Coastal Bend College

VISION 2020 Keeping Student Success In Sight

Course Syllabus

PHYS 1401
College Physics I (4008015303)

******* Note to Student *******

Student success is our number one priority at Coastal Bend College and we realize that prompt, effective communication plays a significant role in achieving that goal. It is vitally important that you have the proper contact information for your instructor. This should include their phone number, email address, and if applicable, their office number, and office hours. If you ever have any problems contacting your instructor, or do not receive a prompt response to your inquiries, please contact the Director of Academics, or the Dean of Academics, as soon as possible. Their contact information is provided below:

Director of Academics, Dr. Kevin Behr: 361-354-2338; kevind@coastalbend.edu

Dean of Academics, Mark L. Secord: 361-354-2529; secordm@coastalbend.edu

We wish you all the best in your education and encourage you to contact us if you have any questions or concerns.

Course Description: Fundamental principles of physics, using algebra and trigonometry; the principles and applications of classical mechanics and thermodynamics, including harmonic motion, mechanical waves and sound, physical systems, Newton's Laws of Motion, and gravitation and other fundamental forces; with emphasis on problem solving. Laboratory activities will reinforce fundamental principles noted above.

Semester Hours Credit: 4

Lecture/Lab Hours: 3-3

Prerequisite: MATH 1314 AND MATH 1316 or MATH 2312/2412

Textbook(s): *Physics – enhance webassign with access (1st edition)* **ISBN:** 9781285858418

Course Learning Outcomes:

Upon successful completion of this course, students will:

1. Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration.

2. Apply Newton's laws to physical problems including gravity.

3. Solve problems using principles of energy.

4. Use principles of impulse and linear momentum to solve problems.

5. Solve problems in rotational kinematics and dynamics, including the determination of the location of the center of mass and center of rotation for rigid bodies in motion.
6. Solve problems involving rotational and linear motion.

7. Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level.

8. Demonstrate an understanding of equilibrium, including the different types of equilibrium.

9. Discuss simple harmonic motion and its application to quantitative problems or qualitative questions.

10. Solve problems using the principles of heat and thermodynamics.

11. Solve basic fluid mechanics problems.

12. Demonstrate techniques to set up and perform experiments, collect data from those experiments, and formulate conclusions from an experiment.

13. Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.

14. Solve problems using principles of energy.

Evaluation Methods:
Internet-based homework will be assigned twice per week except during weeks with official College holidays when there will be only one (1) homework assignment. The average of the student's scores on the homework assignments

will represent 20% of the total numerical grade for the course and the graded laboratory reports will represent 20% of the total numerical grade for the course.

There will be two (2) major Internet examinations during the course. Each of these exams will represent 20% of the final score for the class. There will be an internet-based final examination that will represent 20% of the final score for the class.

ADA Statement: No qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the College District, or be subjected to discrimination by the College District. Nor shall the College District exclude or otherwise deny equal services, programs, or activities to an individual because of the known disability of an individual with whom the individual is known to have a relationship or association. 42 U.S.C. 12132; 28 CFR 35.130(g).

See at: GL (Legal)

Special Needs Services: Students with special needs, including physical and learning disabilities, who wish to request accommodations in this course should contact the Student Development Office as soon as possible to make arrangements; this should occur no later than the second week of class or as soon as the student has the documentation on the disability and requested accommodation per a certified medical or psychological professional. In accordance with federal law, a student requesting accommodations must provide documentation of disability to the Student Development Advisor.

For more information, contact: in Alice at sdalice@coastalbend.edu; Beeville at sdbeeville@coastalbend.edu; Kingsville at sdkingsville@coastalbend.edu; and Pleasanton at sdpleasanton@coastalbend.edu.

Academic Dishonesty: Each student is charged with notice and knowledge of the contents and provisions of Coastal Bend College's rules and regulations concerning student conduct. All students shall obey the law, show respect for properly constituted authority, and observe correct standards of conduct. Scholastic dishonesty shall constitute a violation of these rules and regulations and is punishable as prescribed by Coastal Bend College Policies FLB (Local) and FM (Local). Scholastic dishonesty shall include, but not be limited to, cheating on a test, plagiarism, and collusion.

See at: FLB (Local) and FM (Local).

See the Student Handbook for further explanation of Scholastic Dishonesty.

Copyright Law and Intellectual Property Rights Policy: Copyright is the right of an author, artist, composer or other creator of a work of authorship to control the use of his or her work by others. Protection extends to literary works, musical works, dramatic works, pantomimes and choreographic works, pictorial and graphic works, sculpture, motion pictures and other audiovisual works, sound recordings and architectural works. Generally speaking, a copyrighted work may not be reproduced by others without the copyright owner's permission. The public display or performance of copyrighted works is similarly restricted. Generally, the unauthorized reproduction, performance or distribution of a copyrighted work is copyright infringement and may subject the infringer to civil and criminal penalties. The Fair Use Doctrine outlines exceptions to this Law and is outlined in Coastal Bend College Policy, CT (Legal).

Coastal Bend College, its faculty, students and employees must comply with Copyright Law. Detailed information on Copyright Law and Intellectual Property Rights is available in Coastal Bend College Policy CT (Legal) and CT (Local).

Questions regarding this information should be directed to the Director of Library Services at: library@coastalbend.edu or the Office of Marketing and Public Relations at: socialmedia@coastalbend.edu.

Intellectual Property: Student /Third Party Works: Rights to copyrightable or patentable works created by a student or a third party, that is, not a College District employee, shall reside with the author/ creator. Detailed information on Copyright Law and Intellectual Property Rights is available in Coastal Bend College Policy CT (Legal) and CT (Local).

Questions regarding this information should be directed to the Director of Library Services at: library@coastalbend.edu or the Office of Marketing and Public Relations at: socialmedia@coastalbend.edu.

NOTE: The College website (www.coastalbend.edu) serves as the main source with the most current version of the Coastal Bend College Board Policies and the Coastal Bend College Catalog.