

Syllabus
OSE6455C - Photonics Laboratory
Fall 2015

CATALOG DESCRIPTION:

OSE 6455C OPT-OPT 3(1,3): Photonics Laboratory

PR: Graduate standing and OSE 6432, or OSE 5414 and OSE 6474, or C.I.

Experimental study of photonic devices and systems including liquid crystal displays, fiber-optic sensors, laser diodes, electro optic modulation, acousto-optic modulation, lightwave detection, optical communications, and photonic signal processing

GOALS:

- Relate theoretical knowledge to a variety of photonics phenomena observed in practice.
- Learn photonics measurement techniques.
- Develop lab etiquette - Data collection and analysis, lab notebook and neat work table.
- Write lab reports of high quality - Follow the standard of a typical technical journal.

LIST OF EXPERIMENTS:

- LabView
- Beam Propagation
- Waveguides
- Acousto-Optics
- Electro-Optics
- Liquid Crystal Display
- Fiber Sensor
- Laser Diode
- Fiber-Optic Link
- Wavelength-Division Multiplexed System
- Simulation of Photonic Systems

SUGGESTED READING:

- Fundamentals of Photonics by B. E. A. Saleh and M. C. Teich, Wiley, 1991.
- Optical Electronics in Modern Communications by A. Yariv, Oxford, 5th Edition, 1997.