SUBJECT NO-PH41004, SUBJECT NAME- Optics

LTP- 3-0-0,CRD- 3

SYLLABUS :-

EM waves in anisotropic media, dielectric interfaces, Goos-Hanschen shift, waves in periodic layers and absorbing media, polarization, dichroism, liquid crystals. Fresnel and Fraunhofer diffraction, Kirchhoffs theory, limits of resolution. Fourier optics, spatial frequency filtering, phase contrast microscopy, Fourier transform holograms. Theory of coherence, coherence and interferometry, low coherence interferometry, Fourier domain, LCI. Induced optical effects, strain optic tensor, induced birefringence, electro-optic effects, modulators and switches, acousto-optic interaction, Raman-Nath and Bragg regime, co- and contra-directional coupling, A-O devices, magneto-optic interaction. Basic guided wave optics, laser systems basics, linewidth, mode locking and Q-switching, confocal resonators.