

Laboratory for Classical Physics (I) PHY 133 Spring 2017

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This is the organizational page for the Physics Introductory Labs PHY 133 for Spring 2017.

Instructors

R. Lefferts

Director of UG Laboratory

B. Nielsen

Teaching Assistants

| | |
|------------------------|--------------------------------------------------------------------------------------------|
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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 [TENTATIVE until January 23] schedule of labs for the semester.

The first lab sessions will take place in the week starting from **Monday, January 23**.

Lab 0: January 23 - January 27 [Introduction to the laboratory and Uncertainty, Error & Graphs](#)

Lab 1: January 30 - February 03 [The Pendulum](#)

Lab 2: February 06 - February 10 [Acceleration](#)

Lab 3: February 13 - February 17 [Projectile Motion](#)

February 20 - 24: Make-up Lab Week for Labs 1 - 3. No lab classes.

Lab 4: February 27 - March 03 [The Atwood Machine](#)

Lab 5: March 06 - March 10 [Conservation of Energy](#)

March 13 - 17: SPRING BREAK. No lab classes.

Lab 6: March 20 - March 24 [Conservation of Momentum](#)

Lab 7: March 27 - March 31 [Angular Momentum](#)

April 03 - 07: Make-up Lab Week for Labs 4 - 7. No lab classes.

Lab 8: April 10 - April 14 [Simple Harmonic Motion](#)

Lab 9: April 17 - April 21 [Standing Waves](#)

Lab 10: April 24 - April 28 [Ideal Gas Law and Absolute Zero](#)

May 01 - 05: Make-up Lab Week for Labs 8 - 10.

LABORATORY SCHEDULE & TEACHING ASSISTANTS:

Updated January 22, 2017

| Section | When | Where | Teaching Assistant |
|------------|---------------------|-------|--------------------|
| PHY133 L01 | Mo 12:00pm - 2:20pm | A-117 | Weicheng Ye |

| | | | |
|------------|---------------------|-------|------------------------|
| PHY133 L02 | Mo 12:00pm - 2:20pm | A-126 | Charuhas Shiveshwarkar |
| PHY133 L03 | Mo 2:30pm-4:50pm | A-117 | Chinmay Mishra |
| PHY133 L04 | Mo 2:30pm-4:50pm | A-126 | Charuhas Shiveshwarkar |
| PHY133 L05 | Mo 5:00pm - 7:20pm | A-117 | Guodong Cui |
| PHY133 L07 | Tu 12:00pm-2:20pm | A-117 | Jonathan Pachter |
| PHY133 L08 | Tu 12:00pm-2:20pm | A-126 | Weicheng Ye |
| PHY133 L09 | Tu 2:30pm - 4:50pm | A-117 | Yuqi Li |
| PHY133 L10 | Tu 2:30pm - 4:50pm | A-126 | Jonathan Pachter |
| PHY133 L11 | We 2:30pm - 4:50pm | A-117 | Yuqi Li |
| PHY133 L12 | We 2:30pm - 4:50pm | A-126 | Guodong Cui |
| PHY133 L13 | We 5:00pm - 7:20pm | A-117 | Chinmay Mishra |

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Reporting Problems

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

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