courses a list of required and recommended materials is maintained in the college bookstore.
==========**Instructional Office Use Only - Signatures and Codes**==========

Instructional Vice President Approval: Steven Eaton, AAVP

Curriculum Committee Approval Date: May 2, 2014