



Coastal Bend COLLEGE

Administrative Master Syllabus

Cover Sheet

Purpose: The Administrative Master Syllabus provides a general course description, defines the required elements of the course, and establishes a faculty-driven foundation for course assessment to ensure continuous improvement in student learning, irrespective of the course timeframe, or mode of course delivery.

Course Title: College Physics I

Course Prefix and Number: PHYS 1401

THECB Approval Number (10 digit): 4008015303

Department: Physics Division: Math, Science, Kinesiology

Course Type: (check only one)

Academic General Education Course (From ACGM but not a CBC Core Course)

Academic CBC Core Course

WECM Course (Special Topics or Unique Needs Course: Y or N)

Weekly Contact Hours (Lecture – Lab – External): 3 - 4 - 0

Course Catalog 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.

Prerequisites/Co-requisites:

TSI Complete Reading, Writing, Math

Prerequisite: MATH 1314 and MATH 1316 both with a grade of C or better
or MATH 2412 with a grade of C or better.

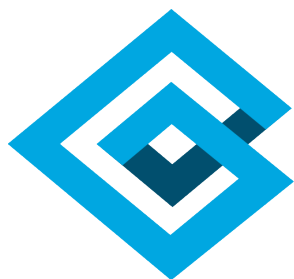
Approval: The contents of this document have been reviewed and are found to be accurate.

Prepared by (Content Expert): C. Villarreal Digitally signed by C. Villarreal
Date: 2022.10.18 14:26:57 -05'00'

Reviewed by Director or Coordinator: Richard Cowart Digitally signed by Richard Cowart
Date: 2022.10.18 15:58:56 -05'00'

Approved by Dean of CTE or NAH or TGE: Mark L. Secord Digitally signed by Mark L. Secord
Date: 2022.10.20 11:42:15 -05'00'

Revised 8/11/2021



Coastal Bend COLLEGE

Master Course Syllabus

Course Name: PHYS 1401 College Physics I

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.

Semester Hour Credit: 4

Lecture Hrs. per Week/Lab Hrs. per Week/External Hrs. per Week: 3-4-0

Curriculum Capacity:

Face-to-Face Lab
Online Lab
Face-to-Face Lecture
Online
Virtual Face-to-Face
Interactive video (multi-locations)
Hybrid
Clinical

Recommended enrollment threshold:

Face-to-Face Lab
Online Lab
Face-to-Face Lecture
Online
Virtual Face-to-Face
Interactive video (multi-locations)
Hybrid
Clinical

Textbook and/or other major required readings:

Title: Open Source to be provided by instructor
Author:
Publisher:
Edition:
ISBN:

The Student Learning Outcomes for the course are the same regardless of modality or location.

**Course Outcomes
(WECM or LDACGM)**

Lecture Course 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.

Lab Course Outcomes: Upon successful completion of this course, students will:

1. Demonstrate techniques to set up and perform experiments, collect data from those experiments, and formulate conclusions from an experiment.
2. Record experimental work completely and accurately in laboratory notebooks and communicate experimental results clearly in written reports.
3. Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration.
4. Apply Newton's laws to physical problems including gravity.
5. Solve problems using principles of energy.
6. Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level.
7. Use principles of impulse and linear momentum to solve problems.
8. 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.
9. Solve problems involving rotational and linear motion.
10. Demonstrate an understanding of equilibrium, including the different types of equilibrium.
11. Discuss simple harmonic motion and its application to quantitative problems or qualitative questions.
12. Solve problems using the principles of heat and thermodynamics.
13. Solve basic fluid mechanics problems.

The following general education course competencies (TGE) or Marketable SCAN Skills (CTE/NAH) are addressed in this course: General education course competencies (TGE) or Marketable SCAN Skills (CTE/NAH) assessed are indicated with an asterisk *.

Not a Core Curriculum Course.

The following program student learning outcome are assessed for this course:

Not a Core Curriculum Course.

Evaluation Methods:

Homework Assignments = 20%,
Tests = 60%
Lab = 20%

Calculation of Final Grade. The lecture portion of this course will count as 80% of the overall grade and the laboratory portion of this course will count as 20% of the overall grade.

Course Grading: Please see individualized instructor policies for course evaluation methods. Students will be assessed on the same measure across each discipline as per CBC guidelines.

Major Course Assignments and/or exams counting for at least 10% of a final course grade:

Homework Assignments = 30%
Tests = 70%

Grade Scale:

90-100 = A
80-89 = B
70-79 = C
60-69 = D
59 or Below = F

Course Subject Matter Outline:

- A. Motion, Kinematic in One Dimension
- B. Kinematics in Two or Three Dimensions
- C. Motion and Force, Newton's laws of Motion, Harmonic Motion
- D. Circular Motion & Gravitation
- E. Work & Energy
- F. Impulse & Linear Momentum
- G. Rotational Motion
- H. Bodies in Equilibrium, Elasticity
- I. Fluids
- J. Vibration & Waves
- K. Sound
- L. Temperature & Kinetic theory
- M. Heat
- N. Thermodynamics

Additional Course Requirements:

Lab Component: The lab portion of the course will be comprised of the following topics.

- A. Simple Measurements
- B. Kinematics in One, two and three dimensions
- C. Motion and Force, Newton's Laws
- D. Equilibrium
- E. Work, Energy and Power
- F. Impulse and Linear Momentum
- G. Rotational Motion
- H. Fluid Mechanics
- I. Vibration & Waves
- J. Sound
- K. Temperature & Kinetic Theory
- L. Heat
- M. Thermodynamics

Note: Lab topics may vary throughout the semester at the discretion of the instructor.

Class Attendance and Classroom Conduct Policies

Attendance Policy: Please see individualized instructor policies for attendance, which is pursuant to any related policy as outlined by the college handbook, financial aid agreements, or any other college related understanding (e.g., athletics, organizations).

Telephone Support: Toll Free: 866-722-2838 or Direct Line: 361-354-2508

I.T. Support Blackboard

<http://coastalbend.edu/it/>

IT Help Desk

1-361-354-2508

helpdesk@coastalbend.edu

Live Chat: Fall/Spring Hours: Monday - Thursday from 8 a.m. to 5 p.m. Summer Hours: Monday – Thursday from 7 a.m. to 6 p.m.

Tutoring Services: Coastal Bend College is committed to the academic success of all students enrolled at the college. A variety of services, including academic support, individual tutoring sessions, group tutoring sessions, and online tutoring, are available to students depending on the availability of tutors for the subject matter requested. All tutoring is provided at no cost to current CBC students who are currently enrolled at CBC. On-demand tutoring services are accessible 24 hours a day, seven days a week through the TutorMe platform, which may be accessed through your Blackboard account. To request a tutor, please complete the online tutor request form found at <http://www.coastalbend.edu/tutoring/> to submit your request. If you have any questions about tutoring programs, you can contact to tutoring@coastalbend.edu.

Beeville	Alice	Kingsville	Pleasanton
3800 Charco Road Beeville, TX 78102 1-866-722-2838	704 Coyote Trail Alice, TX 78332 1-866-891-2981	1814 Brahma Blvd. Kingsville, TX 78363 1-866-262-1615	1411 Bensdale Pleasanton, TX 78064 1-866-361-4222

Grady C. Hogue Learning Resource Center (Library): Located on the Beeville campus, the operation hours are Monday - Friday from 8:00 a.m. to 5:00 p.m.

(Summer semesters will observe the CBC campus operation hours) For locations and hours of the CBC library in Alice, Kingsville, and Pleasanton sites please visit the library web page link below.

Grady C. Hogue Learning Resource Center (Library): <http://lrc.coastalbend.edu/about>

Financial Aid: Resources are available for students for financial aid, work study, and veteran benefits. For additional information, visit our website at <http://coastalbend.edu/finaid> or contact us at 361-354-2238. Office hours: Monday - Friday from 8:00 a.m. to 5:00 p.m.

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: [GA \(Legal\)](#)

Students with Disabilities: Please notify your instructor of any modification/adaptation you may require to accommodate a disability-related need. You will need to provide documentation to the Director of Accessibility Services so the most appropriate accommodations can be determined. Specialized services are available through the Office of Accessibility Services (OAS) (SSB 4.104, 471-6259). For more information, please email oas@coastalbend.edu.

Scholastic 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 \(Local\)](#).

Use of E-mail for Official Correspondence to Students: All students should be familiar with the college's official email student notification policy. Students are expected to check their CBC email on a frequent and regular basis to stay current with college-related communications, recognizing that certain communications may be time-critical.

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 (<http://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.

Student success is our number one priority at Coastal Bend College and we realize that prompt, effective communication (such as emails, assignment feedback, discussion boards and announcements) 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. **Faculty schedules can be located online at <http://coastalbend.edu/hb2504/>**

If you have any problems contacting your instructor, or do not receive a prompt response to your inquiries, please contact the Dean or Division Coordinator/Program Director as soon as possible. Their contact information is provided below:

Mark L. Secord, Dean Transfer and General Education 361-354-2408 secordm@coastalbend.edu	Richard E. Cowart, EdD., Coordinator Math, Science, Kinesiology 361-592-1615 ext. 4024 recowart@coastalbend.edu
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We wish you all the best in your education and encourage you to contact us if you have any questions or concerns.

Keeping student success in sight, faculty in each of the courses will review the course information, including specific reading schedules, assignments, and testing information, with students during the first week of class.

Additionally, the course information will be posted to Blackboard.

This master syllabus is subject to change due to unforeseen circumstances.