

PHYSICS 218: Mechanics (Fall 2008)

Corequisites: MATH 151. You are expected to have a working knowledge of plane geometry, trigonometry, and algebra. As the semester progresses you will also be expected to have a working knowledge of derivatives and integrals, and be proficient in the use of vectors (addition, subtraction, dot and cross products).

Instructor: Instructor's Info
Web Page: <http://physics218.physics.tamu.edu> (this contains formula sheets, and other useful info)

Textbooks: "University Physics", 12th ed. by Young and Freedman
"Laboratory Experiments for Physics 218", 8th ed., by Ramirez, Seidel, and Hiebert (Hayden-McNeil Publishing)

Recitation /Lab: Recitation meets in 118 Heldenfels Hall for the first hour, and is followed by a Laboratory session the remaining two hours. No Lab sessions or Reports will be dropped. **Students retaking the course should contact me immediately in order to get credit for Lab if passed in a previous semester with a grade of 80 or better.** Students retaking the course do not have to repeat the Lab but they are required to attend Recitation and take weekly quizzes. **Note: There will be no recitation or lab meetings during the first week of the semester.**

Quizzes / Homework: Homework assignments and math quizzes will be based on MasteringPhysics (<http://www.masteringphysics.com>). If you have purchased a new book, the MasteringPhysics packet will be included. If you have purchased a used book, you can buy the MasteringPhysics packet at the bookstore – OR – sign up online. You will have to log in and enroll to use this program. The class ID will be given. Homework assignments are for you to practice problem-solving techniques and are critical for your success. Also, roughly 10 quizzes will be given during Recitation. Each quiz will test your ability to work one of the assigned homework problems. There may also be unannounced pop quizzes during Lecture.

Exams: There will be three midterm exams and one final exam. (a) Each exam will generally consist of problems similar in content and difficulty to the homework. The entire solution will be graded and partial credit given if merited. Your work must show steps toward the solution; the answer alone is not sufficient. The grader will judge your use of physics in arriving at the solution. Exams may also include examples worked in the lecture but not appearing in the text nor assigned as problems. (b) Formula sheets will be provided for each exam and the final. (c) If you miss an exam due to an **authorized excused absence** as outlined in the *University Regulations*, then you must **contact me no later than the next class meeting** following the missed exam to arrange for a makeup exam. There will be a **single course-wide makeup exam** for those missing an exam. This makeup exam will be written by a committee of Physics 218 lecturers and administered outside normal class time within 7-10 class days following the missed exam. Note: Very few conditions qualify as an authorized excused absence, so avoid missing an exam at all costs. (e) You must bring your student ID with you to all exams for identification purposes.

Exam Grade: Exam grades may be curved depending on special conditions of a particular exam. In no case will a curve result in a lower letter grade than the standard 90-100% A, 80-89% B, 70-79% C, 60-69% D, and <60% F.

Course Grade: The total course grade consists of 700 points distributed as follows:

3 Exams	275 (75, 100, 100)
Final Exam	200
Laboratory	100
Recitation and Lecture Quizzes	100
Homework	75
Total	750

NOTE: If your final exam grade is higher than your 3-exam average, then the final will count 275/750 points toward your final grade and your midterm exam average will count just 200/750. You must pass both the lecture (3 midterm exams, final exam, homework, recitation lecture quizzes) and laboratory $\geq 70\%$ parts of the course **separately** in order to pass the course.

ADA Policy: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Room 218 of Cain Hall or call 979-845-1637.

Honor Code: The Aggie Honor Code states, "An Aggie does not lie, cheat, or steal or tolerate those who do." Further information regarding the Honor Council Rules and Procedures may be found on the web At <http://www.tamu.edu/aggiehonor>.

Tentative Class Schedule

Week	Chapters	Topics/Homework Assignment
Aug 25 - Aug 29	1 (1-10)	Introduction; vectors End of Chap (EOC) probs: CH1-32, 35, 50, 55, 59, 76, 78, 93 + Mastering Physics probs.
Aug. 31 last day to drop with no record		
Sep 1 - 5	2 (1-6)	Motion along a straight line EOC problems: CH2-4,9,12,18,21,36,40,76,80,83,92 + MS problems
Sep 8 - 12	3 (1-5)	Motion in two or three dimensions EOC problems: CH3-9,10,32,33,38,40,52,54,64,81 + MS problems
Sep 15 - 19	4 (1-6)	Newton's laws of motion EOC problems: CH4-12,16,24,27,35,39,41,40 + MS problems
Sep 22 - 26 Exam 1 (Chap. 1-3)	5 (1-4) Sep 22 (Monday)	Further application of Newton's laws EOC problems: CH5-4,9,14,19,37,55,62,67,86,91,111,113,114,115 + MS problems
Sep 29 – Oct 3	6 (1-4), 7 (1,2)	Work, kinetic energy, and potential energy EOC problems: CH6-61,62,69,70,76,81,81, CH7-14,18,24 + MS problems
Oct 6 - 10	7 (3-5), 8 (1,2)	Force and energy; Momentum EOC problems: CH7-29,38,42,46,54,62,66,67,69,74, CH8-17,18 + MS problems
Oct 13 - 17 Exam 2 (Chap. 4-7)	8 (3-5) Oct 17 (Fri)	Momentum and collisions EOC problems: CH8-37,39,43,46,50,52,66,75,100
Oct 20 - 24	9 (1-5), 10 (1,2)	Rotation of rigid bodies; Torque EOC problems: CH9 – 1,6,9,19,25,30,34,47,55,85,86, CH10 – 1,2,5,7,13 + MS probs.
Oct 27 – 31 ** Oct 31 (Fri):	10 (3-7)	Dynamics of rotational motion EOC problems: CH10- 20,22,27,29,34,35,39,42,64,91 Last day to drop course with no penalty (Q-drop).
Nov 3 - 7	11 (1-3), 12 (1-5)	Static equilibrium; Gravitation EOC probs CH11- 7,10,11,13,14,18,42,52,66,73, CH12-4,5,16,23,27,75,77 + MS probs.
Nov 10 - 14	13 (1-8)	Periodic motion EOC problems: CH13- 1,2,7,11,12,19,26,32,36,44,45,52,54,57,60,68,72,75,91,93
Nov 17 - 21 Exam 3 (Chap. 8-11)	15 (1-8) Nov 17 (Mon)	Mechanical Waves EOC problems: CH15- 3,5,6,7,10,15,20,28,33,39,41,45,49,50,51
Nov 24 – Nov. 26 Nov 27-28 Thanksgiving Holiday	15 (1-8) continued	Mechanical waves (continued)
Dec 1 - 2 Review **Dec 1 (Mon): ** Dec 2 (Tue):		Attend Friday classes. Attend Thursday classes, including Recitation; last day of classes.
TBA		Final Exam (Chap.1-13, 15)