**I. COURSE TITLE:** Electrical Machinery

**COURSE NUMBER:** 1185  **CATALOG PREFIX:** EENG

**II. PREREQUISITES:** EENG 1115

**III. CREDIT HOURS:** 3 **LECTURE HOURS:** 3

**LABORATORY HOURS:** 0 **OBSERVATION HOURS:** 0

**IV. COURSE DESCRIPTION:**

An examination of the characteristics of power transmission and distribution equipment. DC, single phase, poly phase AC machinery are covered including servo machines. Transformers, transducers and industrial controls are also studied .

**V. GRADING**

Grading will follow the policy in the school catalog.

|  |  |  |  |
| --- | --- | --- | --- |
| **A** | **90** | **–** | **100** |
| **B** | **80** | **–** | **89** |
| **C** | **70** | **–** | **79** |
| **D** | **60** | **–** | **69** |
| **F** | **0** | **–** | **59** |

**VI. ADOPTED TEXT(S):**

*Electric Motor & Control Systems*

2nd edition, 2015, McGraw-Hill

Frank Petruzeela.

ISBN: 978-0-07-337381-2

**VII. LEARNING OBJECTIVES:**

Fundamentals of Power Distribution

Control devices

Ladder diagrams

AC, DC & Three Phase Motors

Stepping motors

Servo Mechanisms

**VIII. COURSE METHODOLOGY**

Learning objectives will be taught by lectures, labs, videos, plant visits or any method which is effective in teaching the material

**IX. COURSE OUTLINE:**

**Week Chapter Comments**

1 Chapter1 & 2

Safety Understanding Electrical Diagrams

2 Chapter 3

Motor Transformers & Distribution Systems

3 Chapter 4

Electric Motors

4 Chapter 4 (Cont) & 5 Electric Motors

5 Chapter 5 (Cont.)

Electric Motors

6 Chapter 6

Contactors & Motor Starters

7 Chapter 6(Cont)

Contactors & Motor Starters

8 Chapter 7

Relays

9 Chapter 7(Cont)

Relays

10 Chapter 8

Motor Control Circuits

11 Chapter 8 (Cont.)

Motor Control Electronics

12 Chapter 9

Motor Control Electronics

13 Chapter 9

Motor Control Electronics

14 Chapter 10

Adjustable Speed drive & PLC

15 Chapter 10(Cont)

Adjustable Speed drive & PLC

16 **Final**

**X. OTHER REQUIRED BOOKS, SOFTWARE AND MATERIALS:**

Scientific calculator

**XI. EVALUATION:**

TEST = 40% -10% for unexcused absences

LAB = 40% -10% for unexcused absences

FINAL=20%

How the well is the comprehension of the learning objectives.

**XII. SPECIFIC MANAGEMENT REQUIREMENTS:**

None

**XIII.** **OTHER INFORMATION:**

**FERPA:** Students need to understand that your work may be seen by others. Others may see your work when being distributed, during group project work, or if it is chosen for demonstration purposes.

Students also need to know that there is a strong possibility that your work may be submitted to other entities for the purpose of plagiarism checks.

**DISABILITIES:** Students with disabilities may contact the Disabilities Service Office, Central Campus, at 800-628-7722 or 937-393-3431.