5.	Introduction to spintronics, Book by S. Bandyopadhyay Springer	2008

1. Subject Code: **EP-408**   Course Title: Integrated Optics
2. Contact Hours :   L : 3   T : 1   P : 0
3. Examination Duration (Hrs.) :   Theory : 3   Practical : 0
4. Relative Weight :   CWS : 25   PRS :   MTE : 25 ETE : 50   PRE : 0
5. Credits :   4
6. Semester :   EVEN
7. Subject Area :   DEC-7
8. Pre-requisite : Knowledge of the basic concepts of optics .
          Knowledge of the partial differential equations, their solutions & special functions
9. Objective : To provide the in concepts in the area of integrated optics

S. No.	Contents	Contact Hours
1.	Principles of optical Integrated circuits; Theory of optical waveguides, PlanAr, Rectangular core and Rib waveguide, homogeneous and inhomogeneous waveguide	12
2.	Coupled mode theory, optical waveguide couplers, tapers, bends; Passive and active waveguides polarizer, printer	10
3.	Optical amplifier, modulators and switches; Opto-electronic integrated circuits- Simulation Tools and CAD packages for optical integrated circuits; Technology: Materials and Device process, patterning and Lithography, Deposition and Diffusion techniques	10
4.	Lithium Niobate based integrated optics technology- Process and Characterization; Application: Integrated optic devices and circuits for High speed long distance telecommunication, Optical processing and Optical computing.	10
	Total	42

10.   Details of course :

S.No.	Name of Books/ Authors	Year of Publication/ Reprint
1.	Integrated optics by Reinhard Marz/ Artech House publisher	2009
2.	Integrated optics by Robert G. Hunsperger Springer-Verlag	1995
3.	Integrated optics by T. Tamir Springer-Verlag	2012
4.	Optical integrated circuits by Hiroshi Nishihara Mcgraw Hill professional	2010/
5.	Nonlinear Fiber Optics by Govind Aggarwal/ Elsevier	2013
6.	Optoelectronics and Photonics by S.O. Kasap/Pearson	2010
7.	Glass integrated optics and optical fiber devices by S. Iraj Najafi SPIE Publishing	1994

11.Suggested Books