

## **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)

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Teaching Assistant: 張展銘, ×62275

### **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 interference and diffraction. This is followed by Fourier Optics and Imaging, Coherence and Holography, lasers, crystal and nonlinear optics..

### **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://phweb.physics.gatech.edu/frog/lectures/index.html>

### **References:**

1. J. F. James, A Student's Guide to Fourier Transforms, Cambridge, 2002 (available as e-book).
2. Bahaa E. A. Saleh and Malvin Carl Teich, Fundamentals of Photonics, 1<sup>st</sup> Edition, Copyright © 1991, John Wiley & Sons, Inc., available as an e-book in the library. 2<sup>nd</sup> Edition© 2007.

### **Pre-requisites:**

Optics I or equivalent course.

### **Grading**

Problem Sets: 30%

Midterms I & II: 40%

Final Exam: 30%