

PEP 221A Physics Lab I for Scientists

Meeting Times: See Canvas

Classroom Location: B517 or zoom (hybrid)

Instructors: S. Strauf, Course Administrator, G. Song Lab Supervisor

Contact Info: sstrauf@stevens.edu, 201-216-5639

Office Hours:

Course Web Address:

Prerequisite(s): PEP111

Corequisite(s): PEP112

COURSE DESCRIPTION

An introduction to experimental measurements and data analysis. Students will learn how to use a variety of measurement techniques, including computer-interfaced experimentation, virtual instrumentation, and computational analysis and presentation. First semester experiments include basic mechanical and electrical measurements, motion and friction, RC circuits, the physical pendulum, and electric field mapping. Second semester experiments include the second order electrical system, geometrical and physical optics and traveling and standing waves.

LEARNING OBJECTIVES

After successful completion of this course, students will be able to...

To understand and apply basic data analysis techniques, set up and run experiments related to mechanics and electricity and magnetism, write lab reports and work in a team setting.

FORMAT AND STRUCTURE

Each lab is two weeks long and broken into two parts. During the each week a portion of the experiment will be performed and the lab report written. At the end of the two week period the lab report will be completed and handed into the TA for grading.

COURSE MATERIALS

Textbook(s): Text book for Mechanics and Electricity and Magnetism, Physics for Scientists and Engineers, Serway and Jewett

Other Readings: NA

Materials: Handouts for each experiment will handed out in class.

COURSE REQUIREMENTS

Attendance: If a student is going to miss lab, a note from the office of undergraduate academics is necessary for an excused absence. The lab portion that is missed still needs to be made up. Make up labs are on Wednesdays at 2:00 P.M. The lab must be made up the Wednesday following the missed lab. The course administrator and lab supervisor must be notified of this, so the proper equipment can set up for the missed lab.

Participation: everyone must contribute do the lab work.

Homework : NA

Quizzes : NA

Project(s): NA

Exams: NA

GRADING PROCEDURES

Grades will be based on:

Class Participation 10 (%)

Lab Reports 90 (%)

ACADEMIC INTEGRITY

Undergraduate Honor System

Enrollment into the undergraduate class of Stevens Institute of Technology signifies a student's commitment to the Honor System. Accordingly, the provisions of the Stevens Honor System apply to all undergraduate students in coursework and Honor Board proceedings. It is the responsibility of each student to become acquainted with and to uphold the ideals set forth in the [Honor System Constitution \(Links to an external site.\)](#)[Links to an external site.](#). More information about the Honor System including the constitution, bylaws, investigative procedures, and the penalty matrix can be found online at <http://web.stevens.edu/honor/> ([Links to an external site.](#))[Links to an external site.](#)

The following pledge shall be written in full and signed by every student on all submitted work (including, but not limited to, homework, projects, lab reports, code, quizzes and exams) that is assigned by the course instructor. No work shall be graded unless the pledge is written in full and signed.

“I pledge my honor that I have abided by the Stevens Honor System.”

Reporting Honor System Violations

Students who believe a violation of the Honor System has been committed should report it within ten business days of the suspected violation. Students have the option to remain anonymous and can report violations online at www.stevens.edu/honor (Links to an external site.)Links to an external site..

Graduate Student Code of Academic Integrity

All Stevens graduate students promise to be fully truthful and avoid dishonesty, fraud, misrepresentation, and deceit of any type in relation to their academic work. A student's submission of work for academic credit indicates that the work is the student's own. All outside assistance must be acknowledged. Any student who violates this code or who knowingly assists another student in violating this code shall be subject to discipline.

All graduate students are bound by the Graduate Student Code of Academic Integrity by enrollment in graduate coursework at Stevens. It is the responsibility of each graduate student to understand and adhere to the Graduate Student Code of Academic Integrity. More information including types of violations, the process for handling perceived violations, and types of sanctions can be found at www.stevens.edu/provost/graduate-academics (Links to an external site.)Links to an external site..

Special Provisions for Undergraduate Students in 500-level Courses

The general provisions of the Stevens Honor System do not apply fully to graduate courses, 500 level or otherwise. Any student who wishes to report an undergraduate for a violation in a 500-level course shall submit the report to the Honor Board following the protocol for undergraduate courses, and an investigation will be conducted following the same process for an appeal on false accusation described in Section 8.04 of the Bylaws of the Honor System. Any student who wishes to report a graduate student may submit the report to the Dean of Graduate Academics or to the Honor Board, who will refer the report to the Dean. The Honor Board Chairman will give the Dean of Graduate Academics weekly updates on the progress of any casework relating to 500-level courses. For more information about the scope, penalties, and procedures pertaining to undergraduate students in 500-level courses, see Section 9 of the [Bylaws of the Honor System \(Links to an external site.\)](#)Links to an external site. document, located on the Honor Board website.

LEARNING ACCOMODATIONS

Stevens Institute of Technology is dedicated to providing appropriate accommodations to students with documented disabilities. The Office of Disability Services (ODS) works with undergraduate and graduate students with learning disabilities, attention deficit-hyperactivity disorders, physical disabilities, sensory impairments, psychiatric disorders, and other such disabilities in order to help students achieve their academic and personal potential. They facilitate equal access to the educational programs and opportunities offered at Stevens and coordinate reasonable accommodations for eligible students. These services are designed to encourage independence and self-advocacy with support from the ODS staff. The ODS staff will facilitate the provision of accommodations on a case-by-case basis.

Disability Services Confidentiality Policy

Student Disability Files are kept separate from academic files and are stored in a secure location within the Office of Disability Services. The Family Educational Rights Privacy Act (FERPA, 20 U.S.C. 1232g; 34CFR, Part 99) regulates disclosure of disability documentation and records maintained by Stevens Disability Services. According to this act, prior written consent by the student is required before our Disability Services office may release disability documentation or records to anyone. An exception is made in unusual circumstances, such as the case of health and safety emergencies.

For more information about Disability Services and the process to receive accommodations, visit <https://www.stevens.edu/office-disability-services>. If you have any questions please contact: Phillip Gehman, the Director of Disability Services Coordinator at Stevens Institute of Technology at pgehman@stevens.edu or by phone (201) 216-3748.

INCLUSIVITY

Name and Pronoun Usage

As this course includes group work and in-class discussion, it is vitally important for us to create an educational environment of inclusion and mutual respect. This includes the ability for all students to have their chosen gender pronoun(s) and chosen name affirmed. If the class roster does not align with your name and/or pronouns, please inform the instructor of the necessary changes.

Inclusion Statement

Stevens Institute of Technology believes that diversity and inclusiveness are essential to excellence in academic discourse and innovation. In this class, the perspective of people of all races, ethnicities, gender expressions and gender identities, religions, sexual orientations, disabilities, socioeconomic backgrounds, and nationalities will be respected and viewed as a resource and benefit throughout the semester. Suggestions to further diversify class materials and assignments are encouraged. If any course meetings conflict with your religious events, please do not hesitate to reach out to your instructor to make alternative arrangements.

You are expected to treat your instructor and all other participants in the course with courtesy and respect. Disrespectful conduct and harassing statements will not be tolerated and may result in disciplinary actions.