

General Information

PHYS 107: Light, Perception, Photography & Visual Phenomena Laboratory

Fall 2009

Textbook: Physics 107 Laboratory Manual
Fall 2009 edition

Instructor: Dr. Suresh Tonwar

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Laboratory Schedule

Section 0101: Tue 09:00 - 10 :50 (V. Ashiwal)

Section 0201: Tue 02:00 - 03:50 (Dipali Shah)

Section 0501: Wed 12:00 - 01:50 (Dipali Shah)

Section 0701: Thu 10:00 - 11:50 (V. Ashiwal)

Section 0801: Thu 02:00 - 03:50 (V. Ashiwal)

PHYSICS 107: LIGHT, PERCEPTION, PHOTOGRAPHY & VISUAL PHENOMENA LABORATORY

is a one credit-hour course that must be taken concurrently with **PHYSICS 106: LIGHT, PERCEPTION, PHOTOGRAPHY & VISUAL PHENOMENA** to receive CORE credit, and may not be taken for credit by physics majors. The lab meets for two hours weekly, giving students hands-on in-depth experience with some of the topics covered in the Physics 106 lecture class.

This is a participatory activity; it is mandatory that you attend all labs. It is also important that you prepare for your lab period by reading over the lab instruction sheet and doing the pre-lab questions. Pre-lab questions serve both as a review of important ideas and preparation for lab activities. If you do not do the pre-lab questions before you come to lab, points will be subtracted from your grade. If you do not understand the questions or have difficulty completing the assignment, you may ask questions. Lab reports are completed in lab, submitted to the TA at the end of the lab period for grading, and will be returned to students during the next lab session, so that writing (and grading) long and detailed lab reports is avoided. The questions that you must answer are embedded in the text in the Lab Manual that describes how the lab is to be done. Each of your answers must be self-contained. It should not be necessary for the TA to refer to the Lab Manual in order to determine the question you are answering. A simple yes or no answer by itself is never enough to receive full credit. The text is broken up into topics, T1, T2, T3, etc. Be very careful, as you read the Lab Manual, that you find all the questions, and that you answer them completely. Please include the experiment number, date, your own name and the name of your lab partner on your lab report. Write a brief summary of your work and the conclusions as the final section of your lab report.

If you miss a lab, the reasons for the absence must be submitted to the instructor in writing. If your absence is due to any of the University approved acceptable excuses, as given in the UMD Undergraduate Catalog, you will be permitted to make-up the missed lab. You are encouraged to make-up the missed lab by attending any other lab session during the same week (see the Laboratory Schedule above). You may also make up the missed lab/s by attending one or more lab sessions during one of the the two Make-Up weeks during the semester.

Grading will be based on total point accumulation for the 11 labs, each having a normalized total of 100 points. A histogram of total scores will be made, and letter grades assigned approximately as follows:

Top 20% -- A; Next 40% -- B; Next 30% -- C and Bottom 10% -- D or F

To qualify for an A, you must distinguish yourself among your peers. It is mandatory to do all labs. Missing one lab will lower your grade by at one letter grade; missing two labs will result in D grade and missing more than two labs will result in F grade.

Preparation for Lab #1: (a) Obtain your lab manual; (b) Read the Introduction and Lab Experiment #1, and come prepared to ask questions if you do not understand the material; and (c) Answer the pre-lab questions on the first page of the lab report (Data Sheet) for Lab #1 before coming to the lab.

Honors Code : The Student Honor Council respectfully requests that faculty members place the following passage in their course syllabi in order to inform students of the consequences of academic dishonesty: "The University of Maryland has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit <http://www.studenthonorcouncil.umd.edu/whatis.html>

PHYS 107 - Fall 2009 : Experiment Schedule

Sep 01 – Sep 03	Experiment # 1	Camera Obscura
Sep 08 – Sep 10	Experiment # 2	Pinhole Camera
Sep 15 – Sep 17	Experiment # 3	Light Reflection, Mirrors & Images
Sep 22 – Sep 24	Experiment # 4	Light Refraction
Sep 29 – Oct 01	Experiment # 5	Images Shaped Surfaces, Simple Lenses
Oct 06 – Oct 08	Experiment # 6	More Simple Lenses
Oct 13 – Oct 15	Experiment # 7	The Camera
Oct 20 – Oct 22	Make-Up Week # 1	
Oct 27 – Oct 29	Experiment # 8	Polarized Light and Birefringence
Nov 03 – Nov 05	Experiment # 9	Light Interference
Nov 10 – Nov 12	Experiment # 10	Light Diffraction
Nov 17 – Nov 19	Experiment # 11	Gratings, Color & Holography
Nov 24 – Nov 26	Thanksgiving Week	
Dec 01 – Dec 03	Make-Up Week # 2	
