GEORGIA INSTITUTE OF TECHNOLOGY
School of Electrical and Computer Engineering

ECE6520 Fall Semester 2016

TITLE: "Integrated Optics"

INSTRUCTOR: Professor Ali Adibi

OFFICE HOURS: MW 3:30-5:00 PM. There will be an open door policy. Feel free to come for asking questions at any time the door is open.

CONTACT INFORMATION:
Office: 206B, Email: adibi@ece.gatech.edu.

TEXT:
Class notes will be provided.

REFERENCES:
Pollock and Lipson, "Integrated Photonics," Kluwer Academic, 2003.
Vahala, "Optical Microcavities (Advanced Series in Applied Physics)," World Scientific Pub Co Inc., 2004
Tamir, "Integrated Optics (vol 7. of Topics in Applied Physics)," Springer-Verlag, 1975
Tamir, "Guided-Wave Optoelectronics," Springer-Verlag Series in Electronics and Photonics, vol. 26, 1988
Yariv, "Optical Electronics in Modern Communications, 5th ed.,Oxford University Press, 1997

PREREQUISITES: Familarity with Electromagnetic Theory and Wave Propagation

COURSE OBJECTIVES:
Provides an introduction to the theory and design of optical waveguides, optical cavities, and related devices as well as the integration of multiple optical functionalities on a single substrate.

COURSE POLICIES:
Lectures
Class lectures will be held on MW 1:00-2:50 PM.

Homework
Homework assignments will be usually issued each week and will be due the following week (unless there is an exam that week). Each homework assignment is due at the beginning of the class corresponding to the due date. Late homework is accepted, but there will be a 20% penalty for each day. Collaboration on the homework problems is allowed and encouraged. However, each student must write the solution alone.

Exams
There will be two midterm exams. All exams will be open book and notes. Calculators are not to be used in the programmable mode on the exams.

Final Term Paper/Project
There will be a final term paper/project on the theoretical analysis of important stuctures in integrated optics. The paper/project can be selected from the available list of projects or can be proposed by students and approved by the instructor.

Grades
Grades will be calculated based on the following two formulas, and the better grade will be considered. Note that there is a 5% extra credit for the option with homeworks.

	Formula 1	**Formula 2**
Homework	20%	0%
Exam 1	30%	35%
Exam 2	30%	35%
Final Project	25%	30%