KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS
Department of Electrical Engineering

EE-360 Electric Energy Engineering
Course Syllabus 142

Dr. Ibrahim Omar Habiballah

OFFICE	PHONE	OFFICE HOURS	E-MAIL
59-2080	4985	MW 11:20-11:50 am & 12:20-12:45pm	ibrahimh@kfupm.edu.sa

Course Timing: Sec. 1 MW 08:30-09:45am **; Sec. 2 MW** 10:00-11:15am **; Sec. 3 MW** 12:45-02:00pm

Course Location: 59-2015 (Sec. 1); 59-2018 (Sec. 2); 59-2017 (Sec. 3);

Textbook: Principles of Electric Machines and Power Electronics, By: P.C. Sen, 2013, 3rd edition

Chapters	No. of Lecttures	Topics	Home Work Problems
Appendix B.2-B.5	1	Review of Three-Phase Circuits	T.B.A
1.1.1-1.1.5 & 1.2	4	Magnetic Circuits	T.B.A
2.1-2.6	6	Transformer	T.B.A
4.1-4.4	6	DC Machines	T.B.A
6.1, 6.3-6.5, 6.7	5	Synchronous Machines	T.B.A
5.1-5.3, 5.4.4, 5.7-5.10	5	Three-Phase Induction Motors	T.B.A
Notes	3	Transmission Lines & Cables	T.B.A

Grading:

Home Works, Quizzes, and Attendance	**:**	**15 (4, 9, 2)**
Lab	**:**	**20**
Major-Exam I 9th March (6:00-7:30 pm)	**:**	**15**
Major-Exam II 27th April (6:30-8:00 pm)	**:**	**15**
Design Project	**:**	**5**
Final Exam 20th May (7:00-10:00pm)	**:**	**30**

Each student should work all home work problems and the extra assignments assigned by the instructor on an individual basis; some of these problems may be taken at random for grading. A grade of zero will be given for any problem turned in late unless excused in advance. There will be a quiz related to each home work.

Project:

A design project will be assigned after the 3rd quarter of the semester. The details of the project will be elaborated by the instructor.

Laboratory & Problem Session Schedule

WEEK	TITLE
2	**EXP # 1**: INTRODUCTION TO CASSY LAB
3	**EXP # 2**: MAGNETIC CIRCUITS CHARACTERISTICS
4	**EXP # 3**: EQUIVALENT CIRCUIT AND PERFORMANCE EVALUATION OF SINGLE-PHASE TRANSFORMER
5	**EXP # 4**: THREE PHASE TRANSFORMERS
6	**PROBLEM SESSION # 1 (for MAJOR I)**
7	**EXP# 5**: DC MOTOR CHARACTERISTICS
8	**OFF**
9	**OFF**
10	**EXP # 6**: DC GENRATOR CHARACTERISTICS
11	**EXP # 7**: DETERMINATION OF PARAMETERS OF THREE PHASE SYNCHRONOUS GENERATORS
12	**PROBLEM SESSION # 2 (for MAJOR II)**
13	**EXP # 8**: EQUIVALENT CIRCUIT, PERFORMANCE, AND TORQUE-SPEED CHARACTERISTICS OF 3-Φ INDUCTION MOTORS
14	**Make-up Labs for excused absences**
15	**FINAL LAB EXAM**