

## **Phys334000      Optics II**

Lecture Hours:      11:10 – 12:00, Tuesdays, 10:10 – 12:00, Thursdays

Location:            Room Phys 313

Instructor:          Prof. Ci-Ling Pan (潘屏靈教授)

Room 231, Physics Building

Tel: ×42275

E-mail: [clpan@phys.nthu.edu.tw](mailto:clpan@phys.nthu.edu.tw)

Office Hours: by appointment

Teaching Assistant

### **Course Objective and Contents:**

Optics II is a continuation of Optics I and intended to provide broad, intermediate-level coverage of the field of optics, establishing a solid foundation for further work or study. This material is important for many disciplines. We begin with a quick review of diffraction theory. This is followed by Fourier Optics and Imaging, Coherence and Holography. Time permitting, we will also cover optical system design, Color and Vision, Radiometry and photometry.

### **Text Book:**

Eugene Hecht, Optics, fourth edition, Addison Wesley 2002.

**Most slides are adapted from those of Prof. Trebino's course website (Georgia Tech):**

<http://www.physics.gatech.edu/gcuo/UltrafastOptics/>

### **References:**

J. F. James, A Student's Guide to Fourier Transforms, Cambridge, 2002 (available as e-book).

### **Pre-requisites:**

Optics I or equivalent course.

### **Grading**

Grades will be determined by problem sets, midterm quizzes and a final exam. The formula that will be used to calculate your final grade is:

Problem Sets and Midterms: 50%

Final Exam: 50%

**Resources on the Web:**

<http://www.lightandmatter.com/area1book5.html#contents>

<http://accept.la.asu.edu/PiN/rdg/readings.shtml>

<http://www.physics.gatech.edu/gcuo/UltrafastOptics/index.html>