

## EE 313100 光電工程(二) Optoelectronic Engineering II

### Course Description:

光電工程與現今科技及生活息息相關，其應用廣及電機、物理、生物、機械、材料等領域。本課程講授 wave optics, Fourier optics, waveguide optics, nonlinear optics, 以及雷射之基本原理及特性，適合相關領域大學部中高年級學生選修。

### Topics:

1. Superposition
2. Interference
3. Diffraction
4. Fourier Optics
5. Basics of Coherence Theory
6. Lasers
7. Guided-Wave Optics
8. Nonlinear Optics

<b>Grades:</b>	Homework and Quiz	25 %
	Midterm Exam I	25 %
	Midterm Exam II	25 %
	Final Exam	25 %

**TA:** 阮于珊 sophitia9568@yahoo.com.tw  
工三室 207 分機 34176

### Text Book:

Eugene Hecht, *Optics*, 4<sup>th</sup> ed., Addison Wesley.

### Supplementary Reading:

Frank L. Pedrotti, *Introduction to Optics*, 3<sup>rd</sup> ed., Prentice Hall.

### References:

Saleh Teich, *Fundamentals of Photonics*, Willey-Interscience.

Yariv Yeh, *Photonics – optical electronics in modern communications*, 6<sup>th</sup> ed., Oxford.

Jia-Ming Liu, *Photonic Devices*, Cambridge.