GENERAL PHYSICS
PHY 101: Fall 2007

INSTRUCTOR: DAVENE EYRES
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OFFICE HOURS: M: 11-11:50, Th: 12-12:50 or by appointment.

WHAT IS THIS COURSE ABOUT?

COURSE DESCRIPTION: This course is the first of three non-calculus-based courses covering the field of physics. It includes kinematics, vectors, forces, dynamics, work, energy, momentum, torque and gravitation. There is a lab included.

COURSE PHILOSOPHY: This course is designed so that through the practice of physics, students will learn to apply reasoning skills to successfully deal with new situations or tasks. The fundamental reasoning and analysis skills learned in this course should be able to be applied toward understanding practical studies in other fields of interest.

COURSE OUTCOMES/LEARNING OBJECTIVES:

Upon successful completion of the course, students will be able to:

- Use units appropriately when working with physical quantities.
- Observe, analyze and report the motion of an object using multiple representations.
- Understand and correctly handle quantities that are vectors.
- Analyze systems in terms of the forces acting on them.
- Analyze systems in terms of work and energy.
- Analyze situations in terms of momentum change.
- Analyze situations involving simple rotational motion.

Lab Outcomes:

- Develop a testable experimental question and/or hypothesis given the relevant information.
- Set up an appropriate experiment given a testable experimental question or hypothesis.
- Analyze the results of an experiment and to draw appropriate conclusions from the results.
- Present the results and conclusions of an experiment following appropriate guidelines

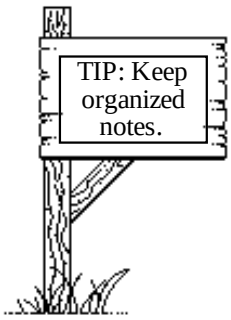
FROM THE BOOKSTORE:

TEXTS

Essentials of College Physics, by Serway and Vuille, Thomson Learning, Inc, 2007.

Tutorials in Introductory Physics, 1st Ed. by McDermott, Shaffer, & P.E.G., U. Wash., Prentice Hall, 2002

OTHER MATERIALS:



- Scientific Calculator (any brand, graphing NOT required)
- Ruler with METRIC scale (any size, 12" recommended)
- Protractor (any size, full or half circle)
- Graph paper (quad. ruled paper with 5x5 divisions, engineer pad)
- Colored pencils
- Bound Lab Notebook with grid paper
- Handouts printed from the course website

AM I READY TO SUCCEED IN THIS COURSE?

PREREQUISITES: MAT 098 or the equivalent. This means that you remember this material. So if it has been many years since you took these courses or if you did not do well, you may not be prepared.

TIME: Academic lab courses of 5 credits generally require a minimum of 12 hours study outside of class each week. Students requiring tutoring or who are weak in prerequisite material should expect to spend additional time.

WHAT WILL WE DO?

Be there in mind and in body!

CLASS MEETINGS: If you are to learn physics, you must be an active participant. Physics is something you **do**, not just something you watch. Attendance/participation points may not be given for students who leave early, are tardy, or miss parts of the class. The student is responsible for all material and announcements covered in class. The instructor will cover material that is not in the textbook. For this reason, students that miss class time may miss important information.

It is also expected that students will be in attendance on quiz and exam days. Arrange your schedules to make this possible.

COURSE WORK: Note: If you cannot be in class to turn in your work, you may fax or email the work to me by 10:00 AM on the due date.

Homework: Course work that is not done according to the directions may not be accepted. Be sure to read the directions. For example, graphs will only be accepted on graph paper. All work is expected be neat, orderly, complete, and grammatically correct. Approximately 25% of each major exam will cover assigned homework problems (both graded and ungraded).

Group Activities: Tutorials and Skill Practice will be done in groups/teams. Individuals in the group are each responsible for their own individual understanding. When a group assignment is accepted as correct, the instructor assumes that it represents the understanding of each member who participated. Participate, ask questions, and don't count on someone else's answer to carry you through. Approximately 25% of each major exam will cover group work and tutorials.

Labs: Please see the Lab Report handouts. Graphs will need to be done by hand unless you receive permission from the instructor to use the computer. You are expected to be in class the day that the lab is done in order to receive lab credit. This course is a designated lab course, therefore students not demonstrating competency in laboratory outcomes will not pass the course. Approximately 25% of each major exam will cover laboratory work (formal labs and informal activities).

Quizzes and Exams: There will be several quizzes, unit exams, and a comprehensive final. Make-up exams are by arrangement with the instructor for emergencies only. Quizzes may not be made up, are given at the beginning of class, and timed. Late students may not get the full amount of time for the quiz.

GRADING:

Grades will be based on the percentage of points earned. Use the following as an approximate weighting for the different types of work:

- Exams: 2 @ 80 points each (None dropped), Final is 120 pts
- Quizzes: 10 points each (low one dropped)
- Homework Problems: 5 points each (16 of 18 required)
- Labs: Attendance & Lab Notebook (5 pts), Group Lab Report, (10 pts), Formal Lab Reports (20 points) **Warning!** Students must earn 60% of lab/activity points, and turn in at least one acceptable (15 point min.) formal lab-report in order to pass the course.
- Activities/Tutorials: Points are given for completion of group assignments. Students not in attendance will not have an opportunity to make up these activities.
- Other class work as assigned.

GRADE (No rounding up)	**MIN. %**
3.9-4.0	92-100%
3.5-3.8	88-91
3.2-3.4	84-87
2.9-3.1	82-84
2.5-2.8	78-81
2.2-2.4	75-77
1.9-2.1	72-74
1.5-1.8	68-71
1.2-1.4	64-67
0.9-1.1	62-64
0.7-0.8	60-61
0.0	<60

Total Points approx. 600

Special Grade Arrangements:

Students wishing to be considered for NC must see the instructor by Thursday of the 10th week. If approved, the arrangement must be in writing.

OTHER POLICIES:

Extra Credit: You are expected to know the material of this course. Don't expect extra credit, and don't ask for it. If there is any, be happy and take advantage.

Know the Syllabus: You are expected to read and know the syllabus. Do not expect other students to know the policies. They are often wrong! Look it up yourself. If it says that I don't give make-ups, then don't ask.

Special Circumstances: These do **not** include: "I just don't know the material yet." "I need more time." "I missed your announcement." "I forgot we were having a test." "I have another class, responsibility, meeting, to go to work, etc."

Dropping Class: Procedures for obtaining a withdrawal are outlined in the college catalogue. The timeline is also listed in the student handbook.

Cell Phones: Please turn them off in class so they do not distract others in the classroom. Cell Phones will be required to be off during exams.

Student Conduct: Students are expected to comply with student conduct policy and procedures. These can be found in the student handbook.

Indoor Air Quality: North Seattle Community College recognizes that suitable air quality is important in fostering a healthy and creative learning and working environment. North encourages a fragrance-free environment on its campus and in its programs.

Campus Resources: The **LOFT** (for writing help) and **MLC** (for math, physics, chemistry and computer help) are available for your benefit. See the quarterly bookmark for hours and services. If you need course adaptations or accommodation, Disability Services is one campus to assist you in setting this up.

Plagiarism:

Any incidence of plagiarizing will result in a <u>zero grade</u> for the assignment.

Plagiarism is defined as using work from another individual as if it was your own. In this course, plagiarism will include turning in copies of any part of another person's work as if it is your own. If this occurs, I will give both copies a zero grade. So, be careful in your sharing of work. Do not give your work to someone else.

If you do use a quote or idea from someone else, you must note it using a standard format (see a style source for help). I will accept any format as long as you are consistent. For those of you who need help with this, you can find help in the LOFT.

Homework:
Please DO work together. This means that you should be talking to each other to figure out how to solve the problems. However, when it comes to writing it down, you write it

your way. You compose the sentences and you write the equations. For graphs, you plot them yourself.

Lab Reports:
Yes, you are expected to do the lab with other students. That means that you will have the same data as the rest of your lab group. However, all writing in a lab report must be your own creation. This includes making the tables, graphing the data, drawing the pictures, and even writing the procedure. You may talk to others about the report but **you**, individually, must create everything that you turn in.

Other Written Work:
Again, you are expected to do the writing yourself. If you use any other person's ideas, you must give them credit. In general, it is expected that you are demonstrating your skills and abilities, not someone else's.

Changes may be made to this course syllabus at any time. Any changes will be announced, at which point it becomes the responsibility of the student to keep track of the change.