

Laboratory for Classical Physics (II) PHY 134 Spring 2018

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About

This is the organizational page for the Physics Introductory Labs PHY 134 for Spring 2018.

Instructors

R. Lefferts

Director of UG Laboratory

B. Nielsen

Teaching Assistants

To Be Announced E-mail of TBA

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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 2 hr 20 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 the introduction of your lab report that you have to write up and submit to your TA 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 performance/report will count 100%, of which the introduction is worth up to 10%, 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 a letter grade ranging from A to F.

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:

1. Title sheet

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

2. 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

3. Procedure [20 pts]

Describe briefly what you have done during the session

4. 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

5. Analysis/Discussion [40 pts]

Graphs, calculations, uncertainty estimates

6. 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.

Please refer also to [Lab Reports](#).

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 TA that make-up session.

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

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Calendar

Here is the schedule of labs for the semester (tentative as of January 12, 2018).

The first lab sessions will take place in the week starting from **Monday, January 22, 2018**.

Lab 0: January 22 - January 26 [Introduction to the laboratory and Uncertainty, Error & Graphs](#)

Lab 1: January 29 - February 02 [Electric Field Plotting](#)

Lab 2: February 05 - February 09 [The Oscilloscope](#)

Lab 3: February 12 - February 16 [Capacitors](#)

[February 19 - February 23: Make-up Lab Week for Labs 1 - 3. No lab classes.](#)

Lab 4: February 26 - March 02 [Ohm's Law](#)

Lab 5: March 05 - March 09 [Magnetic Force I \[Tentative\]](#)

March 12 - 16: SPRING BREAK: No lab classes.

Lab 6: March 19 - March 23 [e/m of the Electron \[Tentative\]](#)

March 26 - March 30: Make-up Lab Week for Labs 4 - 6. No lab classes.

Lab 7: April 02 - April 06 [LRC Circuits \[Tentative\]](#)

Lab 8: April 09 - April 13 [Resonance \[Tentative\]](#)

Lab 9: April 16 - April 20 Optics

Lab 10: April 23 - April 27 [Interference \[Tentative\]](#)

April 30 - May 04: Make-up Lab WEEK for Labs 7 - 10.

LABORATORY SCHEDULE & TEACHING ASSISTANTS:

To Be Updated January 2018

Section	When	Where	Teaching Assistant
PHY134 L01	Mo 12:00pm - 2:20pm	A-116	TBA
PHY134 L02	Mo 12:00pm - 2:20pm	A-130	TBA
PHY134 L03	Mo 2:30pm - 4:50pm	A-116	TBA
PHY134 L04	Mo 2:30pm - 4:50pm	A-130	TBA
PHY134 L05	Mo 5:00pm - 7:20pm	A-116	TBA
PHY134 L06	Mo 5:00pm - 7:20pm	A-130	TBA
PHY134 L07	Tu 12:00pm - 2:20pm	A-116	TBA
PHY134 L08	Tu 12:00pm - 2:20pm	A-130	TBA
PHY134 L09	Tu 8:00am - 10:20am	A-119	TBA
PHY134 L10	Th 8:00am - 10:20am	A-119	TBA
PHY134 L11	We 2:30pm - 4:50pm	A-116	TBA
PHY134 L12	We 2:30pm - 4:50pm	A-130	TBA
PHY134 L13	We 5:00pm - 7:20pm	A-116	TBA
PHY134 L14	We 5:00pm - 7:20pm	A-130	TBA
PHY134 L15	Th 12:00pm - 2:20pm	A-116	TBA
PHY134 L16	Th 12:00pm - 2:20pm	A-130	TBA
PHY134 L17	Th 2:30pm - 4:50pm	A-116	TBA
PHY134 L18	Th 2:30pm - 4:50pm	A-130	TBA
PHY134 L19	Th 5:00pm - 7:20pm	A-116	TBA
PHY134 L20	Th 5:00pm - 7:20pm	A-130	TBA
PHY134 L21	Tu 8:00am - 10:20am	A-116	TBA
PHY134 L22	Tu 8:00am - 10:20am	A-130	TBA
PHY134 L23	Th 8:00am - 10:20am	A-116	TBA
PHY134 L24	Th 8:00am - 10:20am	A-130	TBA
PHY134 L25	Mo 12:00pm - 2:20pm	A-119	TBA
PHY134 L26	Mo 2:30pm - 4:50pm	A-119	TBA
PHY134 L27	Mo 5:00pm - 7:20pm	A-119	TBA
PHY134 L28	Tu 12:00pm - 2:20pm	A-119	TBA
PHY134 L29	We 2:30pm - 4:50pm	A-119	TBA
PHY134 L30	We 5:00pm - 7:20pm	A-119	TBA

PHY134 L31	Th 12:00pm - 2:20pm	A-119	TBA
PHY134 L32	Th 2:30pm - 4:50pm	A-119	TBA

Reporting Problems

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Please report any problem to either your corresponding lab instructor or Mr. Lefferts.

Lab Manual Archives

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[PHY 133 and 134 Plotting Tool](#)

These are only pdf files (no forms or plotting functions)

[Uncertainty, Error and Graphs](#)

[The Oscilloscope](#)

[Electric Field Plotting](#)

[Capacitors](#)

[Ohm's Law](#)

[Magnetic Force 1](#)

[e/m of the electron](#)

[Magnetic Force 2](#)

[LRC Circuits](#)

[Resonance](#)

[Interference and Diffraction](#)

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