

1-2014

PHSX 327.01: Optics

Paul H. Janzen

University of Montana - Missoula, paul.janzen@umontana.edu

Let us know how access to this document benefits you.

Follow this and additional works at: <https://scholarworks.umt.edu/syllabi>

Recommended Citation

Janzen, Paul H., "PHSX 327.01: Optics" (2014). *Syllabi*. 973.
<https://scholarworks.umt.edu/syllabi/973>

This Syllabus is brought to you for free and open access by the Course Syllabi at ScholarWorks at University of Montana. It has been accepted for inclusion in Syllabi by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.

Instructor:	Paul Janzen
Office:	CHCB 010
Office hours:	M 11:00 - 12:00, W 2:00 - 4:00, and by appointment
Phone:	243-2374
Email:	paul.janzen@umontana.edu
Text:	<i>Introduction to Optics</i> , 3rd ed. by Pedrotti, Pedrotti, and Pedrotti (Prentice Hall, 2007).
Website:	http://cas.umt.edu/physics/327/
Lecture:	Tuesdays and Thursdays 11:10-12:30 AM in CHCB 230
Prerequisite:	PHSX 311 Oscillations and Waves

Objectives:

To study a wide range of optical phenomena using three distinct but complementary theoretical models: geometric optics, wave optics, and quantum optics.

To understand the underlying physical principles as well as the relevant mathematical tools.

Outcomes:

- Will be familiar with geometric optics, wave optics, and quantum optics at the upper undergraduate level.
- Will be able to analyze and utilize a wide range of optical instruments.
- Will be able to apply physical principles and mathematical methods used in optics to other branches of physics, including electromagnetism.

Homework:

Problem sets (approximately weekly); some reading assignments.

Exams:

Two midterm exams (Tue Mar 4 and Tue Apr 22)

Closed book but each student is permitted to bring one 4"x6" card.

One final exam (8 AM, Monday May 12)

Closed book but each student is permitted to bring three 4"x6" cards.

Grading:

Problem Sets: 25%

Midterm Exams: 40% (20% each)

Final Exam: 35%

Course **Add** can be performed online until February 4. **Add/Drop** can be performed via override slip until February 14. **Add/Drop** can be performed with the instructor's and advisor's signatures until April 7. Last day to drop with petition is May 9. Students interested in **auditing** the course must choose so on or before February 14.

All students must practise academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at http://life.umt.edu/vpsa/student_conduct.php

Students with disabilities may request reasonable modifications by contacting me. The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. "Reasonable" means the University permits no fundamental alterations of academic standards or retroactive modifications.