

# PHY221 General Physics Laboratory I (Fall 2010)

**Introduction:** This course provides hands on intuition about general physics covered in the PHY211 lecture course and to develop some practical laboratory skills. Sometimes the experiments are ahead of the lecture, or go beyond the scope of the lecture. Please consult with your PHY211 textbook if necessary.

Lab worksheets will be provided when you come to the class. You will work in a team of two or three people. Each person will submit a lab report at the end of the lab meeting, but keep in mind that only one report will be graded along with a single set of printouts or figures. The individual reports make it possible for everyone to keep a copy of the report. Even though the whole team should contribute to the team discussions and the consensus reports, they will have different primary responsibilities during the lab's exercises. One person on the team ("Scribe") will be responsible for writing down results into the lab report. Another person ("Leader") will be responsible for proposing actions and what should be put into the reports. Finally, if there is a third person the ("Critic") will be responsible for suggesting alternative actions. Different tasks, for example, operating the computer must be rotated among the team members so that each member can perform all tasks alone as will be **required on the midterm and final**.

If the same team assembles each week, students are required to alternate on their roles in the team. The reports must be completed and submitted during the class. Occasionally the team may find it difficult to complete all the measurements and answer all the questions. It is more important to present all the completed measurements clearly rather than to complete all the measurements. **When making graphs it is important to label axes and indicate units.**

Each report will be graded separately out of 10 points (total 110 for 11 labs). **No lab grades will be dropped.** A student's performance during the lab (10 points) and the results from two quizzes (5 points each) and two tests in which one works by oneself and not as a team (15 points each) will be included in the final grade (out of 160 total points). Letter grades are based on scaling of the points. In a laboratory course it is crucial to attend the lab sessions, **missing more than two labs** typically results in an F.

*Students must sign in at each lab.* While it is highly recommended that you always attend your assigned section, labs can for compelling reasons be made up in the same week at another regular section held Monday to Wednesday. It is recommended to consult with the instructor of the other section prior to doing the make-up lab. Be certain to put not just your name but the name and section of your regular instructor. If for religious observant reasons you cannot attend at your regularly scheduled time it is your responsibility to do the lab at a different time during the week.

If you have questions please consult with your lab instructor, see contact information below.

Course Fee: To support the laboratory and related lecture demonstrations in the co-requisite course, PHY211, you have been charged a course fee of \$50. This fee helps pay for (i) laboratory manuals and other handouts, (ii) supplies, small pieces of apparatus, and maintenance for laboratory equipment, (iii) supplies and small pieces of apparatus for lecture demonstrations, and (iv) undergraduate students working in the student and demonstration laboratories.

# PHY221 Lab Schedule (Fall 2010)

Week of:

Experiment:

Number Title

## Laboratories start the first week of school

Aug 30-Sept 1	I	Position, Displacement, and Average and Instantaneous Velocity
Sept 6-8		<b>No Labs</b>
Sept 13-15	II	Acceleration and Uniform motion
Sept 20-22	III	Motion in One and Two Dimensions
Sept 27-29	IV	Forces (QUIZ)
Oct 4-6	V	$F = ma$
Oct 11-13		Individual 30-minute midterm
Oct 18-20	VI	Work and Energy
Oct 25-27	VII	Linear Momentum and Collisions (with prelab)
Nov 1-3	VIII	Torque and rotational dynamics (with prelab)
Nov 8-10	IX	Moment of Inertia, Angular momentum and its conservation
Nov 15-17	X	Conservation of Energy (QUIZ)
Nov 22-24		<b>Thanksgiving Break</b>
Nov 29-Dec 1	XI	Behavior of Gases
Dec 6-8		Individual 30-minute lab final

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Lab sessions are at the following times:

M	8:25-10:25AM	10:35AM-12:35PM	12:45-2:45PM	3:45-5:45PM
M	6:00-8:00PM			
W	8:25-10:25AM	10:35AM-12:35PM	12:45-2:45PM	3:45-5:45PM

Because most labs are full and to facilitate the return of graded lab reports and tests, it is important to go as much as possible to your assigned session. If you do go to an unassigned session it is your responsibility to track down your returned lab. Please keep all returned labs until after grades are finalized at the end of the semester.

## PHY221 General Physics Laboratory I (Fall 2010)

### Lab Supervisor:



**Prof. Kenneth Foster**

Office: Physics Building, Rm. 225  
Phone: 443-9220  
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Office hours: by appointment.

### Undergraduate Physics Office

Secretary: Diane Sanderson

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### Lab Instructors:



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## **Academic Integrity**

The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The work reported in a laboratory must be your own. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort.

For more information and the complete policy, see <http://academicintegrity.syr.edu>

## **Disability Services**

Students who may need academic accommodations due to a disability are encouraged to discuss their needs with the instructor at the beginning of the semester. In order to obtain authorized accommodations, students should be registered with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498 and have an updated accommodation letter for the instructor. Accommodations and related support services such as exam administration are not provided retroactively and must be requested in advance."

For more information about services and policy, see Office of Disability Services.