

# Physics 9B Syllabus

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## I. Course Basics

1. **Prerequisites:** Physics 9A (or Physics 9HA) and Math 21C, and at least taking Math 21D concurrently.
2. **Lecture:** Three times a week: M-W-F, 3:10pm-4:00pm in Roessler 66. Participation is not required but highly recommended!
3. **Lab:** The attendance is *required*. It is an important component of the course and it contributes to the grade. See the lab schedule.
4. **Discussion:** The attendance is not required but the TA will help with homework problems and prepare you for the exams. See the discussion schedule for details.
5. **Homework:** There will be 7 homeworks which will be due in the class.
6. **Exams:** There will be 3 midterms in the class on January 27th, February 17th and March 10th. The final exam will be on March 20th at 3:30pm.
7. **Add/Change Lab/Discussion Section:** Talk directly to the lab/discussion TA who can give you a PTA (in case of a lab).
8. **Office Hours:** The discussion TA will hold office hours on Thursdays 11-12 (place will be announced), for the help with the homeworks or other problems. I will also have one hour of office hours, on Tuesdays, 11-12 (subject to change) in the 443 Physics, so please drop in if you have general questions about class, inquiries or just want to chat about physics.
9. **Contact:** If you have any problems, please send me an email through Canvas. This makes easier to track the questions and inquiries. Contact the discussion TA or lab TAs if you have any questions about labs and discussion sessions.

## II. Course material

1. **Textbook:** *University Physics*, 14th edition, by Sears, Zemansky, Young, and Freedman. There are references to chapters in the course schedule to the 14th edition. We will not use MasteringPhysics framework, homeworks and exams will be collected the old-fashioned way.
2. **Laboratory Manual:** Download it here: (contact the lab TA or the lab supervisor Tom Weideman for more questions) <http://www.physics.ucdavis.edu/Classes/Physics9Lab/Phy9BLab/>.
3. **iClicker:** We will not use in this class.

### III. Homework Policy

1. **Format:** Pen, pencil or typed on the letter size papers, stapled. On top of the front page: student name and ID, homework assignment number, class section number and my name as the instructor.
2. **Readability:** Number the problems, put them in the order and circle final results.
3. **Legibility:** If the grader can not read your work, you do not get credit for it. Keep in mind the standard is that they can read your work, not that you can. Also, many people write their names much more sloppily than anything else - if your name is illegible, it may have to be treated as a *no name* paper, and you may not get the credit you deserve.
4. **Posted:** Homework will be posted in Canvas. You will have one week to complete the problems.
5. **Due:** Homework is turned in the lecture (see the course schedule). If you can not be there, give it to a friend who can turn it in at lecture or contact your TA. All homework assignments are due by the end of the lecture on the day that they are scheduled to be submitted, see the due dates on the course schedule or Canvas.
6. **Grading:** There will be 6 problems in each homework, and you can get 15 points in total. The problems will be either multiple choice questions or problem solving. You get 0 or 1 point for each problem for completion: for 1 point you have to show the actual effort to solve the problem and obtain the answer (the correctness is not considered). If you return blank page or major parts are missing (like a bunch of scribbling written down) you get 0 points. One of the problems will be chosen and graded for correctness (you will not know which one in advance), for that you get 0-9 points. No points will be given for numerical answers if no work (algebra, diagrams etc) is shown. For full credit, final answers should include proper units, and circle the answer for clarity.
7. **Late:** Late homework can still receive the completion grade (0-6 points), if it is turned in the lecture following the lecture in which the homework was due. Missing homework or homework handed later than the next lecture gets automatically 0 points.
8. **Returned:** Graded homework will typically be returned the week following the week that they were submitted in the lecture. Students that do not receive their papers when they are first returned should request them from me in lecture.
9. **Inquiries:** You should pick up your homework papers when they come back. If the grade on your returned paper does not match the grade posted on Canvas, you should bring it to my attention immediately (bring it to the next lecture or leave it in the mailbox). The deadline for such an inquiry is the final lecture of the quarter, but please do not wait that long. If you have a question on the grading, write a short note indicating your question, attach it to the homework, and submit it to me directly in lecture or in my mailbox. I will pass it along to the grader for you. The deadline for such an inquiry is before the next submission of work (homework or exam). The final decision on the grading of the homework is in hands of the grader.

#### IV. Exam Policy

1. **Material:** All the questions in the midterm and final exams will be based on the material covered during the lectures and discussions. The problems will be different than the ones in the homework but they will have the same focus.
2. **Preparation:** The best preparation is to solve the homework problems and attend the discussion sessions. They are supposed to prepare you for the midterm and final exams.
3. **Midterm exams:** There will be three midterms scheduled for Jan 27, Feb 17 and Mar 10 in the class. See the course schedule for the topics covered in individual exams. Each exam will contain 4 problems, and you can get 60 points in total.
  - 2 multiple choice questions, 10 points each: If you circle only a correct answer you get full credit, if you circle two answers and one of them is correct you get half credit, otherwise you get no credit. Unlike in the homework you do not have to show the derivation.
  - 2 problem solving questions, 20 points each: these are standard homework-style problems which require to demonstrate the understanding what you are doing. In most cases, clear steps of mathematics will be sufficient but some explanation is also needed. The final result must be circled and have proper units.
4. **Final exam:** It is scheduled for March 20, 3:30pm - 5:30pm. Learn this at the beginning of the quarter, and check to make sure you have no conflicts with events you already have scheduled, because no final exams will be administered at any time other than the scheduled time. If you know you cannot make this time, you should change sections or drop the class immediately. The final exam will have the same format as the midterm with 10 problems, and 160 points in total: 4 problems will be multiple choice questions (10 points each) and 6 problem solving questions (20 points each) with the same grading policy as in the midterm.
5. **Missing exams:** There are NO MAKE-UP EXAMS. You have one excused miss of midterm exam which requires a valid doctor's note, including a phone number where I can contact the doctor. In this case, the points you miss for this exam will be made up by other exams (as average of points). If your miss is unexcused you receive a (just barely) passing grade of 36 points (60%) on that midterm. If you miss two or three midterms or the final exam (whether excused or not) you will receive an incomplete or failing grade depending upon the circumstances.
6. **Best work doubled:** There will be 7 homeworks and 3 midterms but you will get a score for 8 homework and 4 midterms. The last one will be your best score in homeworks/midterms. For example, if you scored 9,8,7,8,9,8,7 on homeworks you get 9, if you scored 49,53,58 on midterms you get 58. This benefit is only extended to students at *my sole discretion*, with typical exceptions being those who do not take all of the midterms (whether the missed exam was excused or not) and those who are strong suspects for cheating during the quarter. If you lose this benefit for whatever reason, your fourth midterm and/or eight homework score will be calculated according to what I think is the fairest method under the circumstances.

7. **What to bring:** You can bring something to write with and a basic calculator which does not connect to outside world (no smartphone, tablets etc). But none of the calculations would really need calculator and could be easily done by hand.
8. **Regrades:** The deadline for submission of a regrade request is the lecture immediately following the one in which the graded exams were handed back. All regrade requests must be submitted to me in lecture with a completed Regrade Request form stapled to the front of the unaltered exam. The final decision is in hands of the grader, only the grader has the context of all other papers. If you think the grading might not have been consistent, then submit a regrade request to the grader, and if they agree that there was a misfire in the grading for your particular case, then they will redress the problem.
9. **Undue hardship on exam days:** If you have several (i.e. 3 or more) exams scheduled for a single day, then you should take every step possible to get accommodation (if you need it) from a class that does not contain 150+ students.
10. **Extra time (SDC):** If you receive extra time on your exams due to accommodation from the SDC, contact me as early in the quarter as possible so that we can make arrangements.
11. **Cheating:** Zero tolerance policy regarding cheating, suspected students will be referred to Student Judicial Affairs. No exceptions. You are strongly advised to avoid even innocent behavior that might give the appearance of cheating.

## V. Grading

1. **Final grade:** For the whole course you can get a maximum of 1000 grade points. This is calculated as a sum of points you receive from homeworks (with coefficient 1), midterms (with coefficient 2) and final exam (with coefficient 2.5). The final grade is then given by
  - (a) Homeworks 12%: 8 homeworks, each worth 15 points, gives 120 grade points.
  - (b) Midterms 48%: 4 midterms, each worth 60 points, times factor of 2, gives 480 grade points.
  - (c) Final exam 40%: worth 160 points, times factor 2.5, gives 400 grade points.

The percentage scale for the grades is (for points multiply by 10):

A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
100-97	97-93	93-90	90-87	87-83	83-80	80-77	77-73	73-70	70-67	67-63	63-60	<60

The boundary points (970, 930, 900 etc) belong to the better grade.

2. **Lab grade adjustment:** Failing the lab results in *failing the course, no matter what your remaining grades are*. Otherwise, the lab grade is *an extra credit grade*, which means that the default passing grade is *zero* (no change in grade points). The strong lab grade (high pass) will boost your course grade by one-half letter grade while a weak lab grade (low pass) will decrease the course grade by one-half letter grade. This does not apply on the transition between D- and F in both directions (the grade stays the same).