PHYSICS 2130: Physics for Science and Engineering Majors I
Classical Mechanics, Waves, and Thermodynamics
LECTURE SCHEDULE & SYLLABUS
Fall 2006

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COURSE WEB ADDRESS:
http://astro1.panet.utoledo.edu/~tkvale/phys2130/fall2006/P2130MAIN1-Fall2006.html


GRADE DISTRIBUTION: Midterm Exams: (4/5) ......................... 60%
Daily Quizzes: (34/40) .......................... 5%
Homework: (12/14) .............................. 5%
Lab: ................................................. 10%
Final Exam: ....................................... 20%
TOTAL 100%

GRADES: Grades are based on your ability to solve problems and your demonstrated understanding of the meaning of physical concepts. There are no predetermined percentages of A's, B's, etc. Successful completion of the laboratory (at least a score of 18/30) is necessary for passing the course. If you are repeating this course AND have received a letter grade in it (A-F, including +/-s) AND have earned a lab score of 24/30 or better, then you do not have to repeat the lab. However, please see the secretary in MH2017 so that your lab grade is transferred to this semester.

PREREQUISITES: The prerequisites for this course include Math 1850. Note that this is a calculus-based physics course. You will need to perform vector calculus in this course.

WITHDRAWALS, DROPS, and INCOMPLETES:
The last day for withdrawing from the course is OCTOBER 27, the end of the 10th week.
W grade: The grade of "W" is assigned for a course that the student has formally withdrawn from by the end of the 8th week.
IW grade: The grade of "IW" has been eliminated. It is the *student's* responsibility to withdraw from the course if he/she doesn't want to be in it!!!
I grade: The grade of "I" will be given only in truly exceptional circumstances which prevent the student from completing the course within the semester. An unexcused absence from an exam is NOT a valid reason for the Incomplete Grade.

HOMEWORK, DAILY QUIZZES, and MIDTERM EXAMS:

HOMEWORK: The Homework problems are to be done through WileyPlus (due each Saturday by 11:00 pm Eastern time). Each homework set will be worth ten points. Your homework grade will be determined by your top 12 HW sets of the 14 possible HW sets. The HW set due Friday, August 25,
is a practice HW set and will not count in your grade.

**DAILY QUIZZES:** There will be at least one problem multiple choice quiz each lecture day (MWF). These daily quizzes are graded on a 0-1 point scale. The quiz will be integrated into the lecture and cannot be made up if you miss that day's class. There are 40 lecture periods and your daily quiz score will be determined by your top 34 quiz scores out of the 40 daily quizzes. *Electronic personal response system (PRS) "rf-clickers" from Turning Technologies are **required** for these quizzes.*

**MIDTERM EXAMS:** These exams will consist of about fifteen multiple choice questions and two problems. Your Exam score will be determined by your top four exam scores out of the five scheduled exams. Tuesdays are reserved for the exams for this course. Note that the Final Exam is scheduled according to the Exam day (Tuesdays). Class generally will not meet on the Tuesdays in which an exam is not scheduled. However, classes will be held on several non-exam Tuesdays in order to accommodate other university holidays throughout the semester. Check the course's webpage for precise information.

**PHYSICS 2130 LECTURE SCHEDULE & PROBLEM ASSIGNMENT**

**Fall Semester 2006**

**EVERY WEEK (Almost):**

- **Monday:** New material
- **Tuesday:** Exam, new material, or no class
- **Wednesday:** New material
- **Thursday:** Problem solving (Recitation breakout sections)
- **Friday:** New material
- **Saturday:** Homework Problems DUE at 11:00 pm

**Week of August 21**

PREVIEW of Phys2130, Math, and the Universe; Chapter 01: *Measurement*; Chapter 02: *1-D Motion*

**Tuesday -- Lecture**

**Week of August 28**

Chapter 03: *Vectors*; Chapter 04: *2-D and 3-D Motion*

**Tuesday -- Lecture**

**Week of September 04**

**Monday -- Labor Day Holiday**

**Tuesday -- EXAM 01 -- Chapters 01 - 04**

Chapter 05: *Force and Motion I*

**Week of September 11**

Chapter 05: *Force and Motion I*; Chapter 06: *Force and Motion II*

**Tuesday -- No Class**

**Week of September 18**

Chapter 06: *Force and Motion II*; Chapter 07: *Kinetic Energy and Work*

**Tuesday -- No Class**
Week of September 25
  Chapter 07: *Kinetic Energy and Work*; Chapter 08: *Energy Conservation*
  Tuesday -- EXAM 02 -- Chapters 05 - 07

Week of October 02
  Chapter 09: *Center of Mass and Linear Momentum*
  Tuesday -- No Class

Week of October 09
  Chapter 10: *Rotation*; Chapter 11: *Torque and Angular Momentum*
  Tuesday -- No Class

Week of October 16
  Monday & Tuesday -- FALL BREAK
  Chapter 12: *Equilibrium and Elasticity*; Chapter 13: *Gravitation*

Week of October 23
  Chapter 13: *Gravitation*; Chapter 14: *Fluids*
  Tuesday -- EXAM 03 -- Chapters 08 - 13

Week of October 30
  Chapter 15: *Wave motion*; Chapter 16: *Waves I*
  Tuesday -- No Class

Week of November 06
  Chapter 17: *Waves II*
  Tuesday -- Lecture, Friday: Veterans' Day Holiday

Week of November 13
  Chapter 18: *Thermodynamics*
  Tuesday -- EXAM 04 -- Chapters 14 -17

Week of November 20
  Chapter 19: *Kinetic Theory of Gases*
  Tuesday -- Lecture, Wednesday - Friday: Thanksgiving Holiday

Week of November 27
  Chapter 19: *Kinetic Theory of Gases*; Chapter 20: *Entropy*
  Tuesday -- No Class

Week of December 04
  Chapter 20: *Entropy*; Review; Additional Topics
  Tuesday -- EXAM 05 -- Chapters 18 - 20

**FINAL EXAM**  TUESDAY, DECEMBER 12  12:30p - 2:30p  Chapters 01 - 20