

Physics 104: College Physics I Spring 2014

Professor: Dr. Daniel K. Marble
Office: SCI 213E; SCI 232 (RBS Lab)
Telephone: 968-9880
Email: Marble@tarleton.edu

Office Hours: MWF 9:00-10:00
Others by appointments

Class Hours:

M	10:00-12:00 & 1:00-2:00
T	10:00-11:00 & 1:25-2:40
W	10:00-12:00 & 1:00-2:00
R	10:00-11:00 & 1:25-2:40
F	10:00-12:00 & 1:00-2:00

Textbooks:

Physics 7th ed. by Giancoli (Primary Textbook – Mandatory)
Schaum's Outline Series: College Physics by Bueche (Optional)
Used Math – Clifford Swartz (Optional) – Math Primer for Students Needing Additional Help

Homework: WebAssign Password – (Required: Purchase from the bookstore or over the Internet at www.webassign.com)

Catalog Description: An introduction to mechanics, heat, and wave motion. This course is a trigonometry-based physics course. A student cannot get credit for [PHYS 104](#) if credit has been previously received for [PHYS 122](#). Prerequisite: [MATH 109](#) or 118 or concurrent.

Course Description: This course is a flipped course. Outside of class, students will watch taped lecture videos and do textbook readings to complete course notes and prepare for class. During class, students will complete graded activities including labs, homework, quizzes & tests rather than traditional classroom lectures.

Grading: The final grade for Physics 104 will be based upon written tests, quizzes, homework and lab work. Homework will consist of in class group activities as well weekly problems collected using the automated homework system WebAssign.

Time: Because Physics 104 requires students to use math and science skills learned in other classes as well as learning and study skills beyond simple memory and recall, it is a challenging course for most students. However, most students even those with poor backgrounds can succeed in Physics 104 if they develop the necessary study skills and consistently spend the required time. Students should consider their academic, work, and outside activity schedule to see if they have sufficient time to dedicate to Physics 104. A student should expect to **spend a minimum of 2 to 3 hours outside of class for every 1 hour of class** depending on the student's background and the material. **In order to be**

successful, it is important that the student develops a consistent study schedule instead of cramming for tests as each future test requires mastery of the previous material. The student should complete all textbook reading and watch all video lectures for each particular module. The student's study program should include working through each equation in the textbook, reviewing previously covered material, working problems, and noting questions for the instructor. The process of learning physics is similar to that of learning to play football or the flute in that it is not a spectator activity. Each student is expected to come to class with questions and prepared to engage in an interactive activity. Failure to come prepared for class will likely result in the student being unable to complete the class assignment. Students should make frequent use of the instructor's office hours whenever they are having difficulties. In addition to posted office hours, students should feel free to come for assistance anytime the instructor is in his office. Students can also contact their instructor for help using e-mail or the WebAssign help desk.

Pre/Post Class Work: In order to master the material in Physics 104, students may have to work through the reading assignments multiple times using pen and paper. Students are expected to visit <http://www.tarleton.edu/physics/Physics104/index.html> the Physics104 course web site. The student should watch any assigned video to fill out their notes and then make a quick reading of the chapter and record any areas of confusion.

Homework: Homework will be assigned and collected individually using the automated homework system, WebAssign. (<http://www.webassign.com>). In class group homework activities will also be collected. Universities from all over the country including the US Military Academy at West Point, US Naval Academy, Purdue, Massachusetts Institute of Technology, etc have found WebAssign to be a powerful teaching tool. Each student is provided a set of problems with their own unique set of numerical values. Upon completion of the assignment, the student will submit their answers over the Internet and receive immediate feedback. In order to improve the student's ability and their grade, WebAssign will allow the student to rework the problems as many times as they wish until the assignment's due date. If a student finds that they do not understand the solution to a particular problem or have spent more than 30 minutes on one problem, they are encouraged to seek help from the instructor. Students should consider these assigned problem sets to be the minimum number of problems that must be solved to successfully complete Physics 104. Additional problems with solutions are also contained in their Schaum's Outline Series.

Notebook: Each student is required to keep an organized class notebook containing filled out lecture notes from the online videos, worked out solutions to all homework problems including those on Webassign, and labs. The notebook will be collected periodically for a homework grade.

Attendance: Students are expected to attend all classes and labs. If a student will miss a class due to illness, they should contact the instructor by email as soon as possible and supply a doctor's note. If the instructor determines that an absence excused then the instructor will either allow the student to make up the activity or adjust the weighting of

graded events so that the student is not penalized. **If the absence is unexcused then the student will receive a zero for the missed graded event.**

Lab: In order to receive credit for the course, a student must complete the lab portion of the course by successfully finishing all lab assignments. These include redoing successfully for no credit those labs for which they received a failing grade of zero.

If a student receives a zero for missing a lab, they must still arrange a time with the instructor to complete the lab in order to complete the course. During lab, **computers are only allowed to be used for lab work**. They are not to be used while the instructor or student group is presenting material or to complete homework assignments without instructor approval. **Students not working with their team on their labs or using computers in an unauthorized manner will be given a grade of zero and required to make up the lab.**

Disability Statement:

It is the policy of Tarleton State University to comply with the Americans with Disabilities Act and other applicable laws. If you are a student with a disability seeking accommodations for this course, please contact the Center for Access and Academic Testing, at 254.968.9400 or disability@tarleton.edu. The office is located in Math 201. More information can be found at www.tarleton.edu/sds or in the University Catalog.