

Physics 255:
University Physics I
Fall 2008

Course:

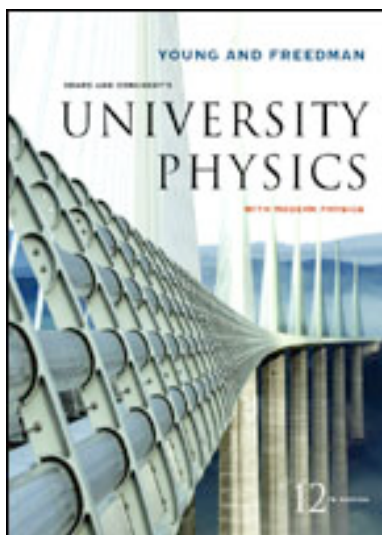
Discussion: MWF 10:20-11:15, R 11:10-12:30, TCCW 201

Lecturer: Dr. Louis-Gregory Strolger

Office: TCCW 225
Phone: 745-6204
Email: louis.strolger@wku.edu
Web Page: <http://astro.wku.edu/strolger/>
Office Hours: W 1:30–3:30 p.m., R 3:30-4:30, or by appointment

Catalog Course Description: This is the first half of a year-long sequence in calculus-based physics (255 & 265) suggested for students in the physical sciences and mathematics. Definitions, concepts, and problem solving will be emphasized. Topics include kinematics, dynamics, energy, conservation laws, rotation, harmonic motion, mechanical waves, and thermodynamics. It is recommended that a strong pre-college level mathematics background precede this course. Calculus will be used throughout this course.

Objectives: The course will emphasize rigorous problem-solving in physics using interactive instruction, educational software, computer applications important for science and engineering students, and cooperative learning. Class activities will require students to be responsive, to think, and to perform hands-on tasks. Key concepts of new material will be discussed in short lectures. As a scientist or an engineer you will often be required to work in a group setting as well as alone. This course will encourage collaborative teamwork, a skill that is valued by most employers. As you study together, help your partners to get over misconceptions, ask each other questions, and critique your group homework. Teach each other! You will be surprised at how much you can learn by teaching.



Required Text: *University Physics with Mastering Physics, 12th edn.* By Young and Friedman (Addison-Wesley, ISBN 080532187X). The textbook should be available in campus bookstores before the start of the semester. This textbook will be used for the entire University Physics sequence (PHYS 255 & 265). The bookstore may also offer additional study guides, but these are optional and will not be required.

Prerequisites and Co-requisites: Students taking Physics 255 **MUST** have already satisfactorily completed Math 126 (Calculus I). In addition, you must be enrolled in Physics 256 - University Physics I Laboratory, and must be enrolled in (or have already completed) Math 227 (Calculus II). **There will be no exceptions to these requirements.**

Your grade in this course will be based on your performance on homework, quizzes and examinations. The weights assigned to the homework and exams are:

- 10% Take Home, Group Assignments, and Quizzes.
- 25% **Mastering Physics** assignments
- 10% Exam 1
- 10% Exam 2
- 10% Exam 3
- 10% Exam 4
- 25% Final Exam

Your final letter grade will be determined using the usual percent distribution of 90 - 100 = A, 80 - 89 = B, 70 - 79 = C, 60 - 69 = D, < 60 = F.

Assignments:

- **Reading:** You are responsible for reading the textbook prior to the dates indicate on the course schedule.
- **Mastering Physics:** Individual homework assignments in the course are to be done on the Mastering Physics computer homework system. You will receive credit for correct solutions automatically by Mastering Physics. It is in your best interest to maintain prepared written solutions (using a good problem solving strategy) for discussion in lecture. Frequently, extra credit will be given to those who demonstrate effective solutions. As a general rule homework solutions will not be posted. The burden is on you to make sure you find out how to solve the problems by getting help before they are due or asking about them in class. Grading in MP is such that you can enter an unlimited number of wrong answers. You only lose credit if you turn in the assignment late. Multiple choice and true-false questions are the only exception to the rule. Each part of an assignment that is not submitted by the due date will lose credit based on a linear scale where 25% is deducted for every day that it is late (roughly 1% loss per hour).
- **Take Home & Group Assignments:** Occasionally, there will be additional in-class and out of class assignments. In some, you will be responsible for completing the assignment completely on your own, without outside assistance. But in group assignments, you will be asked to work with other students. A diligent effort on the homework is the best approach to a successful learning experience in this course.

Exams: The examinations for this course will be given during class time according to the schedule shown in the course calendar. Since our classroom is not suitable for giving exams to over 30 students, the exams may be held in an alternate location to be announced later. Everyone is expected to take exams during the regularly scheduled exam periods with the rest of the class. As a general rule, makeup examinations will **NOT** be given, except for very unusual circumstances. If you are unable to take an exam, you **MUST** request to schedule a makeup examination by asking permission from the instructor **BEFORE** (except in the case of unforeseen circumstances) the regularly-scheduled exam period. A serious reason is required to warrant the scheduling of a makeup exam.? The final exam for the course will

be comprehensive. It will include material from all 4 exams plus new material covered after Exam 4. The exam will be given according to the university mandated schedule which is also shown on the course calendar.

Attendance: Regular and punctual attendance is expected of everyone during every class meeting. You will be responsible for material missed in your absence. Lecture notes must be obtained from a classmate.

Drop/Audit Policies: Due to the nature of this course, **students will not be allowed to audit PHYS255**. If you choose to not complete the course for a grade then your only option is to drop the course and receive a grade of W by the University deadline for dropping a course. If you choose to drop the course you **MUST** also drop the lab since they are co-requisites.

Student Disability Services: In compliance with university policy, students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Office for Student Disability Services in DUC A-200 of the Student Success Center in Downing University Center.

Please DO NOT request accommodations directly from the professor or instructor without a letter of accommodation from the Office for Student Disability Services.

Additional Classroom Policies:

- Food and drinks are NOT allowed in the classroom.
- Cell phones, pagers, beepers, and similar devices MUST be turned off and stored away during class time.
- The laptops in the classroom are for specific classroom activities ONLY:
- Do not install or modify any software on the laptop computers.
- Do not use the computers to check email during class time.
- Do not use the computers to instant message or chat with anyone ever.
- Do not browse the internet during class time unless it is part of an activity.
- Do not submit or review Mastering Physics assignments during class time.