

Laboratory for Introductory Physics for Life Sciences (II) PHY 124 Fall 2016

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About

This is the organizational page for the Physics Introductory Labs PHY 124 for Fall 2016.

Instructors

K. Dehmelt

Director of UG Laboratory

B. Nielsen

Teaching Assistants

Niveditha Ramasubramanian	niveditha.ramasubramanian@stonybrook.edu
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Scope

The scope of the introductory labs is to give an understanding of basic experimental methods applied in physical sciences. The experiments performed during the lab sessions are closely related to the topics covered in the lecture.

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Overview

You will perform each week an experiment as indicated in the [Calendar](#) section. You have 1 hr 50 min time to perform each experiment. Each experiment will come with a manual that you can access from this webpage. Your performance in the lab session will be evaluated by your teaching assistant. The evaluation is based on an quiz that will be conducted at the beginning of the session and your performance during the experiment that includes a final written report that will be submitted in the week following the lab experiment. Please refer also to [Lab Reports](#).

Your lab report should give the reader a chance to get a picture of the experiment and what you have done without having the lab manual in their hand. You should not copy excerpts from the manual or only refer to passages in the lab manual. The lab report has to have the following format:

- **Title sheet**

Name, lab-section, TA name, partner name(s), name of experiment, date

- **Introduction** [10 pts]

In your own words: briefly describe the experiment, DO NOT copy the lab manual

Describe how to perform the experiment with a short sketch and text

- **Procedure [20 pts]**

Describe briefly what you have done during the session

- **Data sheet [20 pts]**

Include data taken which has been analyzed, clear and neat

Have your TA signed your data sheet before you leave the lab

- **Analysis/Discussion [40 pts]**

Graphs, calculations, uncertainty estimates

- **Conclusion [10 pts]**

Brief summary of results: physics implied by the data

Any caveats or comments

Σ [100 pts]

IMPORTANT: You have to submit your first lab report 48 hours after your lab experiment finished. Please refer to your Teaching Assistant for details. For and after your second experiment you have to submit your lab report the latest at the beginning of the next lab session following the experiment performed.

Penalties for late submission

Any lab report submitted after that deadline will not be considered and receive zero points for the lab experiment.

The quiz will determine how well you are prepared for that particular experiment which is very important for the successful accomplishment of the experiment. The quiz will count 10% toward your grade on the particular lab experiment.

Your performance/report will count 90% toward your grade on the particular lab experiment.

Your final grade will be an average from your single lab grades scaled by a factor that will be determined at the end of the semester. This final grade will be part of your mothercourse's grade weighted with 20%. This grade will be included in the grade of the mother-course and you receive a combined grade for PHY122 and PHY124 which will be the same for both courses.

You are required to perform each lab experiment by yourself, mostly together with a lab partner.

If you need to be absent for a lab experiment you will have to provide written documentation for a significant reason to be absent, e.g., a medical note from your doctor, a written document about jury duty, and similar.

You will then have the opportunity to make up the lab experiment in the dedicated make-up week. You have to arrange with your teaching assistant for a make-up session.

If you are absent for a non-excusable reason your lab grade for that particular experiment will be Zero (0) points!

Calendar

The first lab sessions will take place in the week starting from **Monday, August 29**.

For grading policy and methods please refer to:

TBA

The sequence of Labs in PHY 124 is the following:

Lab 0: August 29 - September 01 [Introduction to the laboratory and Uncertainty, Error & Graphs](#). (Note: the link goes to the PHY123 webpage, but the content is the same)

September 05 - 08: Labor Day Week. No lab classes.

Lab 1: September 12 - 15 [The Electric Field](#)

Lab 2: September 19 - 22 [The Oscilloscope](#)

Lab 3: September 26 - 29

October 03 - 06: Make-up Lab Week for Labs 1 - 3. No lab classes.

Lab 4: October 10 - 13

Lab 5: October 17 - 20

Lab 6: October 24 - 27

Lab 7: October 31 - November 03

November 07 - 10: Make-up Lab Week for Labs 4 - 7. No lab classes.

Lab 8: November 14 - 17

November 21 - 24: Thanksgiving Week. No lab classes.

Lab 9: November 28 - December 01

Lab 10: December 05 - 08

December 09: Make-up Lab Day for Labs 8 - 10.

LABORATORY SCHEDULE & TEACHING ASSISTANTS:

Section	When	Where	Teaching Assistant
PHY 124-L01	Mo 1:00PM - 2:50PM	A-120	Kentaro Mihara
PHY 124-L02	Mo 4:00PM - 5:50PM	A-120	John Logan
PHY 124-L05	Tu 1:00PM - 2:50PM	A-120	Niveditha Ramasubramanian
PHY 124-L06	Tu 6:30PM - 8:20PM	A-120	Kentaro Mihara
PHY 124-L07	Th 1:00PM - 2:50PM	A-120	Niveditha Ramasubramanian
PHY 124-L08	We 4:00PM - 5:50PM	A-120	John Logan

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Reporting Problems

Please report any problem to either, your corresponding lab instructor or Professor Dehmelt.

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