EE2035 COMPUTER AIDED DESIGN OF ELECTRICAL APPARATUS L T P C 3 0 0 3

AIM
To introduce the basics of Computer Aided Design technology for the design of Electrical Machines.

OBJECTIVE
At the end of this course the student will be able to

☐ Learn the importance of computer aided design method.
☐ Understand the basic electromagnetic field equations and the problem formulation for CAD applications.
☐ Become familiar with Finite Element Method as applicable for Electrical Engineering.
☐ Know the organization of a typical CAD package.
☐ Apply Finite Element Method for the design of different Electrical apparatus.

UNIT I INTRODUCTION 8
Conventional design procedures – Limitations – Need for field analysis based design – Review of Basic principles of energy conversion – Development of Torque/Force.

UNIT II MATHEMATICAL FORMULATION OF FIELD PROBLEMS 9

UNIT III PHILOSOPHY OF FEM 10

UNIT IV CAD PACKAGES 9

UNIT V DESIGN APPLICATIONS 9

TOTAL : 45 PERIODS

TEXT BOOKS

REFERENCES
5. User Manuals of MAGNET, MAXWELL & ANSYS Softwares.