12/02/14   **DATE**   **Technology**   **DIVISION**
                REQUIRED COURSE   **NEW COURSE**
                ELECTIVE COURSE   **X**   **REVISION**

LAKE LAND COLLEGE
Course Information Form

COURSE NUMBER   **MET043**   **TITLE**   **Motors and Generators**

SEM CR HRS   **2.5**   **LT HRS**   **1.5**   **LAB HRS**   **2**   **SOE HRS**   _____   **ECH**   _____

COURSE PCS# _____ (Assigned by Administration)

Prerequisites: **MET 042 or EET 050**

Catalog Description (40 Word Limit):   This course focuses on the installation, maintenance and

Application of motors, equipment and controls.

List the Major Course Segments (Units)	Lt Hrs	Lab Hrs
DC Motors	3	4
Generators	2	1
AC Motors Single Phase:	3	3
Series , Shunt	1	1
Synchronous Motors	1	1
Shaded Pole	2	3
Universal	3	4
Alternators	1	1
Multi-Phase	5	8
Motor Controls	4	6

EVALUATION: **Quizzes** _____   **Exams**   **X**   **Oral Pres** _____   **Papers** _____
                   Lab Work   **X**   **Projects** _____   **Comp Final**   **X**   **Other** _____

Textbook: **Motors**   **published by ATP 2010**

Major Course Segment	Hours	Learning Outcomes
DC Motors	7	Students should be able to identify type, describe operation and diagnose DC motors.
Generators	3	Students should understand operation and repair of DC generators.
AC Motors (Single Phase)	6	Student should understand operation, uses and diagnostic procedures for AC motors.
Series and Shunt	4	Student should understand motor construction to help in applications of correct motor.
Synchronous	2	Students should understand operation and construction of constant RPM motors.
Shaded Pole	3	Students should understand uses and diagnostic procedures for less expensive motors.
Universal	7	Students should understand uses, limitations and repair of universal motors.
Alternators	2	Students should understand operation and repair of AC generating equipment.
Multi Phase	13	Students should be able to choose correct motor and understand repair procedures.
Motor Controls	10	Student should understand types, uses, applications and repair of various motor controls.

Course Outcomes: At the successful completion of this course, the students will be able to:

- Describe the operation of a DC motor and generator
- Describe the operation of a AC single phase motor
- Describe the operation of a three phase motor