

PHYS 2053 (General Physics I)
Spring 2008
Syllabus

Important Note

The following information applies only to Section 1 of PHYS 2053 and most likely differs from sections taught by other instructors in the same semester. The instructor reserves the right to revise the syllabus with proper notice to the students.

Class Meetings

Lecture: MWF 8:00 – 8:50 a.m., KEP U2

Quiz: Th 8:30 – 9:20 a.m., KEP U2

Instructor

Dr. Jeremy K. Edwards

jeremy-edwards@utulsa.edu

The best way to reach me is by e-mail. I check my e-mail many times during the day. Please call Ann Archer in the Physics Department office (631-3029) if you need to reach me by phone.

Office Hours

By appointment.

Textbook

P. A. Tipler and G. Mosca, Physics for Scientists and Engineers, 6th Ed., W.H. Freeman and Co., New York, 2008.

Online Resources

Physics department: www.physics.utulsa.edu

Textbook publisher: www.ebooks.bfwpub.com/

Grading:

Course grades will be computed based on the following:

| | |
|-------------|-----|
| Three exams | 50% |
| Final exam | 15% |
| Homework | 15% |
| Quizzes | 15% |
| Attendance | 5% |

Final course grades will be assigned according to the following scale (I round up, not down):

| | |
|---------------|---------------|
| 89.5% – 100% | A (excellent) |
| 79.5% – 89.5% | B (good) |
| 69.5% – 79.5% | C (fair) |
| 59.5% – 69.5% | D (poor) |
| Below 59.5% | F (failing) |

Course Content

We will cover as much of Parts I and II of the textbook (chapters 1–20) as time allows. Topics will include general mechanics (1D/2D/3D translational and rotational motion, oscillations and waves, gravitation, and basic fluid mechanics). Typically we will have 2-3 lectures per chapter. I will distribute a detailed schedule by the end of the first week of class.

Standards and Rules

Unless otherwise instructed, materials, you submit for grading should adhere to the following standards:

1. Use standard 8 ½ × 11 inch paper (no spiral paper!). Graphs must be computer-generated (I recommend using a spreadsheet such as Excel). Axes must be neatly labeled with units.
2. Use pencil. Please be neat and legible.

3. Order problems sequentially (do not mix up the order of the problems) and number them vertically down the page. Skip some space and/or draw a line between problems. **YOU MUST SHOW ALL OF YOUR WORK FOR FULL CREDIT.** Include appropriate significant figures (usually three) and the correct units for all calculations. Clearly identify your answer (for example, draw a box around it). For discussion questions, provide a concise justification (usually 3-5 sentences is sufficient).
4. Staple multiple pages together. Fold your assignments lengthwise and write your name on the outside.
5. Turn in your assignments on time. **NO LATE HOMEWORK WILL BE ACCEPTED UNLESS YOU HAVE MADE PRIOR ARRANGEMENTS WITH ME OR YOU HAVE A PROVEN EMERGENCY.**
6. Please allow one full week for return of graded materials. I will make every effort to return homework and exams in a timely manner.

Reading

To better understand the lectures, I strongly suggest that you read the corresponding section in the text **BEFORE** coming to class. As you read each assignment, note the following:

1. Terms – list and define boldface terms.
2. Laws and equations – list laws and important equations, what each may be used for, any assumptions, approximations, conditions, restrictions, etc. on their use.
3. Questions – list any questions you have or things that are unclear. Use the quiz/discussion time to get the answers to these.

Homework

Homework assignments consist of problems and discussion questions for each chapter we cover in the text. We will discuss homework assignments in quiz class before they are due. **The assignments must be turned in at the beginning of class on the day they are due (typically Friday), no exceptions.** I will place homework solutions on the course web site shortly after each is due.

Each part of a problem or discussion question on an assignment will be assigned a grade of 0 (no work), 1 (partially correct work) or 2 (fully correct work). Discussion questions require your answer and your justification for that answer in order to receive full credit for the problem.

You should consider solving assigned homework to be the minimum work necessary to learn the material. Working more problems on your own will certainly improve your understanding of the material.

Quizzes

You will be given a quiz each week during your quiz section (except for the first week of class). Each quiz will be similar to a homework problem or discussion question taken from the homework assignment due the previous week. I will typically allow ten minutes to solve the quiz question (depending on the difficulty of the question, of course).

Quizzes will be closed-book and closed-notes. You may bring an equation sheet consisting of ONE sheet of 8-1/2×11 inch paper that you may fill (both sides) with any information you think might be helpful. **You may NOT include solved problems on your equation sheet. Your score for a quiz in which you use an illegal equation sheet will be zero.** A good way to make up your formula sheet is to go through your homework and make a list of all formulas and constants you use for each problem. Each quiz will be graded on a 10 point scale. Your equation sheet must be in your own handwriting (no photocopies!) and must be handed in with your exam. I will not supply equations or commonly known constants during quizzes.

Exams

There will be three regular exams administered during the semester. Exams will be a combination of partial credit, multiple-choice, true/false, and discussion question problems.

Exams are closed-book, closed-notes. You may bring an equation sheet consisting of ONE sheet of 8-1/2×11 inch paper that you may fill (both sides) with any information you think might be helpful. **You may NOT include solved problems on your equation sheet. Points will be deducted (severely!) if you use an illegal equation sheet during an exam.** You must turn in your equation sheet along with your exam. A good way to create your equation sheet is to go through your homework and make a list of all formulas and constants you use for each problem. Each exam will be graded on a 100 point scale. Your equation sheet must be in your own handwriting (no

photocopies!) and must be handed in with your exam. I will not supply equations or commonly known constants during exams or quizzes.

I will not allow any make-up exams. Your lowest regular exam score (including a regular exam you miss for any reason) will be replaced by your final exam score. In case your final exam score is lower than all your regular exam scores, no replacement will be made. If you miss more than one regular exam, your score for the second missed exam will be zero.

Exam material will be taken from the homework problems, examples I work in class, old exams, and classroom demonstrations. A good way to study for an exam is as follows:

1. Review the objectives for the exam (to be handed out during the semester), then come to the scheduled help session with any questions.
2. Create your equation sheet by reviewing graded homework, class notes, the textbook, and old exams.
3. Practice working additional problems and/or old exams. Do not refer to solutions until you have completed each problem. Add to your equation sheet as needed.

Final Exam

There will be one final exam. The final exam will be comprehensive. You may bring up to four equation sheets as described under the Regular Exams section above.

The final exam is required, and cannot be dropped or made-up. The final exam must be taken at the time scheduled by the University. There are no exceptions to this policy. Please do not ask for one.

Help Sessions

Prior to each regular exam and final exam there will be a help session at a time and place to be announced. The help sessions are designed to help you prepare for the exam. I will not present any new material during the help session. Instead, I will answer any questions you have.

Attendance

My and other professors' teaching experience suggests that when a student misses a class, he/she lowers the final grade by around 1%. For this and other reasons, class attendance is required. I will circulate an attendance sheet at the beginning of each class session. It is your responsibility to sign the attendance sheet. Students who are late to class cannot sign the sheet once it has been circulated. Each attendance is worth only a very small portion of your final grade. My attendance policy is intended to be an incentive for you to come to class regularly and on time since it will help decide borderline grades.

Classroom Etiquette

Please maintain proper classroom etiquette and decorum. As a courtesy to me and to other students, please:

1. Do not use your cell phone during class. This includes text messaging! If you have an emergency where you need to be reached while you are in class, please set your phone to vibrate.
2. Stay alert in class (no sleeping!). We will have fun with you if I catch you sleeping in class.
3. Don't bring work from other classes to my class. This is a Physics class, not Calculus, Chemistry, History, etc.
4. If you need to leave early, let me know in advance. Also, please sit in the back of the room and be quiet when you leave.

Withdrawal / Drop

If you withdraw from the course prior to the start of the fourth week of the semester, the course will not show up on your academic record. If you withdraw from the course after the start of the fourth week and up to and including the twelfth week of the semester, your academic record will indicate either a grade of W (withdraw) or WF (withdraw failing), depending on your grade at the time of withdrawal.

If you are doing passing work but are unable to complete your work due to a LEGITIMATE and DOCUMENTED circumstance (serious illness or personal problems for example), at my discretion I may grant you a grade of I (incomplete). I will only grant a grade of I for an exceptionally good reason. To receive this grade, you will need to sign a Record of Incomplete form that will specify what work you must do and when the work must be finished in order to remove the incomplete. This form must be filed with the Dean's office. The incomplete grade can remain

on your academic record for one year. If the unfinished work is not completed in that time, your course grade will change from an I to an F.

Students with Disabilities

Students with disabilities should contact the Center for Student Academic Support (CSAS) to self-identify their needs in order to facilitate their rights under the Americans with Disabilities Act. All students are encouraged to familiarize themselves with and take advantage of services provided by the CSAS, including tutoring, academic counseling, and study skills development. The CSAS also provides confidential consultations with students who have academic concerns.

Academic Misconduct

Cheating is usually of little value and is surprisingly easy to detect. I have no tolerance for cheating and will come after you if you try to cheat. I will follow the "Policies and Procedures Relating to Student Academic Misconduct in the College of Engineering and Natural Sciences" which may be obtained from the Dean's office. The minimum penalty for cheating is a grade of zero on the assignment in question. I will not drop this assignment when calculating your final grade.

I encourage students to collaborate and to use the Student's Solution Manual. You are also welcome to include problem solutions we discuss in your quiz session in your homework assignment. However, the work you submit for grading must be your own and must demonstrate some level of original thought. Verbatim copying or even edited copying of assignments from other sources that demonstrates no original thinking constitutes cheating.

Tips for Success

1. Actively read the textbook before coming to class.
2. Attend each class, take notes, and ask questions, even if you are completely lost. Do not skip class!
3. Exchange phone numbers and/or e-mail addresses with classmates to obtain class notes and assignments in the event you must miss a class.
4. Form a study group; however, if you do this, make sure you understand the rules of Academic Misconduct!
5. Solve all of the assigned homework from each section before the next class session. Do not fall behind!
6. Develop the ability to check your work apart from answers in the text or solution manual. This skill will serve you well on exams, in other classes, and in your job after you graduate.
7. Learn from mistakes. We are all human, and we do make mistakes. Review your graded materials to fully understand your errors so that you don't make them again.
8. Save all of your class materials in one place. I used three-ring notebooks all through college and graduate school. These worked very well.
9. Communicate with me often. Do not be shy or intimidated. Don't wait until you are swamped to seek help.