

Course Type	Course Code	Name of the Course	L	T	P	Credits
DP	NEEC505	Advanced Electrical Machine Lab	0	0	3	1.5

Course Objective

- The objective of this lab is to introduce postgraduate students to the practical aspects of Advanced Electrical Machines.

Learning Outcomes

Upon successful completion of this course, students will develop:

- an ability to deal with advanced electrical machines.
- an idea about the working of different advanced electrical machines.

Unit No.	Topics to be Covered	Contact Hours	Learning Outcome
1	Experiments on three-phase transformers	2x4	Students will learn different connection of three-phase transformers
2	Experiments on synchronous machines	2x4	Students will learn determining different parameters of synchronous machines
3	Experiments on DC compound machines	2x4	Students will learn working of cumulative and differential compound DC machines
4	Experiments on synchronization techniques of synchronous machines	2x3	Students will learn synchronization techniques
5	Experiments on v/f control of AC motors	2x3	Students will learn v/f control method of AC motors
6	Practice and review	6	-----
Total Contact Hours		42	

Text Books:

- B. Adkins & R.G. Harley, Generalized Theory of AC Machines, Springer Publishers.
- P.S. Bhimbra, Generalized Theory of Electrical Machines, Khanna Publishers.

Reference Books:

- A Fitzgerald, Charles Kingsley, Stephen Umans; Electric Machinery, Mc Graw Hill Say M.G.,
- The performance and Design of Alternating Current Machines, CBS Publishers and Distributors Pvt. Ltd.
- A.E. Clayton & N N Hancock, The Performance and Design of Direct Current Machines, CBS Publishers and Distributors Pvt. Ltd.