

Basic Electrical

MCH 242

Course Name

Course Number

PHILOSOPHY/GOALS:

The object of this course is to introduce the student to a number of Basic Fundamentals of Electricity. These instructions should enable the student do do minor electrical repairs and the understanding of electrical operations as applied to machining operations.

METHODS OF ASSESSMENT (GRADING METHOD);

A	=	76%	-	100%
B	-	66%	-	75%
C	=	55%	-	65%
X	=	0		54%

X grade students may rewrite a test covering the entire course to achieve a passing grade of C.

TEXTBOOK(S):

Electric Circuits and Machines - Listor

OBJECTIVES:

TOPIC MO.	PERIODS	TOPIC DESCRIPTION	REMARKS
1		Electrical quantities and units Electric charge, electric current Voltage, conductors for energy- transmission Ohms Law, series, parallel and combination circuits	
2		Insulation testing and maintenance AC voltage, DC voltage	
3		DC motors and generators Series, shunt, compound Principle of generator action and motor action Commutation and maintenance of "brush gear Mica under cutting, cleaning and mechanical repair	
4		AC motors and alternators Three phase motors Single phase motors Split phase motors	
5		Transformers Principle of transformer operation Transformer markings	
6		Trouble shooting procedures Grounds, opens, shorts Circuit breakers over current devices Under current devices Electrical and mechanical horsepower Mechanical vibration and alignment	