

KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS

Department of Electrical Engineering

EE-360 Electric Energy Engineering Course Syllabus 151

Dr. Ibrahim Omar Habiballah

OFFICE	PHONE	OFFICE HOURS	E-MAIL
59-2080	4985	MW 11:00-11:45 am & Tue 11:00-11:45am	ibrahimh@kfupm.edu.sa

Course Timing: Sec-1 MW 08:30-09:45am ; Sec-2 MW MW 12:25-01:40pm

Course Location: 59-2016 (Sec. 1); 59-1016 (Sec. 2);

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

Chapters	No. of Weeks	Topics	Home Work Problems
Appendix B.2-B.5	0.5	Review of Three-Phase Circuits	T.B.A
1.1.1-1.1.5 & 1.2	2	Magnetic Circuits	T.B.A
2.1-2.6	3	Transformer	T.B.A
4.1-4.4	3	DC Machines	T.B.A
6.1, 6.3-6.5, 6.7	2.5	Synchronous Machines	T.B.A
5.1-5.3, 5.4.4, 5.7-5.10	2.5	Three-Phase Induction Motors	T.B.A
Notes	1.5	Transmission Lines & Cables	T.B.A

Grading:

Home Works, Quizzes, and Attendance	:	15 (4, 9, 2)
Lab	:	20
Major-Exam I 26 th October (5:30-7:00pm)	:	15
Major-Exam II 30 th November (5:15-6:45 pm)	:	15
Design Project	:	5
Final Exam 28 th December (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 (October 4-7)
5	EXP # 4: THREE PHASE TRANSFORMERS
6	PROBLEM SESSION # 1 (for MAJOR I)
7	EXP# 5: DC MOTOR CHARACTERISTICS
8	EXP # 6: DC GENRATOR CHARACTERISTICS (Nov. 1-4)
9	EXP # 7: DETERMINATION OF PARAMETERS OF THREE PHASE SYNCHRONOUS GENERATORS
10	Make-up Labs for excused absences
11	PROBLEM SESSION # 2 (for MAJOR II)
12	EXP # 8: EQUIVALENT CIRCUIT, PERFORMANCE, AND TORQUE-SPEED CHARACTERISTICS OF 3- Φ INDUCTION MOTORS
13	FINAL LAB EXAM (Dec. 6-9)