

	GURGAON INSTITUTE OF TECHNOLOGY & MANAGEMENT	
	Department : Electrical Engineering	Session :Jan-June 2018
Branch / Sem : EE 6 th Sem Subject Name & Code : Computer Added Electric Machines Design (EE-314-F)		
LESSON PLAN		TEACHER : Ritu Sharma

Text Books:

1 A course in Electrical Machine Design by A.K. Sawhney, Khanna Pub.

Reference Books:

1. Theory, performance and Design of alternating current machines by MG Say, ELBS, 15th Ed. 1986.
2. Theory, Performance and Design of Direct Current machines by A.E. Clayton, 3rd Ed. 1967.
3. Optimization Techniques, S.S. Rao

Lecture No.	Topics to be Covered
1.	General features and limitations of electrical machine design.
2.	Types of enclosures
3.	heat dissipation, Cooling media
4.	temperature rise heating and cooling cycles
5.	ratings of machines
6.	Output equation and output coefficient
7.	Specific electric and magnetic loading, Effect of size and ventilation
8.	MMF calculation for air gun
9.	iron parts of electrical machines
10.	Gap contraction coefficient.
11.	Real and apparent flux densities.
12.	Estimation of magnet current of transformers
13.	Estimation of magnet current of rotating machines
14.	no load current of transformers
15.	no load current of induction motors

16.	Leakage flux and reactance calculations for transformers
17.	Leakage flux and reactance calculations for rotating machines
18.	Design of field magnet.
19.	Design of transformer
20.	Design of transformer and their performance calculations
21.	Design of D.C. machines
22.	Design of D.C. machines
23.	Design of D.C. machines and their performance calculations
24.	Design of induction motor and their performance calculations
25.	synchronous machine and their performance calculations
26.	Computerization of design Procedures
27.	Development of Computer program and performance prediction
28.	Optimization techniques
29.	Optimization techniques
30.	applications to design Problems