1.	Title of the course	Introduction to Integrated Photonics
2.	Course number	EE518L
3.	Structure of credits	3-0-0-3
4.	Offered to	PG
5.	New course/modification to	Modification To EE5031/9
6.	To be offered by	Department of Electrical Engineering
7.	To take effect from	July 2022
8.	Prerequisite	CoT for UG
9.	**Course Objective(s):** To introduce material and device aspects of photonics, particularly, integrated optics. To provide an understanding of the theory, design and fabrication aspect of photonic devices and circuits from an application perspective.	
10.	**Course Content:** Introduction, optical materials, and waveguides, fundamental building blocks of photonic integrated circuits (PICs), off-chip coupling, optical modulation, photodetectors, integrated light sources, photonic circuit modeling, fabrication flow of silicon photonic waveguide, characterization methods and techniques, applications.	
11.	**Textbook(s):** 1. Chrostowski L and Hochberg M E, *Silicon Photonics Design: From Devices to Systems*, Cambridge University Press (2015). 2. Pavesi L and Vivien L, *Handbook of Silicon Photonics*, CRC Press (2013).	
12.	**Reference(s):** 1. Coldren L A, Corzine S W and Mashanovitch M L, *Diode lasers and photonic integrated circuits*, John Wiley & Sons (2012). 2. Reed G T and Knights A P, *Silicon Photonics an introduction*, Wiley (2004).	