

COURSE SYLLABUS

ELECENG 565: Optical Communications

Instructor: Dr. Mahsa Ranji

Lectures: T/Th 3:30pm- 4:45pm.

Classroom: EME E160.

Homepage: Desire2Learn (D2L)

Instructor Office: EMS 1195

Phone: 229-5889

E-mail: ranji@uwm.edu

Office Hours: T, 5- 6:30pm

Text:

1) *Lecture notes.*

2) Fiber Optic Communications, Joseph C. Palais, 5th edition, Prentice Hall

Homepage: Desire2Learn (D2L): D2L.UWM.edu

Prerequisite: EE 361, 330.

Topics:

Basics of optics, fiber optics, optical components, lasers, fiber optic communication, guided wave optics, photonics, biophotonics, antennas.

Course Policy:

- Homework Assignments (20%).
- Exams (two in class, 40% each), non-cumulative, open book.

Homework: Due one week after assignment in class.

Exams:

The tentative first exam date is on March 10. The first exam covers the first half of the course and the second exam will cover the second half (i.e., it is not cumulative). Graduate and undergraduate exams will be partially different. The questions for grads will be more mathematically intensive.

Workload:

This course meets weekly for a total of 35 contact hours. You are required to read 440 pages, that approximately takes 36 hours. There is a total of 9 required homework assignments, each of which will take 12 or more hours. This yields a total workload of 179 hours or more.

Course Schedule:

Week	Topic
1	Background and overview
2	Introduction to light
3	Fourier Transforms

4	Basics of Optics
5	Wave propagation
6	Wave propagation
7	Exam 1
8	Fiber and guided optics
9	Fiber optic communication
10	Optical components
11	Photonics
12	Biophotonics
13	Antennas and Antenna arrays
14	Exam 2

MISCONDUCT Policy:

- Academic misconduct is handled according to procedures specified in Chapter UWS 14 and the UWM implementation provisions (Faculty Document 1686).