

Semester	JAN 2023
Open to semester	2
Course code	PH1213
Course title	Introductory Electricity and Magnetism
Credits	3 /
Course Coordinator & participating faculty (if any)	Arka Banerjee, Arijit Bhattacharyay
Nature of Course	Lectures and Tutorials
Pre-requisites	None
Objectives (goals, type of students for whom useful, outcome etc)	This is an introductory level course, the goal is to give students a basic understanding of the concepts in electricity and magnetism.
Course contents (details of topics /sections with no. of lectures for each)	Action at a distance and the concept of fields [1] Vector Analysis [2] Electric Field and potential for static charges [2] Conductors, Insulators, and fields in their vicinity [3] Electric Fields in Matter [3] Moving charges and free currents [3] Magnetic fields due to currents [3] Electromagnetic Induction [2] Magnetic Fields in Matter [3] Magnetic materials and permanent magnets [3] Maxwell's equations and Electromagnetic Waves [3]
Evaluation /assessment	End-Sem Examination-30% Mid-Sem Examination-30% Others-2 quizzes - 20% 1 Problem demonstration in tutorials - 20%
Suggested readings (with full list of authors, publisher, year, edn etc.)	Introduction to Electrodynamics, D. J. Griffiths, 4th Edition, Cambridge University Press Additional/Optional reading - Electricity and Magnetism, E. M. Purcell, Berkeley Physics Course, Volume 2, Tata McGraw-Hill Ltd (2008) Feynman Lectures on Physics Vol 2, R. P. Feynman, R. B. Leighton, M. Sands, The Millenium Edition, Basic Books (2011)