

Semester	AUG 2022
Open to semester	5,11
Course code	PH3134
Course title	Optics*
Credits	4 /
Course Coordinator & participating faculty (if any)	G V Pavan Kumar
Nature of Course	Lectures
Pre-requisites	Basic electromagnetism and quantum mechanics
Objectives (goals, type of students for whom useful, outcome etc)	A modern introduction to classical optics. To lay foundations to explore photonics. To give an overview of contemporary research in optics
Course contents (details of topics /sections with no. of lectures for each)	Introduction - 1 Interference and Diffraction of light - 6 to 8 Polarization of light - 5 Scattering of Light - 5 Light-matter Interaction - 6 Basic of lasers - 2 Introduction to quantum optics and photonics - 2 Discussion sessions on advanced topics after each module - 6 to 8
Evaluation /assessment	End-Sem Examination-40% Mid-Sem Examination-40% Others-20%
Suggested readings (with full list of authors, publisher, year, edn etc.)	1) Optics by Eugene Hecht; Addison-Wesley; 4th edition (or later) 2) Fundamentals of Photonics by Bahaa E. A. Saleh and Malvin C. Teich 2nd Edition (or later), Wiley 3) Various articles from journals such as Am. J. Phys., Physics Teacher etc.