

Physics 342

Optics Syllabus

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Text book : Introduction to Optics, 3rd Edition, by Pedrotti, Pedrotti and Pedrotti
Publisher: Pearson

Chapters	1:	Nature of Light
	4:	Wave Equations
	5:	Superposition of Waves
	6:	Lasers
	7:	Interference of Light
	8:	Interferometry
	9:	Coherence and Fourier Transform
	10:	Fiber optics
	11:	Fraunhofer Diffraction
	12:	Diffraction Gratings
	15:	Polarized Light

The pace is approximately one week per topic.

The course grade is based on the following (assuming that all the midterms are taken): Homework 5% Quizzes 10%, midterms 50%, final 35%. There will be two midterms. Each will count for 25%. There will be no makeup midterms. If a student misses one midterm for a valid reason, the course grade will be based on the exams taken, with homework plus final still counting for 100% of the course grade.

The homework must be handed in one week after the chapter ended. They will be checked but not corrected. The solutions will then be handed out.

Learning Outcomes

The students completing the course are expected to learn:

1. Wave nature of light and wave equations
2. Superposition of waves
3. Interference of Light
4. Interferometry
5. Coherence and Fourier Transform
6. Fiber optics
7. Fraunhofer Diffraction
8. Diffraction Gratings
9. Polarized Light

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documented disabilities (Emotional, Medical, Physical and/ or Learning) consult the Office of AccessABILITY located in Room E1124 to secure necessary academic accommodations. For further information and assistance please call (212- 772- 4857)/TTY (212- 650- 3230).”

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