



Department of Physics and Astronomy Syllabus for PHY 122 Classical Physics Laboratory II,
asynchronous (“online”) version Section L69 Spring 2025

Course Description: PHY 122: Classical Physics Laboratory II
An asynchronous, “at-home” laboratory portion of PHY 122, the course described below.

Second part of an introduction to physics with applications to biology, primarily for students majoring in biological sciences or pre-clinical programs. Topics include electromagnetism, optics, acoustics, and radiation phenomena. Strong algebra skills and knowledge of the ideas of calculus are required. Three lecture hours and two laboratory hours per week. (This text is from the Undergraduate Bulletin but does not apply to L69 section)
PHY 122 may not be taken for credit in addition to PHY 127, 132, or 142. This course has been designated as a High Demand/Controlled Access (HD/CA) course. Students registering for HD/CA courses for the first time will have priority to do so. This course has an associated fee. Please see <http://www.stonybrook.edu/coursefees> for more information.

Pre or corequisite: Prerequisite: C or higher in PHY 121
Corequisite: CHE 132 or CHE 152
Lab is 25% of 4 credit course

Student Learning Objectives: Students will learn to perform experiments, analyze data, evaluate experimental uncertainties and engage in scientific communication in the disciplines of electromagnetism, optics and modern physics

Credits: Lab portion of PHY 122, roughly 25% of 4 credits

Stony Brook Curriculum Learning Objectives:
Associated with PHY 122 which has the objective
Studying the Natural World (SNW)

Course Meeting Time: Asynchronous

Course Instructor: Richard S. Lefferts
Contact: richard.lefferts@stonybrook.edu
Office: A-112 of Physics Building
Office Hours: TBD, in Physics Help Room, Online Meeting or by Appointment

Graders: Teaching assistants, most often graduate students in Physics and Astronomy



Required Textbooks and Materials:

ioLab interface and measurement tool

<https://store.macmillanlearning.com/us/product/iOLab-Version-2.0/p/1464101469>

Study Extras kit of parts

<https://store.macmillanlearning.com/us/product/iOLab-Experiments-for-Scientists-and-Engineers/p/1533919771>

Lab Manuals and data analysis software

Included with ioLab purchase for SBU students

Recommended Readings:

Students will be doing experiments related to topics in PHY 122. Textbooks and lecture notes from that course will provide important background material.

Course Structure:

Students will purchase the ioLab device as part of a lab kit and use these items to perform all their experiments. Following each experiment they will submit a lab report through Brightspace and take a quiz testing their understanding of the material for the lab.

Assignments and Assessment:

Students will perform 10 experiments and create a report for each lab. These reports will be scored by the graduate teaching assistants. At the end of the semester, these scores will be combined with post-lab quizzes to create a grade for each student. The course instructor will take into account variation among TA graders to treat different lab sections with a common grade scale.

- 10 Post-Lab quizzes 16.7% (total)
- 10 Lab Reports 83.3% (total)

Details on the lab report format are available in Brightspace

Grade Determination: Scores will be scaled to have (approximately) a common mean and spread by factors determined for each teaching assistant/grader. Then a Grading Scale with Grade Thresholds will be applied. This is reviewed and adjusted every semester. Scores will be used by the course instructor for PHY 122 as part of that course grade, counted as 25%.

Communication:

Brightspace <https://mycourses.stonybrook.edu/d2l/login>

Announcements from the course instructor

Support materials for experiments

Post-lab quizzes

Submission of lab reports

Receipt of graded reports and record of scores

SBU Google Apps E-Mail

This course will only use University e-mail for official business
We use a hierarchical system which **must** be followed.

- I) For nearly all questions re: PHY 122L69, students first e-mail the TA assigned to them;
- II) IFF (if and only if) the issue is not resolved, students contact the Head TA for the course;
- III) IFF the issue is still not resolved, students should e-mail the course instructor at PHY121_lab@stonybrook.edu

Technical Requirements:

This course uses Brightspace for the facilitation of communications between faculty and students, submission of assignments, and posting of grades. The Brightspace course site can be accessed at <https://mycourses.stonybrook.edu/d2l/login> .

If you are unsure of your NetID , visit <https://it.stonybrook.edu/help/kb/finding-your-netid-and-password> more information.

You are responsible for having a reliable computer and Internet connection throughout the term.

MacMillan Learning, vendors of the ioLab, parts kit and associated software are EXCLUSIVELY RESPONSIBLE for delivery and operation of the materials needed to complete this course. ALL INQUIRIES regarding technical and logistical issues MUST be directed to the vendor.

As of Spring 2025, ioLab will work on Windows 7 or higher and Mac OSX 10.9 or higher. Using web-based implementations (which may allow Chrome or Linux use) are not supported by MacMillan Learning and at the user's risk.

Attendance and Late Work Policy:

Lab reports are due approximately 1 per week through the semester.
Late reports will suffer penalties and late quizzes will not be scored.
Extensions to due dates are for excused absences only.

Course and University Policies

Student Accessibility Support Center Statement

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Student Accessibility Support Center, ECC (Educational Communications Center) Building, Room 128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential. Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Student Accessibility Support Center. For procedures and information go to the following website:
<http://www.stonybrook.edu/ehs/fire/disabilities>.

Academic Integrity Statement:

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website
https://www.stonybrook.edu/commcms/academic_integrity/

Important Note: Any form of academic dishonesty, including cheating and plagiarism, will be reported to the Academic Judiciary.

Critical Incident Management:

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Student Conduct and Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn.

Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.



Understand When You May Drop This Course :

It is the student's responsibility to understand when they need to consider disenrolling from a course. Refer to the Stony Brook Academic Schedule for dates and deadlines for registration:

https://www.stonybrook.edu/commcms/registrar/calendars/academic_calendars

Incomplete Policy:

Under emergency/special circumstances, students may petition for an incomplete grade. Circumstances must be documented and significant enough to merit an Incomplete. If you need to request an incomplete for this course, contact the instructor for approval as far in advance as possible.

Course Materials and Copyright Statement:

Course material accessed from Brightspace, SB Connect, SB Capture or a Stony Brook Course website is for the exclusive use of students who are currently enrolled in the course. Content from these systems cannot be reused or distributed without written permission of the instructor and/or the copyright holder. Duplication of materials protected by copyright, without permission of the copyright holder is a violation of the Federal copyright law, as well as a violation of Stony Brook's policy on Academic Integrity.

Communications Guidelines:

The course instructor and lab section instructors will conduct themselves according to the standards in the Stony Brook University Faculty Handbook
<https://www.stonybrook.edu/commcms/provost/faculty/handbook/>

Students will conduct themselves according to the standards in the Stony Brook University Code of Student Responsibility
<https://www.stonybrook.edu/commcms/studentaffairs/ucs/conduct.php>

SUMMARY

Welcome to PHY 122!