

KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS

Department of Electrical Engineering

EE-360 Electric Energy Engineering Course Syllabus 132

Dr. Ibrahim Omar Habiballah

OFFICE	PHONE	OFFICE HOURS	E-MAIL
59-2080	4985	MW 09:50-10:50 am & 12:30-1:00pm	ibrahimh@kfupm.edu.sa

Course Timing: Sec. 1 MW 08:30-09:45am

Course Location: 59-2015

Textbook: Electrical Machinery Fundamentals; By: Stephen J. Chapman, 2012, 5th edition

Chapters	Week No.	Topics	Home Work Problems (Plus Extra Assignments)
1.1 + Appendix A	1	Machines Principles Review of Three-Phase Circuits	T.B.A
1.4 + Notes	2-3	Magnetic Circuits	T.B.A
2.1-2.5, 2.7-2.10	4-5	Transformer	T.B.A
7.3, 7.5-7.7, 8.1-8.8,8.10-8.16	6-8	DC Machines	T.B.A
3.7-3.8, 4.1-4.9, 5.1-5.2	9-11	Synchronous Machines	T.B.A
6.1-6.6, 6.9, 6.11	12-13	Three-Phase Induction Motors	T.B.A
Notes	14-15	Transmission Lines & Cables	T.B.A

Grading:

Home Works, Quizzes, and Attendance	:	10 (3, 5, 2)
Lab	:	20
Major-Exam I 3 rd March (6:30-8:00 pm)	:	15
Major-Exam II 21 st April (6:30-8:00 pm)	:	15
Design Project	:	5
Final Exam 22 nd May (8:00-11:00am)	:	35

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. Each student must submit his written individual report before the end of the semester. Each student's performance is evaluated based on the submitted report; on his case analysis and results.

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	PROBLEM SESSION # 1 (for MAJOR I)
6	EXP # 4: THREE PHASE TRANSFORMERS
7	EXP# 5: DC MOTOR CHARACTERISTICS
8	EXP # 6: DC GENRATOR CHARACTERISTICS
9	OFF
10	EXP # 7: DETERMINATION OF PARAMETERS OF THREE PHASE SYNCHRONOUS GENERATORS
11	PROBLEM SESSION # 2 (for MAJOR II)
12	OFF
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