

Introduction to Optoelectronics Technology

ECSE 4961, Spring 2018
Tuesday, Friday 2:00 – 3:20pm

Professor: Z. Rena Huang

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Office Hours: Open door policy or by appointment

Textbook:

1. *Optoelectronics and Principles and Practices*, by S.O. Kasap, Prentice Hall, 2nd edition
2. Class notes

Course Pre-requisites:

ECSE 2210 Microelectronics Technology or Equivalent (Required)

PHYS 2620 Fundamentals of Optics or Equivalent (Recommended)

Course Objectives:

This course serves as an introduction course to optical physics and optoelectronic devices and systems. Topics include nature of light, optical waveguides and fibers, light emitting diodes, laser diodes, photodetectors, solar cells, electro-optic modulators, polarizers, optical display and LiDAR system. Particular emphasis is placed on the operation principles and concepts of various devices and systems, as well as the practical aspects of the devices and systems in real world applications.

Grade Composition:

Homework: 10%

Quiz 1: 30%

Quiz 2: 30%

Final Exam: None

Term paper and presentation: 30% (Term paper 20%, Presentation 10%)