
Physics 4A Syllabus

Hartnell College • Spring 2010

Instructor: Dr. Haag
Office: M-10
Phone: 831 - 770 - 7017
Email: bhaag@hartnell.edu
Physics homepage: <http://www.hartnell.edu/physics>
Office hours: MW 1 - 2, T 11 - 12

Required Textbook / Materials

- Fundamentals of Physics, 8th Edition, by Halliday, Resnick, and Walker
- Lab Notebook with graph sheets
- 15 cm clear plastic ruler and protractor
- scientific calculator
- glue stick
- binder and notebook
- one ream of printer paper

Course Objectives: You will be expected to have gained a thorough understanding of the material presented to you by attending all lectures and labs, watching demonstrations, reading assigned material, working homework problems, and asking lots of questions.

Course Content: Chapters 1-16 in Fundamentals of Physics

Attendance: Attendance will be taken at the beginning of each class session via roll sheet. The Hartnell standard attendance policy from the Schedule of Classes will be adhered to:

“Any lack of attendance which leads an instructor to judge that unsatisfactory progress is being made may result in the student being dropped. Absence from a full semester class in excess of two weeks (consecutive or non-consecutive) may result in the instructor dropping the student. That is, a student may be dropped after missing one more class meeting than twice the number of class meetings per week.”

This amounts to 7 absences, excused OR unexcused. In addition 3 tardies can be counted as 1 absence.

Cell phones: If your phone rings during class or lab, you will be obligated to bring snacks for the class for the next class meeting. This policy applies if you are caught texting or otherwise using your phone during class or lab time.

Homework: Homework problems will be assigned once a week. Assignments are available on the physics homepage (see above). Working problems is one of the best ways you can learn the material in a physics course. Do the homework religiously and don't get behind! Work with other students (the Rotarium and Mesa rooms are great places to seek out tutoring and find fellow physics students studying) and see your instructor frequently—don't be afraid to ask for help. Homework assignments should be kept in your Exam/Homework folder and will be checked once a week. You are expected to come to office hours with questions on the homework assignments as we do not have time to answer homework questions in lecture. The homework will be graded mainly for completeness. If you do not attempt all of the problems, it will be turned back to you uncredited. You will have a 1 day grace period for homework. That is, you may turn the homework in the day after it is due without a loss of credit. The following day, you'll receive half credit. Any day after that and you receive **no credit**.

Laboratory: Generally, you will be doing an experiment or exercise each week in the laboratory section of the course. A written lab report will be turned in for each experiment done. The reports will be graded. Details will be given to you during the first laboratory session. Note: Experiments and lab reports must be completed for at least $\frac{3}{4}$ of the scheduled labs or **no credit will be given for the entire course**.

Exams and Quizzes: Several one-hour exams and weekly quizzes will be given throughout the course. Quizzes will be multiple choice. No make-up exams or quizzes will be given unless a prior arrangement

has been made with the instructor. Expect a quiz every Friday. Exams will generally consist of three problems. One or more of these problems may be taken from the homework assignments. You can also find Sample Exam problems on the website. You are allowed **one 3x5 inch card** with formulas on an exam (including the final). If you use anything larger than a 3x5 card, points will be deducted. No earbuds allowed during an exam. In addition you will be allowed to rework one exam of your choosing to increase your score by the amount of half of the points you lost. You may rework all the exams if you choose (the exam that helps your grade the most will be counted). A reworked exam is due one week after the exam is turned back. You will be expected to rework the entire exam (even if you only missed one problem). The reworked exam should be attached to the original exam and turned in together.

Exam/Homework Folder: Each student will be required to maintain an Exam/Homework Folder. All exams **should be reworked (solutions are posted in the case outside of M10 after they are graded and returned to you)** and stored in this folder. All homework assignments should also be kept in this folder in a separate section. All returned quizzes should be stored in this folder as well. In other words, you should have three different sections in your folder for exams, homework, and quizzes.

Academic Dishonesty / Cheating: As per the Hartnell policy from the Schedule of Classes:

“Dishonesty includes, but is not limited to, in-class cheating, out-of-class cheating, plagiarism, knowingly assisting another student in cheating or plagiarism, or knowingly furnishing false information to College staff, faculty, administrators or other officials. Following are definitions of in-class cheating, out-of-class cheating, plagiarism, and furnishing information. These are not all-inclusive, and the list itself is not meant to limit the definition of cheating to just those mentioned.

1. In-class cheating: during an examination or on any work for which the student will receive a grade or points, unauthorized looking at or procuring information from any unauthorized sources or from any other student’s work.

2. Out-of-class cheating: unauthorized acquisition, reading or knowledge of test questions prior to the testing date and time; changing any portion of a returned graded test or report and resubmitting as original work to be regarded; or presenting the work of another as one’s own for a grade of points.

3. Plagiarism: unauthorized use of expression of ideas from either published or unpublished work(s) as a student's own work for a grade in a class. This also includes the violation of copyright laws, including copying of software packages.

4. Furnishing false information: forgery, falsification, alteration, or misuse of College situations.”

If a student is discovered to be cheating, a zero will be given on the assignment immediately and a meeting with the instructor will be scheduled. If a second instance occurs, the prior policy will be invoked in addition to further action taken with administration and the possible result of a failing grade in the course.

Final Grade: Your grade in the course will be based on the total number of points* you receive for the following:

Item	Points	Percentage of Total (approximate)
Laboratory	100	12.5
Exams and Quizzes	400	50
Homework	100	12.5
Final Exam	200	25

Final Grades will be determined by calculating the percentage of your total points earned relative to the total possible points for the course and then applying that percentage to the following table*:

90 - 100% = A	70 - 79% = C	< 60% = F
80 - 89% = B	60 - 69% = D	

*Additional points for extra credit projects, extra or fewer exams, quizzes, the Physics Olympics and other subjective factors may change these percentages somewhat. As to further details on how your grade is determined, see pages 5 -6.

The Final Exam for this class will be given **Friday, May 28, 8 - 11:00 am**. The final will be cumulative.

Calculating your grade:

week (chapter)	Quizzes	Exam	Homework	Labs	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
Total					
Total Possible					

Your grade is: (points earned / points possible) * 100 %

points earned = (# of homeworks completed * (100/15)) + (# of labs completed * (100/15) + (total points on quizzes) + (total points on exams))

points possible = (total # of homeworks * (100/15)) + (total # of labs *(100/15)) + (total # of exams * 100) + (total # of quizzes * (10))

Sample Calculation:

week (chapter)	Quizzes	Exam	Homework	Labs	
1	9	-	x	x	
2	10	-	x	x	
3	7	-	0	x	
4	2	-	x	x	
5	-	75	x	x	
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
Total	$9+10+7+2 = 28$	75.0	$4 * (100/15) = 26.7$	$5 * (100/15) = 33.3$	$28+75+26.7+33.3 = 163$
Total Possible	$4 * 10 = 40$	$1 * 100 = 100$	$5 * (100/15) = 33.3$	$5 * (100/15) = 33.3$	206.6

Your grade is: (points earned / points possible) * 100 %

$$(163 / 206.6) * 100 \% = 78.9 \%$$

Homework Assignments:

Chapter 1:

1, 5, 12, 16, 21, 23, 25, 43

Chapter 2:

Questions: 3, 5

Problems: 5, 6, 15, 20, 24, 34, 49

Chapter 3:

Questions: 4

Problems: 8, 28, 35, 37, 43

Chapter 4:

Questions: 7

Problems: 7, 13, 15, 30, 37, 61, 65, 70

Chapter 5:

Problems: 8, 19, 21, 35, 41, 47, 51, 55

Chapter 6:

Problems: 7, 13, 18, 20, 29, 37, 46

Chapter 7:

Problems: 11, 13, 21, 27, 36, 46

Chapter 8:

Problems: 3, 11, 20, 25, 27, 29, 39, 50, 55

Chapter 9:

Problems: 3, 15, 18, 29, 37, 39, 40, 47, 50, 57, 64, 71

Chapter 10:

Problems: 4, 17, 21, 38, 41, 47, 52, 61

Chapter 11:

Problems: 8, 11, 23, 29, 33, 43, 53, 56, 61

Chapter 12:

Problems: 9, 30, 37, 43, 44

Chapter 13:

Problems: 6, 7, 17, 19, 27, 33, 35, 37, 45, 47, 61

Chapter 14:

Problems: 9, 13, 32, 33, 57, 62, 69

Chapter 15:

Problems: 7, 10, 11, 28, 31, 35, 40, 41

Chapter 16:

Problems: 3, 5, 11, 15, 28, 31, 32, 35, 45, 47