Course Description:

Introducing fundamentals of magnetic materials for the next-generation magnetic, nanomagnetic, and spintronics-related technologies. Includes basics of magnetism paramagnetic and diamagnetic materials, soft and hard magnetic materials, and magnetic system design foundations.

Learning Objectives:

1. To acquire knowledge on the basics of magnetic phenomena on materials
2. To impart knowledge in the field of material science and their applications in electrical engineering

Pedagogy: Normal Mode

Syllabus:

Module 1


Module 2


References:

3. Modern magnetic materials Principles and Applications , ROBERT C. O’HANDLEY Massachusetts Institute of Technology

Course Outcome:

CO1: Classify magnetic materials and describe different laws related to them
CO2: Acquire knowledge about specific core loss in different core materials

Evaluation Pattern:

Midterm Exam
Assignments
Design Exercise
End Exam

Employability:

Designed for analytical research