

## EE 328 Electrical Power and Machines

### COURSE INFORMATION

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Laboratory	
EE 232	3	5	2	2	2	3

### COURSE AIM

- To investigate the different stages of power system generation and distribution.
- To study the basic concepts of transformers and 3-phase motors.
- To study the basic of power generation and single-phase and dc machines

### COURSE WEEKLY CONTENTS

- 1 Revision on electric and magnetic circuits.
- 2 The law of motor and generator action.
- 3 DC Motors.
- 4 DC Generators.
- 5 Core Loss and transformer basics.
- 6 Transformer model and regulation.
- 7 Transformer ratings and testing. + Midterm Exam
- 8 AC rotating field.
- 9 Three-phase induction motor.
- 10 Synchronous machines.
- 11 Single phase and small motors.
- 12 12th week + Electric power system.
- 13 Plant distribution system
- 14 Protective devices and distribution of electricity in buildings.
- 15 System protection & PF correction.

### STUDENT GRADING & ASSESSMENT

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	20 Midterm	←	10	MARKS		→	30
To be freely distributed among possible assessments							
8 to 12	←		20	MARKS		→	20
13 to 15	←		10	MARKS		→	10
16 or 17	40	Final					40
<b>Total</b>	<b>Exams</b>	<b>Assign.</b>	<b>Quizzes</b>	<b>Reports</b>	<b>Present.</b>	<b>Lab.</b>	100

### REFERENCES

**Textbook** Stephan J. Chapman "Electric Machinery Fundamentals" Mcgraw-Hill

**Other**

C. Hubert, "Electric Machines" Maxwell Macmillan, 1991