

KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS

Department of Electrical Engineering

EE-360 Electric Energy Engineering Course syllabus 122

Dr. Ibrahim Omar Habiballah

OFFICE	PHONE	OFFICE HOURS	E-MAIL
59-2080	4985	UT 11:20-11:50 am M 11:20-11:50 am & 12:20-1:00pm	ibrahimh@kfupm.edu.sa

Course Timing: UT 10:00-11:15am

Course Location: 59-2018

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	4-6	Transformer	T.B.A
7.5-7.7, 8.1-8.8,8.10-8.16	7-9	DC Machines	T.B.A
4.1-4.9, 5.1-5.2	10-11	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 Work, Quizzes, and Attendance	:	15 (3, 10, 2)
Lab	:	20
Major-Exam I 3 rd March (7:00-9:00 pm)	:	15
Major-Exam II 13 th April (7:00-9:00 pm)	:	15
Project	:	5
Final Exam 26 th May (8:00-11:00am)	:	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. 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	DATE
2	EXP # 1: INTRODUCTION TO CASSY LAB	2-6 Feb
3	EXP # 2: THREE PHASE CIRCUITS AND POWER MEASUREMENTS	9-13 Feb
4	EXP # 3: MAGNETIC CIRCUITS CHARACTERISTICS	16-20 Feb
5	PROBLEM SESSION # 1 (for MAJOR I)	23-27 Feb
6	OFF	2-6 March
7	EXP # 4: EQUIVALENT CIRCUIT AND PERFORMANCE EVALUATION OF SINGLE-PHASE TRANSFORMER	9-13 March
8	EXP # 5: THREE PHASE TRANSFORMERS	16-20 March
9	EXP# 6: DC MOTOR CHARACTERISTICS	30 March – 3 April
10	PROBLEM SESSION # 2 (for MAJOR II)	6-10 April
11	OFF	13-17 April
12	EXP # 7: DC GENRATOR CHARACTERISTICS	20-24 April
13	EXP # 8: DETERMINATION OF PARAMETERS OF THREE PHASE SYNCHRONOUS GENERATORS	27 April – 1 May
14	EXP # 9: EQUIVALENT CIRCUIT, PERFORMANCE, AND TORQUE-SPEED CHARACTERISTICS OF 3-Φ INDUCTION MOTORS	4 – 8 May
15	FINAL LAB EXAM	11 – 15 May