

PHYS-114, Newtonian Mechanics

Course Information – Winter 2008 A Section

Professor: Dr. Daniel Russell

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Office Hours: W 1:30-3:30 and ThF 10:00-11:00 (also by appt.)

⇒ **PHYS-114 homepage:** <http://www.kettering.edu/~drussell/phys114.html> ⇐

Text: *Physics for Scientists and Engineers*, Volume 1, by Randall D. Knight (Addison Wesley, 2004) with Student Workbook Volume 1 (we will use this in class)
with Mastering Physics Student Access Kit

Classroom Policies

Attendance

You are expected to attend and participate in every class session. *Your attendance and classroom participation will be monitored.* Dr. Russell may administratively withdraw any student who misses more than 4 lectures without an acceptable excuse. (Withdrawals after 7th week are recorded as a 65).

Cell Phones

Cell phones must be turned off during class. Dr. Russell tends to get very annoyed if he hears beepers and phones ringing during class time.

Grading

Daily Reading Quizzes	5%
Mastering Physics Homework	10%
Group Quizzes	5%
In-class Tests	60% (highest score 25%, middle score 20%, lowest score 15%)
Final Exam	20%

Daily Reading Quizzes (5% of grade)

The course schedule contains a reading assignment for each lecture period. You will be expected to read these sections from the textbook **before** coming to class. In addition, before coming to class for each lecture you will take a brief internet quiz which will assess your understanding of the reading material and prepare you for each lecture. The purpose of these daily quizzes is: (1) to help you keep up with the course material, (2) to get you thinking about the lecture material before you come to class, (3) to provide you and your professor with instant feedback on areas that may give you difficulty, and (4) to help your professor make more effective use of time spent in the classroom. Daily Reading Quizzes will be taken over the Internet using a web browser. You may take the quizzes anywhere, at any time of day or night, as long as you submit them **before 10:00Am each day**. Dr. Russell looks at the individual/class quiz responses before coming to lecture and adjusts the lecture material to reflect student responses.

The starting point for each daily quiz is the "**Daily Quiz**" link from the PHYS-114 homepage (see link above). Your UserID is your Lastname (with a capital first letter), and your password is the last five (5) numbers of your Student ID number.

Each daily quiz will consist of 7 questions: a combination of fill-in-the-blank, multiple choice, simple number calculations, and short essay. Collaboration is allowed, but for many quiz questions your individual quiz questions will have unique randomized numbers. You may logon to a quiz as many times as you like, but you may only submit each quiz for a grade once — you will not be able to submit a quiz a second time to improve your score. Your quiz is submitted only when you click the [Submit]. Some browsers will submit the quiz when you accidentally hit the [Return] or [Enter] key on your computer keyboard — however, this does NOT submit your quiz. Your quiz answers are submitted only when you click the [Submit] key at the bottom of the quiz.

You will receive a percent grade immediately upon completing the quiz. Your actual quiz grade will be your $\% \times 0.3 + 70$. For example, if you correctly answer 5 out of 7 questions, your score will be $71\% \times 0.3 + 70 = 91$. If you attempt a quiz and get every question wrong you will still get a 70%. If you do not take a quiz you will receive a zero for that quiz. Each daily quiz will also provide you with the opportunity to give feedback to your professor about the reading assignment, what you would like clarified in class, or anything else about the course.

Mastering Physics Homework (10% of grade)

Students are required to complete homework assignments consisting of approximately 10-15 questions for each chapter we cover from the textbook. Homework will be assigned using the Mastering Physics on-line homework system (<http://www.masteringphysics.com>). The course ID is PHYS114KUDRW08, and you will need a **student access code** to enroll (bundled with the textbook and workbook at the Kettering Bookstore). *If you purchased and used a student access code for PHYS-114 last term you should still be able to use the same access code this term.*

→ One of the biggest mistakes students make in this class is to wait until day a homework assignment is due to start working on it. Wise students will start looking the homework as soon as it is posted, so that they have time to seek out Dr. Russell for assistance.

Group Quizzes (5% of grade)

At least once a week you will be given a problem to work in groups. Problems will be similar to what you will expect to see on tests. You will be allowed to work together in groups, but each student will turn in a solution for a grade. Working in groups will help you, and the quizzes will provide you with feedback to get you ready for tests.

Tests (60% of grade)

There will be three (3) **in-class tests** (see dates on course schedule). Your highest score will count for 25%, your middle score for 20% and your lowest score for 15%. Tests will usually consist of a 6 to 8 questions, including several shorter conceptual, graphical and numerical problems, some short essay type questions, and at least one longer detailed worked out problem. *In order to receive full credit for any and all questions you must correctly show all work in detail, and/or correctly explain the reasons for your answer.* Skipping steps, or not showing work will result in loss of points even if your answer is correct. Dr. Russell reserves the right to award zero points for simply stating the correct answer without showing work. Partial credit will be given for correct work. Equation sheets will be provided for each test.

⇒ Any disputes concerning graded material (other than simple errors adding points) must be brought to the professor's attention **in writing** within three (3) class periods after the test was handed back.

Make-Ups: for tests will be administered only in extreme cases. The decision to allow a makeup test rests exclusively with the professor, and Dr. Russell reserves the right to refuse a request for a makeup exam if the reason for the request is not considered to be a legitimate emergency situation. **Requests for makeup tests must be made within 24 hours before or after the test**, and documentation must be provided to explain the reason for requesting a makeup.

Calculator Policy: calculators will be required for every exam, but there are no restrictions on the specific make or model. Students will be required to show all work for all problems, so feel free to use a calculator that you are comfortable with. Cell-phones, however, will **not** be allowed as calculators.

Cheating: as defined in the Code of Academic Integrity (see the Kettering University Student Handbook) cheating will not be tolerated. The minimum penalty for the first offense is a zero (not a Kettering 65). All suspected cases of cheating will be referred to the Dean of Students for disciplinary action.

Final Exam (20% of grade)

The final exam for this course will be comprehensive over the entire course including content covered after the third in-class test. The final exam will be common to all sections of PHYS-114. The format for the final exam, as well as the date, time, and location will be announced later in the term.

Withdrawal Policy Regarding Lecture and Laboratory

PHYS-114 (lecture) and PHYS-115 (lab) are co-requisite courses, which means that they must be taken simultaneously. Any student who withdraws from PHYS-114 (lecture) before Friday of 6th week must also withdraw from PHYS-115 (lab). Any student who withdraws from PHYS-114 during or after 7th week may elect to remain in PHYS-115 (lab) for the remainder of the term. Any student who fails or withdraws from PHYS-115 (lab) must retake the entire laboratory course completing all of the experiments. NO credit will be given for laboratory exercises completed during previous terms.

Pre-requisites

PHYS-114 requires MATH-101 as a pre-requisite and MATH-102 as a co-requisite. Students who have not satisfied these requirements will very likely be removed from the course by the registrar.