

PHYSICS 317K, FIRST DAY HANDOUT

Fall Semester, 2017

Tu-Thur 2 to 3:30 PM Unique # 56185 Pai 2.48

Instructor: Rory Coker, RLM Hall 8.312, 471-5194, <http://tinyurl.com/cokerrory> contains links to all Coker's course information. <http://tinyurl.com/317kcoker> takes you directly to the 317K web page.

Text: *Essential University Physics* by Richard Wolfson, current edition. [Earlier editions will work.]

Office Hrs: TBA, in RLM 8.312.

Nature of the Course: This is the first semester of a calculus-based university-level course in introductory physics. You must also be concurrently enrolled in Physics 117M, a separate course which constitutes the laboratory part of the Physics 317K coursework. In general, you should **not** be in this course unless you are thoroughly familiar with all aspects of algebra, trigonometry and basic calculus, at the level of a **very good** high school course or an introductory college-level course.

Examinations: There will be two in-class mid-term examinations and a final (see syllabus). The examinations will cover **ONLY** material that has been covered in class lectures, independent of what is in the textbook chapters supposedly covered, so that good class notes and regular class attendance are an *an absolute necessity*. Each examination will have several basic conceptual questions and several numerical or algebraic problems. All will be in multiple-choice Quest format, answered on bubble sheets, and graded by the same system that handles homework. On the mid-term examinations, you can use a "crib sheet" that you have made for yourself, handwritten by you on both sides of a single 8.5 by 11 sheet of white paper. Each crib sheet is for a specific exam and cannot be re-used. No other reference material may be used: no books, no old homework solutions, no notes, no nothing— unless provided by the instructor at the time of the test. **There will be no makeup exams, under any circumstances.** Because of the way exams are constructed on Quest, it is impossible to create two different exams on the same chapters, with the same level of difficulty. The mid-term exams are held during the regular class times in the regular classroom, on October 3 and November 7.

Homework: Homework is handled by the on-line College of Natural Sciences system called Quest. The homework assignments can be viewed on your web browser or smart phone and your answers submitted there as well; the homework will consist of conceptual questions and problems to be solved; most answers are in multiple-choice format; a few will require input of a specific numerical answer. You log in with your UT-EID at <https://quest.cns.utexas.edu/>. A link is found on our class webpage, <http://tinyurl.com/317kcoker>. There is a continuously-updated running table of homework due dates and times on this same course web page; and of course the due dates and times are clearly stated on the assignments themselves. There

is a severe built-in penalty for guessing, in multiple-choice format. Problems that have required numerical inputs have much more tolerance, and two or three trials will not result in great loss of points. “Late Homework” and “Makeup Homework” *DO NOT EXIST!* Doing the homework is vital! Trouble in doing the homework is a clear indication of trouble with your study habits; don’t neglect the warning! When you need help, don’t hesitate to get it, but try to work *on your own* and start work well before the homework is due. It is when doing the homework, *on your own*, that you find out what *you* don’t understand and what *you* need to study more effectively, or ask the class TA, or coaches, or the instructor, or your tutor for more information concerning. If you don’t find this out when doing the homework, you will first find it out when you take the relevant mid-term exam... and then it is far, far too late. The homework also directly contributes as a significant percentage of your final course grade.

The Quest homework service will require a charge of roughly \$30 per student for its use, which goes toward the maintenance and operation of the resource. After the 12th day of class, when you log into Quest using the link provided above, you will be asked to pay that amount via credit card on a secure payment site. You have the option to wait up to 30 days to pay while still continuing to use Quest for your assignments. If you are taking more than one course using Quest, you will not be charged more than a total of \$60/semester. Quest provides mandatory instructional material for this course, just as does your textbook. For payment questions, email quest.fees@cns.utexas.edu.

Basis of Grade: In-class quizzes, 25%; Homework, 40%; Final, 25%; lecture attendance 10%.

Teaching Assistant: The TA is TBA. Office hours, TBA.

Laboratory: The laboratory is a separate course, 117M, and must be registered for, taken, and passed, independent of Physics 317K. You must take the lab unless this is your second time to take 317K, and you passed the lab the first time. If you have registered for 317K but not 117M, you may be automatically dropped from 317K after one warning e-mail from the Registrar.

Clickers and Attendance: In large physics classes we take attendance with a so-called iClicker, which can be purchased at the UT Co-op. There are several different kinds of clickers, and any of them should work in the classroom, PAI 2.48. Attendance is specifically checked by a so-called in-class “Attendance clicker quiz,” a single question which you have to answer with your clicker. The standard approach is to assign full credit if the question is answered correctly, half-credit if it is answered incorrectly, and zero credit (absence) if the clicker was not used. Make sure your clicker is set on the standard channel AA! Because of some very, very unwise changes related to clickers and Quest, you must register your clicker for this class, *on Canvas*, even though we do not use Canvas for anything whatsoever in large physics classes. Therefore, please register your clicker remote in Canvas to participate in in-class activities. Simply go to this class in Canvas, click the “i-Clicker” link in the menu,

and enter the remote ID that can be found on the back. The clicker itself flashes a green light when the classroom system confirms that it is working, during an attendance check. It is your responsibility to get your clicker working for the course as soon as possible, so that your attendance is correctly recorded. **Do not register more than one clicker for this course on Canvas! That usually causes none of your scores to be counted, nor can they be recovered!** If you have a used clicker, again, make sure it is set to the standard classroom channel, AA. *Do not come up halfway through the semester* and ask how to register your clicker or ask why your attendance has not been counted. Lost attendance scores *cannot be recovered*.

Coaching: Coaches will be available at certain posted hours per day (typically 9 to 6) at tables near the elevators on the 5th level of the physics building, RLM Hall. Please do not ask coaches to do your homework for you! They are there to answer questions you might have, set up and solve example problems, and explain concepts that you are having trouble with. Be aware that some coaches may give you incorrect information!

Tutors: If you find yourself having trouble with understanding the material, or keeping up, it is important *as soon as possible* to take steps to improve your situation. *Do not wait* until you have flunked an exam, or stopped doing homework, or stopped coming to class!! One thing that helps many is to hire a tutor. The physics undergraduate student office on the 5th level of RLM Hall has a list of physics graduate students available for tutoring. Rates and hours must be arranged individually between you and the tutor. If this is your second time to take 317K, i.e., if you have *already* had to drop the course, or took the course previously and made D or F, **you should definitely get and work closely with a competent tutor from the very first day of the class.** Be highly specific in explaining what you want the tutor to help you with, e.g., strategies and techniques for physics problem solving, starting from a thorough review of basic principles and concepts. Have the tutor watch as you work out examples, so that he or she can see specifically where you go off the tracks.

Other Information: For the homework and mid-term quizzes in this course you will need a good “scientific” calculator, and the knowledge of how to use it rapidly and accurately. The calculator should use “scientific” (powers of ten) notation and have keys for at least the following functions: \sin , \sin^{-1} , \cos , \cos^{-1} , \tan , \tan^{-1} , e^x , $\ln x$, $\log x$, 10^x , x^2 , \sqrt{x} , y^x and $\sqrt[y]{x}$. Such a calculator typically costs not much more than \$10, at any drugstore or grocery store. Do not waste money on a fancier calculator with fancier features, unless you really need them for some other course. Beware of, and do not waste money on, any calculator that lacks basic functions such as e^x , or any of the other necessary functions listed above. During exams you cannot use *any device that can be connected to the internet*, such as for example the calculator app on a pocket phone (and note that almost all pocket telephones have a scientific calculator on them somewhere, useful in doing homework).

UT Legal BS: (1) “The University of Austin provides upon request appropriate academic

accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471- 6259, 471-6441 TTY.” (2) “This course carries the Quantitative Reasoning flag. Quantitative Reasoning courses are designed to equip you with skills that are necessary for understanding the types of quantitative arguments you will regularly encounter in your adult and professional life. You should therefore expect a substantial portion of your grade to come from your use of quantitative skills to analyze real-world problems.”

COURSE SYLLABUS

Date	Topic of lecture	Exam Coverage
Aug 31	Ch. 2	
Sept 5	Ch. 2, 3	
Sept 7	Ch. 3	
Sept 12	Ch. 4	
Sept 14	Ch. 4, 5	
Sept 19	Ch. 5	
Sept 21	Ch. 6	
Sept 26	Ch. 6, 7	
Sept 28	Ch. 7	
Oct 3	Quiz 1	(Chs. 2 - 6)
Oct 5	Ch. 8	
Oct 10	Ch. 8, 9	
Oct 12	Ch. 9	
Oct 17	Ch. 10	
Oct 19	Ch. 10, 11	
Oct 24	Ch. 11	
Oct 26	Ch. 12	
Oct 31	Ch. 13	
Nov 2	Ch. 13, 14	
Nov 7	Quiz 2	(Chs. 7 - 12)
Nov 9	Ch. 14	
Nov 14	Ch. 15	
Nov 16	Ch. 15, 16	
Nov 21	Ch. 16	
Nov 28	Ch. 17	
Nov 30	Ch. 18	
Dec 5	Ch. 18, 19	
Dec 7	Chs. 19	

Exact due dates and times for homework assignments are summarized on the course web page, <http://tinyurl.com/317kcoker>, and of course on the specific Quest assignment itself. The final exam will be held on Thursday, Dec. 14, from 9 to 12 noon, place to be announced. It will be cumulative, but about 65% will be devoted to Chs. 13 - 19, and only 35% to Chs. 2 - 12.