

PHYS 2111 – GENERAL PHYSICS LAB I

Spring Semester 2007

Section PHYS-2111-001, Wednesday 02:00 PM to 04:50 PM; New Science Building Room 307

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| Assistant Professor | Dr. Orion CIFTJA | Office Hours | T. 1 PM – 5 PM; W. 8 AM – 2 PM F. 8 AM – 2 PM |
| Office | New Science Bldg 330F | | |
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CATALOG DESCRIPTION: Semester credit hours: 1. General physics laboratory to include hands-on and computer-based experiments on measurement, vectors-force table, air track, projectile motion, static and kinetic friction, ballistic pendulum, Atwood's machine, or blocks and incline, centripetal force, moment of inertia, oscillations-simple and physical pendulum.

PREREQUISITE: None

TEXTBOOK: Physics 2111 Laboratory manual (available online); Physics Laboratory Experiments, 5th Ed., by Wilson, J. D (optional)

COURSE GOAL: To enable students to have a hands-on experience with the physical laws especially those dealing with Newtonian mechanics (the focus of this laboratory). This lab will also strengthen student's skills on how to approach and solve a problem, etc.

COURSE POLICIES: The lab report will be due on the session in which the lab is performed. Each group will hand in one lab report for each laboratory session, containing the names of the members of the group. Attendance is required therefore is the responsibility of the students to make sure their names appear in the submitted lab reports (NO EXCUSES ACCEPTED!). No grade is given for a missed lab. Students can make up ONLY one missed lab by the end of the semester (note the Lab Make-up day scheduled in the final week before the exam). Opportunities for extra credit may be given in some of the labs.

GRADING: Each lab will be graded. A final theory exam may be given if chosen by the professor (optional). The laboratory reports can be group projects, but the exam (if given) must be an individual endeavor. Based into a percentage scale, the grading system is as follows:

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| 90 – 100 | A |
| 80 - 89 | B |
| 70 - 79 | C |
| 60 - 69 | D |
| 0 - 59 | F |

ORAL AND WRITTEN COMMUNICATIONS: Oral or written communication will be given through exams, homework, classroom, individual discussion, and use of optional web-based materials.

ATTENDANCE POLICY: Class will start and end at the prescribed times. Attendance at every class is expected and is each student's responsibility. Absence or tardiness may result in lowered grades. Excessive absenteeism, whether EXCUSED or UNEXCUSED, may result in a student's course grade being reduced or assignment of a grade of "F". Absences are accumulated beginning with the first day of class. The University Undergraduate Catalog provides more detailed information.

STUDENT ACADEMIC APPEALS PROCESS: Authority and responsibility for assigning grades rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the University Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.

ADA STATEMENT: Students with disabilities who believe they may need an adjustment in this class are encouraged to contact the Office of Disabilities Services at (936) 857-2693/2694 as soon as possible. Once you receive a letter of adjustment from the office, kindly make an appointment with me to discuss appropriate adjustments for this class.

CHEATING AND PLAGIARISM: Prairie View A&M University is dedicated to a high standard of academic integrity among its faculty and students. In becoming part of the Prairie View A&M academic community, students are responsible for honesty and independent effort. Disciplinary action will be taken against any student who alone or with others engages in any act of academic fraud or deceit.

GRADE OF "T": A grade of "T" may be given in cases of documented emergencies or tragedies that prohibit a student from completing a course. In order to receive a grade of "T", approval must be granted by the Department Head and College Dean.

COURSE OUTLINE

| Week (Starting on) | Topic | Note |
|--------------------|---|---|
| 1 (Jan. 15) | No Lab the first week! | Jan 15, 2007: Dr. Martin Luther King Jr. Day (University Closed) |
| 2 (Jan. 22) | Lab 1: Introduction to measurement, measurement techniques and calculation of density | |
| 3 (Jan. 29) | Lab 2: Vectors on a force table | |
| 4 (Feb. 05) | Lab 3: Introduction to computer interface experiments and the relationship between position, velocity and acceleration | |
| 5 (Feb.12) | Lab 4: Uniformly accelerated motion (acceleration due to gravity) | |
| 6 (Feb. 19) | Lab 5: Projectile motion | |
| 7 (Feb. 26) | Lab 6: Static and kinetic friction on a flat and/or incline plane | |
| 8 (Mar. 05) | Lab 7: Conservation of mechanical energy (Inelastic collisions) | |
| 9 (Mar. 12) | NO LABS | SPRING BREAK WEEK |
| 10 (Mar. 19) | Lab 8: Computer Experiments and Simulation (Classical Mechanics, Physics Learning Center) | |
| 11 (Mar. 26) | Lab 9: Conservation of linear momentum (ballistic pendulum or free fall) | |
| 12 (Apr. 02) | Lab 10: Centripetal and/or uniform circular motion | |
| 13 (Apr. 09) | Lab 11: Torque, equilibrium, and center of gravity [Optional] | |
| 14 (Apr. 16) | Lab 12: Archimedes principle: buoyancy and specific gravity [Optional] | |
| 15 (Apr. 23) | Lab Makeup | |
| 16 (Apr. 30) | Lab Test | |

THIS SCHEDULE IS VARIABLE