

Physics 1401-C2
College Physics I
Blinn College – Bryan Campus
Fall, 2009

Instructor: James Freeman

Office: G202

Office Hours: Monday and Wednesday: 2:45 pm – 4:00 pm
 Tuesday and Thursday: 12:00 pm – 1:00 pm
 (other times by appointment)

Email: jim.freeman@blinn.edu

Phone: 979.209.7451(O) 281.389.4681(C)

Course Information

Course Web site: www.blinn.edu/brazos/natscience/jfreeman

Classroom Locations and Meeting Times:

Lecture	Lab
Room G231 TR 1:25 pm – 2:40 pm	Room G231 TR 2:50 pm – 4:05 pm

Course Description:

This course is designed primarily for students preparing for careers in architecture, biology, medicine, pharmacy and other fields requiring two semesters of physics. We will cover the fundamentals of classical mechanics, heat and sound.

Prerequisites:

Two years of high school algebra with a grade of “C” or better or Math 1314. Knowledge of basic trigonometry is also useful.

Core Curriculum Course:

This course is in the 42-hour Core Curriculum of Blinn College. Students will develop proficiency in appropriate intellectual competencies, exemplary educational objectives, and general perspectives. The URL of the Blinn College core curriculum web site is www.blinn.edu/corecurriculum.htm.

Student Learning Outcomes:

Upon completing this course, students should be able to accomplish the following goals using algebra and basic trigonometry. Lecture and laboratory work will focus on these learning outcomes:

- Apply the equations of kinematics for objects moving with constant acceleration in one and two dimensions.
- Use vectors in solving physics problems.
- Apply Newton’s laws of motion to one- and two-dimensional linear dynamics problems.
- Utilize the definition of work, the work-energy theorem and the principle of conservation of energy in solving physics problems.
- Apply the principle of conservation of linear momentum.
- Apply the equations of rotational kinematics for objects rotating with constant angular acceleration.
- Apply the equations of rotational dynamics, including the principle of conservation of angular momentum.
- Utilize principles such as Newton’s law of universal gravitation, conservation of energy or Kepler’s laws to solve problems in gravitation.
- Describe selected properties of oscillations and waves.
- Distinguish between the concepts of heat and temperature. Use the concept of specific heat in solving problems involving calorimetry.
- Apply the concept of latent heat to problems involving phase changes. Describe various properties of ideal gases.
- Recognize, explain and apply the laws of thermodynamics.

Textbooks and other materials:

- **Required Textbook:** James S. Walker, *Physics*, 3rd edition (Vol. I)
- **Required Homework System:** Students *must* purchase an access key to [MasteringPhysics](#), the textbook publisher's online homework system. This key is bundled with the textbook at the Blinn bookstore. Alternatively, you can purchase the access key online at www.masteringphysics.com; be sure to select the Walker text above to pair with *Mastering Physics*. The *Mastering Physics* Course ID for section C3 is **BLINN1401C2F09**. *****Make sure to enter it exactly as it is given here.*****
- **Required Laboratory Manual:** *Physics 1401 Laboratory Manual*. This manual is available for a nominal fee at the Copy Center on the first floor of the Bookstore Building.
- **A scientific calculator**

Blinn College Policies**ADA Statement:**

Students with physical or learning disabilities must contact the [Office of Disability Services](#) (Room 165, Science Bldg.) to receive accommodation on exams and assignments. The Office of Disability Services will provide you with an accommodation letter specifying the accommodations that are to be provided to you. You must present this letter to me in order to receive accommodation. Accommodation is not retroactive.

Attendance

The College District believes that class attendance is essential for student success; therefore, you are required to promptly and regularly attend all classes. Each class meeting builds the foundation for subsequent class meetings. Without full participation and regular class attendance, you will find yourself at a severe disadvantage for achieving success. Class participation will constitute at least ten percent of the final course grade. I will keep a record of attendance from the first day of class. If a student accumulates one week's worth of unexcused absences during the semester, he or she will be sent an e-mail by the College requiring the student to contact his or her instructor and schedule a conference immediately to discuss his or her attendance issues. **Should the student accumulate two weeks' worth of unexcused absences he or she will be administratively withdrawn from class.**

There are four types of excused absence officially designated by Blinn College: (1) Observance of religious holy days: You must notify me not later than the 3rd day of the semester concerning the specific date(s) that you will be absent for any religious holy day(s); (2) Representing Blinn College at an official institutional function; (3) Official involvement in a high school activity for "dual credit" students; (4) Military obligations.

NOTE: Missing any part of lecture or lab counts as one absence. If you miss both the lecture and lab periods for a given day, the absence counts as only one absence.

Student E-mails

Students are assigned an e-mail address that must be checked regularly for official Blinn communications and course information. The address is of the form: *Firstname.LastnameLast2digitsBlinnID@buc.blinn.edu*. Information about accessing this account can be found at: www.blinn.edu/acadtech/studentemail/

- **Note:** All official course email between the instructor and students will be via [eCampus](#) email.

Dropping

If you choose to drop the course, it is your responsibility to complete a drop order at the Office of Enrollment Services; failure to do so could result in a grade of F in the course.

Classroom Civility

Members of the Blinn College community, which includes faculty, staff and students, are expected to act honestly and responsibly in all aspects of campus life. Blinn College holds all members accountable for their actions and words. Therefore, all members should commit themselves to behave in a manner that recognizes

personal respect and demonstrates concern for the personal dignity, rights, and freedoms of every member of the College community, including respect for College property and physical and intellectual property of others.

If a student is asked to leave the classroom because of uncivil behavior, the student may not return to that class until he or she arranges a conference with the instructor. It is the student's responsibility to arrange for this conference.

Mobile Phones

All mobile phones must be turned off at all times while in the classroom or lab.

Scholastic Dishonesty

Blinn College does not tolerate cheating, plagiarism, or other acts of dishonesty. Definitions of these acts and procedures for dealing with them are described in "Scholastic Dishonesty" in the [Blinn College Student Handbook](#), copies of which are available at the information desk in the Administration Building.

Blinn College grading system*

A = 90 – 100	Superior
B = 80 – 89	Above Average
C = 70 – 79	Average
D = 60 – 69	Passing
F = < 60	Failing

*from Board Policy Manual EGA(LOCAL), issued 05/24/2004

Class Details

eCampus

The eCampus system will be our primary means of communication outside of class. Each student will be enrolled in the appropriate eCampus course. Access the course at ecampus.blinn.edu. The following items will be available online:

- Important announcements
 - Students should check daily for new announcements
- Email
 - **Note:** All official course email between the instructor and students will be via [eCampus](#) email.
- Copies of Power Point lecture slides
- Copies of all handouts
- Grades
- Links to external resource material
- Discussion forums/Blogs
- A detailed schedule

Tentative Exam Schedule:

Exam	Material Covered	Date (tentative)
1	Chapters 1-5	Thursday September 24 th
2	Chapters 6-9	Tuesday October 20 th
3	Chapters 10-13	Tuesday November 12 th
Final Exam	Comprehensive	Tuesday December 15 th 12:45 pm

Course Schedule

A detailed course schedule is available on [eCampus](#).

Criteria for Grading

Grades will be based on three exams plus extra-credit quizzes, a comprehensive final exam, labs, and homework.

- **Exams:** All exams will be closed-book and closed-note exams.
 - You must present all work in clear, logical order to receive full credit. Correct answers with little, no, or incorrect justification will be given no credit.
 - I will give partial credit ONLY if your work is neat, and presented in such a manner that I can clearly follow what you did. So....BE NEAT AND ORDERLY.
 - I will provide you with an equation sheet to use during the exam.
 - You must have an excused absence – APPROVED BY ME IN ADVANCE – in order to make up an exam. If you have a sudden illness or accident on the day of the exam, I will expect a physician's statement that you were unable to attend the exam along with the specific reason.
- **Labs:** Please refer to the handout on eCampus for detailed information on how the lab operates. Once on the eCampus course site, select **Lessons->Physics 1401 Handouts->Lab Procedures and Protocols**.
 - Labs will receive either a numerical grade, 0 – 100%, or a letter grade, A, A-, B, B-, C, etc., depending on how I grade them. Letter grades translate to numerical grades as follows: A = 95%, A- = 90, B=85%, etc.
 - Lab reports are due on the class day following the lab.
 - I encourage you to use Excel to do any graphing exercises. You will find instructions on using Excel on the [eCampus](#) site for this course. Once you are in the course, select **Lessons->Using Excel** .
 - You must have an excused absence in order to make up a lab.
- **Homework:** Homework is graded automatically by the *Mastering Physics* system.
 1. Each assignment will have a due date. You will get no credit if you submit an assignment past the due date. Due dates will typically be midnight on the day before I give an exam covering the material.
 2. You have a maximum of 6 attempts to answer any problem.
 3. There will be some multiple-choice questions. Don't just guess at the answer until you find the correct one. If you guess wrong, you will be penalized according to the number of possible answers. For example, if there are four possible answers and you guess wrong once, the maximum possible score on that problem will drop to 75%.
 4. You can ask for a hint. If you ask for a hint, you will be penalized 2% for each hint you receive.
 5. If you answer a question incorrectly, you receive a deduction of 3% per incorrect answer.
- **Concept Quizzes:** Short (5 – 10 min) **conceptual** quizzes, one per chapter. Quiz scores are added directly to your exam grade. These quizzes cannot be made up.
- **Group Quizzes:** Open book quizzes on which you may collaborate with your fellow students. These quizzes are due the day they are assigned unless I specify otherwise. You must be in class the day they are assigned in order to get credit for them.
 - For purposes of grading, labs and group quizzes are considered together.
- **Grading summary**
 - Exams 1-3 (45%), Final (20%), Homework (20%), Labs and Group Quizzes (15%)

Classroom Policy Summary

Specific class policies are available on eCampus. Once on the eCampus course site, select **Lessons->Physics 1401 Handouts->Course Policies**.