

Physics 2125 CRN-11607

Northwest College

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Northwest (Spring Branch Campus): TuTh, 3:15-7:45 pm, Room 610

Course: Topics – motion, force, work, energy, impulse, momentum, gravity, rotational dynamics, oscillations, waves & sound. The purpose of the lab course is to support the topics covered in the lectures. Labs on these topics may be conducted before being addressed in the classroom. Most labs will be “verification” labs – a few will be “discovery” types. Students will not all do the same set of labs.

Laboratory Text: None

Students will be issued procedures for each lab.

Grading Scale: 100-90 = A, 89-80 = B, 79-70 = C, 69-60 = D, <60 = F

Grades: Grades will be based upon 1) **attendance percentile**, 2) **lab reports**, and 3) **lab participation**. There will be no exams.

Grade: Attendance, participation, and lab reports.

- 1) **Attendance Percentile:** Students must sign an attendance sheet for each lab. Each lab begins at 3:15 pm and ends at 7:45 pm. Missing part of a lab, being late or leaving early will affect the student’s attendance percentile. Attendance at labs is essential. Students who miss a lab will not be allowed to submit a report based upon data from another student. There are **no makeup labs**.

Arriving late to class – leaving early: Students arriving late or leaving early will be penalized double for lost time. Example – Students 10 minutes late will be docked for 20 minutes; 25 minutes late will count as 50 minutes. After 30 minutes, students will not be admitted to the lab.

Once class begins, students will only be admitted through the front door of the lab. Students arriving late will need to sign the attendance sheet.

- 2) **Lab Reports** are due the following lab session. **The grade for any report submitted “late” will be reduced 20%.** Laboratory concepts will be discussed prior to the beginning of the lab. Lab reports will not be returned – students should keep a copy of the lab. Any

student who copies (plagiarizes) another student's lab – both students will be graded as a zero.

- Students must submit a report for every lab conducted.
- Submit a neat, legible report.
- Clearly identify the report as to date, principal author and lab partners.
- Please submit your lab reports on stapled paper, **do not submit in a binder.**

3) Lab participation: Students will be penalized for poor lab participation. Students using cell phones and texting during lab will lose 20% of the lab grade. It also includes taking phone calls during lab time. Lab time is for setting up equipment, taking data, calculating results and disassembling equipment. Other activities include coordination with partners, collecting data, assisting in calculations, data analysis, cleanup of lab area, etc. Reports should be written outside of class. Students are expected to perform lab calculations in class.

The instructor will maintain a record of labs conducted by each student. Labs will be conducted by a team of 4-5 members. Each group will inform the instructor when they start a new lab. At the end of a lab, the instructor will approve and record results obtained by the group. **Students must not disassemble equipment upon completion of a lab until authorized to do so by the instructor. Other students or classes may use the same setup of equipment. Disassembling equipment early will result in a 20% grade penalty on a lab.** Upon completion of a lab, groups need to leave their equipment and work area in a neat manner, having cleared away all pieces. Students must return equipment to the correct location if requested to disassemble their setup. **Failure to adhere to these policies will result in a 20% reduction in lab participation grade.**

Lab reports: Students will work in groups of 4 or 5. Each individual will submit a lab report. Each group will not necessarily conduct the same lab exercises. Some labs are very short and will be grouped with another lab to count as a full report.

Student will miss 5% of class grade for each lab missed. You cannot miss more than two lab sessions for the semester. If you do, you may be dropped from the class.

Group names: Each group may choose a group name.

The Printer is for printing graphs only. It is not for printing lab reports.

Academic Responsibility: Please refer to the Student Handbook concerning grievances, complaints, discipline (including student conduct), scholastic dishonesty and student rights. Please contact me if you require any reasonable accommodation to achieve your academic responsibilities.

Syllabus subject to change.

Note: The state of Texas has begun to limit the money it will contribute to a student's education. The state contributes only to the first 2 times a student registers for a course. For the 3rd registration, the cost will be almost doubled.

Dropped classes: The HCCS administration has instituted a strict policy regarding withdrawal from a course. The deadline is **June 23, 2014 at 4:30pm** to receive a “W” on your transcript. After this date, a grade will be issued including a “D” or “F”.

Last Day For Administrative & Student Withdrawal:

June 23, 2014 (@ 4:30 pm is the last day for student to withdraw from the course and receive a grade of “W” in the course. It is the responsibility of any student contemplating on dropping the course to do so by or before that day. I recommend that any student planning to drop the course should discuss his/her performance in the course with me first before dropping. Sometimes it may not be as bad as it looks. *"NOTICE: Students who repeat a course three or more times may soon face significant tuition/fee increases at HCC and other Texas public colleges and universities. If you are considering course withdrawal because you are not earning passing grades, confer with your instructor/counselor as early as possible about your study habits, reading and writing homework, test-taking skills, attendance, course participation, and opportunities for tutoring or other assistance that might be available."*

A STUDENT CAN NO LONGER ASK THE INSTRUCTOR TO WITHDRAW HIM/HER FROM A CLASS AFTER THE LAST DAY FOR ADMINISITRATIVE & STUDENT WITHDRWAL. ANY STUDENT WISHING TO WITHDRAW FROM A CLASS MUST DO SO BEFORE OR BY THE LAST DAY FOR WITHDRWAL. THIS IS A NEW RULE FROM THE COLLEGE AND THERE WILL BE NO EXCEPTIONS TO THIS RULE. A student who fails to withdraw by due date will automatically receive the grade of F since the instructor cannot withdrawal him/her after that date. Please take note of this new requirement.

Besides, there is a new law in Texas which stipulates that beginning fall 2007, an undergraduate student attending any Public College/universities in Texas is allowed to have a maximum of six (6) withdrawals in his/her records prior to getting his/her first degree.

Important Dates:

June 23	Last Day to Drop with a grade of W
July 1	Instructions Ends

Texting, laptops, computers and cellphones: Students may not use electronic devices of any type in the classroom during class time. These devices are a detriment to learning in that they break the concentration of students during lecture and lab. **In particular, texting is not allowed during class time.** Students needing to respond to a text or cell phone call must leave the classroom. (Do not speak on the phone until outside the classroom.) **Using a cell phone during lab will result in a 20% penalty to the entire group.**

Mechanics 2125 – General schedule – Subject to revision:

Lab 1 Motion
Lab 2 Kinematics

Lab 3 Force
Lab 4 Dynamics
Lab 5 Projectile Motion
Lab 6 Impulse–Momentum
Lab 7 Conservation of Momentum/Energy
Lab 8 Energy–Work
Lab 9 Rotational Dynamics
Lab 10 Rotational Dynamics
Lab 11 Fluids/Pendula
Lab 12 Oscillations/Waves
Lab 13 Waves/Sound – All labs due

Lab Reports

Introduction: Describe the purpose of the lab. Include a short synopsis of the theory or phenomena being observed including relevant equations and definition of symbols. You may wish to paraphrase but not plagiarize the handout. Do not include the procedures.

Data: From the lab handout, include only the data sheets and perhaps the questions. Tables are usually the clearest way to record and present data. Be sure to include units. Include and title any relevant graphs. Include a sample calculation. If an Excel spreadsheet is included, it may not be necessary to submit a sample calculation.

Summary of Lab: Discuss your results. **You should focus on relevant content.** Discuss the shape of any curves. Discuss your numbers from the chart, observations from the data collection. What do the calculations and graphs mean? what is your Conclusions? You may wish to mention problems with the equipment or data collection. Answer questions using complete sentences. You may wish to expand upon the questions.

Comments: Never use the words “Human error”. What does human error mean? Reports should be neat and legible, else points will be deducted. Some students may need to type their report.

Rewriting Lab Instructions: In lieu of writing a lab report, a group may choose to rewrite the lab instructions. This rewrite will be conducted in conjunction with the professor. This would be a “group rewrite”. Generally, only one group would be doing a rewrite for a particular lab.