

PHYS 2102 Laboratory Syllabus

Spring 2023

This course is an asynchronous online course (there are no in-class activities and no lab meeting time).

Please be advised that PHYS 2102L lab sections are 1-credit-hour online **laboratory** courses. The co-requisite for this course is PHYS 2102 **lecture** course.

Instructor: Dr. Umesh Silwal

Office Location: Burson 136

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Email: usilwal@uncc.edu

Virtual Office Hour: Wednesday 2:00 to 3:00 pm ET via Zoom (link available in Canvas)

Please put your **course and section number in the subject line** of your emails while emailing me.

Note: I am teaching multiple courses and sections and hence I will only be able to address your email properly if I know which course and lab section you belong to.

COURSE MATERIALS REQUIRED:

- Calculator (Scientific)
- A Desktop/Laptop/Tablet which has the ability to install/run Java and Flash players.
- For Lab 10 (Thin Lenses): You **will need a magnifying glass** (cost is less than \$10), a ruler, your cellphone (or night light, or any object that is bright enough to be used as a light source), and paper.

COURSE INFORMATION:

Physics 2102L laboratory is a course in experimental physics, which must be taken concurrently with the lecture course, PHYS 2102. The laboratories are chosen to coincide with topical coverage in the lecture as much as possible.

The labs are all posted on the lab course webpage in Canvas. Thus, no lab manual is required. **Also, there is no final exam.**

COURSE OBJECTIVES:

By the end of the semester, student should able to

- conduct organized scientific investigations,
- report their observations and results clearly and completely,
- draw conclusions from the results based on their understanding of the relevant physics, and

- explore introductory physics concepts via computer simulation experiments and exercises.

LABORATORY ACTIVITIES

- 10 online simulation exercises

You are supposed to do your lab on your own. Copying laboratory report from another student violates academic integrity. Your lab report should reflect your data and analysis and should not be the same as another student's data and analysis. There will be a severe penalty for both students if we detect two similar/identical reports. Refer to the "Academic Integrity" section of the syllabus for detail.

COURSE GRADING:

Each lab will be worth 10 points of the overall grade.

Individual Lab grade breakup will be as follows:

| | |
|---------------------|----------------------------|
| Pre-Lab Quiz ----- | 10 points |
| Lab Report ----- | 80 points |
| Post-Lab Quiz ----- | 10 points |
| Total----- | 100 points per lab. |

(Grade assignment: $\geq 90\%$: A, 80-89.9: B, 70-79.9: C, 60-69.9: D, $< 60\%$: F)

The instructor reserves the right to change the syllabus or the modality of the lab anytime.

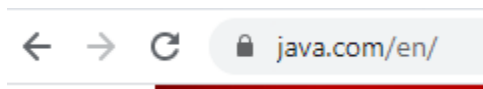
Simulation Activities & Exercises

For each week's lab, you will have 5 things to do in the following order:

- (i) Read the General Instructions. There will be videos that you need to watch and take notes. Also, download the "Online Material" (lab), read the theory section and take notes.
- (ii) Complete the pre-lab quiz. The questions in this pre-lab will be from videos and the theory section of the lab manual you read in (i).
- (iii) Download and complete the lab.
- (iv) Upload your completed lab in PDF format to Canvas. **Do not email us!**
- (v) Complete the post-lab quiz. Post-lab quiz will have questions from the videos you watched, the theory section of the lab you read, and the lab portion you did in part (iii).

Your device requires Java in order to run these simulations.

Java: To install Java go to this link: <https://www.java.com/en/>



Refer to “Running/Troubleshooting Simulation” page of the Canvas if your simulation is not working properly.

PHYS 2102L-Lab Schedule (Online Lab Section)

| Due dates | Labs |
|----------------------|-------------|
| Jan 30 th | Lab 1 |
| Feb 06 th | Lab 2 |
| Feb 13 th | Lab 3 |
| Feb 20 th | Lab 4 |
| Feb 27 th | Lab 5 |
| Mar 13 th | Lab 6 |
| Mar 20 th | Lab 7 |
| Mar 27 th | Lab 8 |
| Apr 03 rd | Lab 9 |
| Apr 10 th | Lab 10 |

Labs are strictly due by 11:59 PM of the specified date. **All late submissions will automatically get a grade of zero.** If you were unable to submit the lab on time due to reasons approved by the university, please email me and cc it to your TA **with proof** of your absence.

Academic Integrity:

Students have the responsibility to know and observe the requirements of *The UNCC Code of Student Academic Integrity* (See the *UNCC Catalog*). This code forbids cheating, fabrication or falsification of information, multiple submissions of academic work, plagiarism, abuse of academic materials, and complicity in academic dishonesty.

Any special requirements or permission regarding academic integrity will be stated by the instructor and are binding on the students. Academic evaluations in this course include a judgment that the student’s work is free from academic dishonesty of any type; and grades in this course therefore should be and will be adversely affected by academic dishonesty. Students who violate the code can be expelled from UNCC. **The normal penalty for a first offense is zero credit on the work involving dishonesty and further substantial reduction of the course grade.** In almost all cases the course grade is reduced to F. Copies of the code can be obtained from the Dean of Students Office. Standards of academic integrity will be enforced in this course. Students are expected to report cases of academic dishonesty to the course instructor.

TITLE IX Reporting Obligations

UNC Charlotte is committed to providing an environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic violence, dating violence, and stalking. If you (or someone you know) have experienced or experiences any of these incidents, know that you are not alone. UNC Charlotte has staff members trained to support you in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, helping with civil protective orders, and

more.

Please be aware that all UNC Charlotte employees, including faculty members, are expected to relay any information or reports of sexual misconduct they receive to the Title IX Coordinator. This means that if you tell me about a situation involving sexual harassment, sexual assault, dating violence, domestic violence, or stalking, I am expected to [report the information to the Title IX Coordinator](#). Although I am expected to report the situation, you will still have options about how your case will be handled, including whether or not you wish to pursue a formal complaint. Our goal is to make sure you are aware of the range of options available to you and have access to the resources you need. If you wish to speak to someone confidentially, you can contact the following on-campus resources, who are not required to report the incident to the Title IX Coordinator: (1) University Counseling Center (counselingcenter.uncc.edu, 7-0311); or (2) Student Health Center (studenthealth.uncc.edu, 7-7400). Additional information about your options is also available at titleix.uncc.edu under the “Students” tab.