

PHYSICS 152 – Physics for Life Sciences I

Fall 2006-2007

Course Description:

An introduction to physics in a two-quarter sequence, including applications for the life sciences. Topics include describing motion, Newton's laws, gravitation, energy, momentum, angular motion and dynamics, statics, fluids, vibrations, waves and sound. Includes weekly labs to enrich class material. High School physics not required.

Course Objectives:

The main objective of this course is to gain practical knowledge of Newtonian Mechanics.

Course Number and Section: PHYS 152

Meeting Times and Places:

PHYS 152 Lecture

M 10:00 am - 11:50 am Disque 103

Recitations:

001	WF	12:00 pm - 12:50 pm	Randel 329	Erica Caden
002	WF	11:00 am - 11:50 am	Curtis 455	Aruna Nishtala
003	WF	01:00 pm - 01:50 pm	Curtis 457	Danny Pan
004	WF	03:00 pm - 03:50 pm	Curtis 343	Yi Yang
005	WF	02:00 pm - 02:50 pm	Mathsn 407	Yihau Wang
006	WF	10:00 am - 10:50 am	Curtis 452	Trevor King
007	WF	09:00 am - 09:50 am	Stratn 101	Tatjana Miletic
008	WF	03:00 pm - 03:50 am	Mathsn 310	Aruna Nishtala

Labs:

060	W	09:00 am - 10:50 am	Disque 702	Yihau Wang
061	W	11:00 am - 12:50 pm	Disque 702	Yihau Wang
062	W	01:00 pm - 02:50 pm	Disque 702	Runcong Liu
063	W	03:00 pm - 04:50 pm	Disque 702	Runcong Liu
064	R	03:00 pm - 04:50 pm	Disque 702	Trevor King
067	T	03:30 pm - 05:20 pm	Disque 702	Erica Caden
068	M	12:00 pm - 01:50 pm	Disque 702	Danny Pan
069	M	02:00 pm - 03:50 pm	Disque 702	Danny Pan
565	W	07:00 pm - 08:50 pm	Disque 702	Yi Yang
566	W	05:00 pm - 06:50 pm	Disque 702	Yi Yang

Credits: 4 credits

Text Required: Physics 6th Edition Giancoli Pearson(Prentice Hall)

(You will also need a simple scientific calculator for quizzes and exams.)

Prerequisites:

Course Schedule: See attached calendar.

Contact Information:

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Office Hours: Tuesday 3:30 – 4:20 , Tuesday 5:30 – 7:00

STAFF:

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Topical Outline:

Week	Date:	Topic	Chapter	Recitations	Lab
1	09/25/06	Describing Motion: Motion in 1D, Motion in 2D, Vectors	1,2,3	1:1,15,37,46 2:9,11,42,47, 52 ,53, 56,57 3:1, 9 ,10,20,31	Free Fall
2	10/02/06	Motion and Force: Dynamics	4	5,12, 24 ,25,27, 31, 52 ,63	Projectile Motion
3	10/09/06 Holiday Monday No Classes on Monday	Gravitation	5	33,48, 53 , 58, 59 ,60 Recitation Quiz	No Lab
4	10/16/06 First Exam	Equilibrium, Elasticity, and Fracture	9	2,3,9, 12 ,21,27, 31,32, 38 ,34	3D Equilibrium
5	10/23/06	Energy and Linear Motion	6,7	6:2,7, 12 ,18,31, 35 ,40,48 7:4,17,30,44	Conservation of Momentum
6	10/30/06	Circular Motion	5	1,7, 9 ,18,19, 26	Rotation
7	11/06/06	Rotational Motion	8	3,8, 16 ,22,24,26, 51 , 53 Recitation Quiz	Angular Momentum
8	11/13/06 Second Exam	Vibrations	10	1,9 ,17, 26 ,32,43,53, 64	Harmonic Motion
9	11/20/06 University Holiday Wed., Thurs., Fri. No classes 11/22, 11/23, 11/24	Fluids	11	10 ,18,24, 25	No Lab
10	11/27/06	Sound	12	2,8, 9 ,15,24,31, 53 ,54	Longitudinal Waves
11	12/04/06	Waves	11	1,16,22,24, 30 ,31,34 ,39, 57 ,62 Recitation Quiz	No Lab
12	12/11/06	Final Exam (Date and Room TBA)			

**** The bold, underlined problems are to be completed by the student and handed in on Wednesday in recitation in person.

Grading:

The course is graded "on the curve"; 55% is passing.

Reading Quizzes:	10%
Homework	10%
Quizzes	10%
Lab	10%
Midterms	30%
Final (Cumulative)	30%

- 2 Midterms: 30% (15% each) These are given in the lecture period that week. On those weeks there is no lecture, but you are still responsible for reading the chapters and doing problems in recitation. We have tried to arrange these so that the material for your reading is easier than average.
- For the Midterm exams, we will spend the first hour taking the exam, and then review right afterwards in the second hour. In such a week, your recitation instructor will review the new material with you; same for the Monday Holidays.
- Final: 30%: The final exam is cumulative. It will be scheduled during finals week. Check the Drexel Website for the schedule of final exams.

What if you do poorly on the midterm?

Midterm Rescue Points: The midterms are tough. To get a good grade we expect you to understand the material, not only to have worked hard at it.

If you score below 55% on a Midterm, you may work your grade up (but no higher than 55%) by reviewing what you got wrong, and explaining clearly the right answers to your TA. This **MUST** be done before the next exam.

Religious Holy Days:

I have had a few e-mails about Religious Holy Days. You will not be penalized for missing class due to religious holy days. Please let me know of any conflicts. You will still be responsible for any material you miss and it will be **your** responsibility to gain an understanding of the covered material and hand in any assignments prior to missing class. That being said, I will gladly assist you in any way I reasonably can. I expect honesty and maturity from all university students.

This is how the course works week-to-week:

- Each week we cover a topic that corresponds to certain chapters in the Text. as shown in in the above schedule.
- On Monday, when you come to class you will have read the chapter(s). There will be a brief multiple-choice quiz on the chapter at the start of class each Monday, based on your reading. We don't expect you to know all the material yet, but, for example, we need you to know the definitions and terms, and to have read carefully. Watch out! These points add up, and will cost you if you regularly are unprepared. On the other hand they can act as one kind of safety net, documenting your effort if an exam doesn't go well.
- In recitations, you will go over the assignment in class and hand in the problems assigned in the weekly assignment. The problems to be covered are listed in the above schedule. The problems you need to hand in are highlighted in bold. Again, you get points toward your grade even for handing in an incorrect attempt. **THE HOMEWORK MUST BE HANDED-IN IN PERSON IN THE FIRST RECITATION OF THE WEEK.** In other words, recitations are NOT optional, attendance is required. The homework is to be handed in at on Wednesday in recitation in person. It can not be delivered by a friend or e-mailed to the TA. The homeworks must also be legible and neat.
- During some recitations we will also have Quizzes, as marked on the specific weeks above. These are harder than the reading and lab quizzes, and are like homework problems or problems from the book.

LABS:

- On LAB days we have the Labs in Disque 702.
- Read the lab beforehand.
- There will be a brief quiz at the start of lab, which will include approximately 3 questions about the lab you are to do, and one question about the last lab you did.
- The purpose of the labs is to reinforce the lecture material through hands-on experimentation. It is not to teach you how to do lab reports: your Bioscience courses already taught you that. Thus, although we will not be collecting lab reports, we expect you to understand the material before you leave.
- Note that you NEVER have to hand in any "Pre-Lab" material, no matter what the write up says. {These write-ups are used by other courses too...}
- Labs will be available on the web site and on banner. Please print out a copy prior to coming to lab.

What if I have to miss a class where there is graded material?

1. Missing Grades: The main rule is that we do not make up missed material, since we have such an extensive data base of your performance. Here are some specifics:
2. Homework: We NEVER accept late homework. You can always hand it in early if you have to be away. If you have some emergency, we will discount that assignment --and your grade (10% here) is then based on all the other homework.
3. Recitation Quiz: Same as Homework. No makeups, ever.
4. Reading Quiz on Monday: Same as homework. This includes coming in after the quiz is collected: you snooze, you lose!
5. Labs: **NO MAKE UP LABS.** A valid excuse will be needed; your other labs therefore count more.
6. Midterms: Again, we do not do makeup midterms. If you miss one, AND HAVE A VALID EXCUSE the other carries the weight for your entire midterm grade.
7. Final: OK, we'll work out an option if you have an iron-clad excuse. Leaving early for the holiday break is NOT one of those excuses.

NOTE the following:

1. This is NOT blanket extra credit. You cannot "boost" a mediocre grade with this mechanism. You must have a grade below 55, and you can only get as high as 55.
2. You will have to explain your answers satisfactorily to a TA. So you can't use the expertise of a room-mate or tutor to beat the system.
3. The rescue points are specific to each exam: you can't bank tutorial points from the first set to rescue a bad grade on the second exam.
4. Our goal is NOT just to give you more points. We think this will itself be a help to learning the material. The points are incentive to help you get back on track. The final is cumulative, and has no Rescue points:.

Academic Policies:

Attendance is required. If you must miss class due to work, personal illness or injury, or family illness, injury or death, please e-mail me as soon as possible. Attendance will be taken. Lateness cannot be tolerated. It disrupts class and will also disrupt your academic achievement. In regards to civility, this is a college course and you will be expected to act accordingly. There will be no fowl language or disrupting other students or the class. Class participation will be expected, but not graded. There will be no make-up for missed assignments other than what is stated above. Assignments will be turned in on time. Problems due to personal injury/sickness or family injury/sickness will be handled on a case-by-case basis. Academic Integrity is the same as is expected in any academic environment. No cheating or copying of assignments or answers to test will be tolerated. Any cheating will result in an F in the course.

Please feel free to call or email me with any questions or concerns regarding the class at any time. I will do my best to get back to you as soon as possible. I prefer that you talk to me directly if you are experiencing any difficulties with any of the material.