

COURSE SYLLABUS

ECE 4500 Optical Engineering, Summer 2016
Time and location TBD, GT Shenzhen program, May 16 – July 30

Instructor: Prof. Wenshan Cai
Office hours: Time: Monday 4:00 – 5:00 pm (tentative)
Location: GT Shenzhen campus, office TBD
Additional office hours may be available by appointment only. Please send me an email for appointment at least 24 hours in advance.
Email: wcai@gatech.edu
Course webpage: T-square site: ECE-4500-RSZ

Course description:

ECE 4500 presents the laws and applications of optics. This course covers nature of light, geometrical optics, wave optics, polarization, interference, diffraction, imaging, waveguides, optical instruments, introduction to lasers, and photonics in everyday life.

Prerequisites:

It is assumed that you are acquainted with calculus (MATH 2401 or equivalent), and have basic understanding of electromagnetic waves (ECE 3025 or equivalent).

Text and references:

Primarily online notes. Lecture slides will be posted online prior to each class.
Pedrotti³, *Introduction to Optics* (3rd edition), Prentice Hall, 2006.

Homework:

Eight problem sets will be assigned, graded, and returned. Homework will be assigned on Wednesdays and collected the following Wednesday at the beginning of class. Late homework will not be accepted. Problem sets and solutions will be made available via the course webpage. Students are welcome to discuss homework with others, but all submitted work must be original.

Grading:

Homework, an in-class midterm exams and a final exam will be used to evaluate performance with the following weights:

$$\begin{array}{ccccccc} \frac{3\% \times 8}{\text{Homework}} & + & \frac{33\%}{\text{midterm exams}} & + & \frac{35\%}{\text{final exam}} & + & \frac{8\%}{\text{instructor's discretion}} & = & \frac{100\%}{\text{total}} \end{array}$$

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>.