COURSE SYLLABUS

ECE 6510 Electro-Optics, Summer 2017

GT Shenzhen Program, T/Th 9:15 – 11:05 am, May 15 – July 28

GT Distance Learning Program (Q Section), May 15 – August 3

Instructor:	Prof. Wenshan Cai
Office hours:	Shenzhen Program: Tuesday 3:00 – 4:00 pm, GT Shenzhen, Dr. Cai's office Q section: Tuesday 9:00 – 10:00 pm, US Eastern Time, via Skype Additional office hours may be available by appointment. Please send me an email for appointment at least 24 hours in advance.
Contact:	Email: wcai@gatech.edu; Skype: wenshan.cai2
Course webpage:	T-square site: ECE-4500-Q, RSZ (combined site)

Course description:

ECE 6510 provides a comprehensive overview of the fundamental principles and primary applications of lasers. This course covers review of geometrical and wave optics, ray tracing, Gaussian beams, optical resonators, atomic radiation, laser dynamics, optical detectors, and laser applications.

Prerequisites:

It is assumed that you have basic understanding of electromagnetic waves and are comfortable with basic calculus and linear algebra.

Text and references:

Primarily online notes. Lecture slides will be posted online prior to each class.

Verdeyen, *Laser Electronics* (3rd edition), Prentice Hall, 1995.

Homework:

Seven problem sets will be assigned, graded, and returned. Homework will be assigned on Thursday and collected the following Thursday at the beginning of class. Section Q students should upload their homework to T-Square drop box by the following Monday. Late homework will not be accepted. Problem sets and solutions will be made available via the course website. Students are welcome to discuss homework with others, but all submitted work must be original.

Grading:

Homework, presentation, a midterm exam, a final exam, and instructor's discretion will be used to evaluate performance with the following weights:

3% × 7	+	15%	+	27%	+	33%	+	4%	=	100%
homework		presentation		midterm exam		final exam		instructor's discretion		total

Note:

1. The "Instructor's discretion" will be based on your class attendance, course engagement, etc.
2. If you are not able to attend class or finish assignments because of professional activities (e.g. to attend a conference), you should contact Dr. Cai in advance so that appropriate arrangement can be made.

Honor Code:

All students are expected to comply with the Georgia Tech Honor Code. The academic Honor Code is available on the web at http://www.honor.gatech.edu.