Course Name	Electrical Machine Design-II
Course Code	EE681
Course Credit	2
Contact Hour	3P
Prerequisite	Concept of Stationary and Rotating machines, Magnetic Circuit and coupling, basic knowledge of computer drawing.

Course Objective

The objectives of this course are

1. Ability to understand the various parts and performance of Machines.
2. Ability to design and estimate for a particular machine.
3. Ability to design magnetic circuit of machines and performance and characteristics study.

Course Outcome

On completion of the course students will be able to

1. Gain knowledge of designing a system.
2. Synchronize different machines in a system.
3. Use of theoretical designing concept to implement a practical model.
4. Estimate and planning system.
5. Gain knowledge in industries.
6. Develop knowledge helpful for PhD

CO Mapping with departmental POs

H: High, M: Medium, L: Low

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO 1	H		H		L							
CO 2		M			M						L	
CO 3		H	L									
CO 4	H	M	M			H					H	M
CO 5			M	M				L			L	L
CO 6									M			

Course Content

Design of Transformer:

Core, core cross section, yoke cross section, clamping of core, core earthing, transformer winding, cooling of transformers, transformer insulation, bushings, design details of single phase transformer. Introduction of 3 phase transformer with special emphasis on core design.

Design of Single Phase Induction Motor:

Stator Frame, Rotor windings, Insulation Selection, Shaft and bearings, design details.

Design of three phases Induction motor (Squirrel Cage and Slip Ring):

Stator frames, rotor, rotor windings, slip rings, shaft and bearings, design details.

Computer Aided Drawing:

Introduction to AutoCAD Based Computer Aided Drawing, Sample drawing of Transformer with specific data.

Text Books:

1. Electrical Machine Design by Sawhney and Chakraborty.