ALLAN HANCOCK COLLEGE

ACADEMIC AFFAIRS

Phys 162 – Engineering Physics 2

THIS SYLLABUS MAY CHANGE. STUDENTS WILL BE NOTIFIED OF CHANGES AS QUICKLY AS IS REASONABLE.

Semester and Year: Spring 2026

CRN: **40369** (Lab R 11-2:05), **40370** (Lab R 2:15-5:20), & **41756** (Lab R 5:45-8:50)

Units: 4

Lectures (both CRNs): MW 11-1:05 p.m. in M310

Labs (in M205): R 11-2:05 (40369), & R 2:15-5:20 (40370), & R 5:45-8:50 (41756)

Final Exam: Mon. May 18, 11 a.m. to 1 p.m., M310

Instructor: Rob Jorstad

E-mail: r j o r s t a d @ hancockcollege.edu

Office Phone: x3836

Office Location: M208B

Office Hours:

MW 1:15-2:15 p.m. in M208B

T noon to 3 p.m. on Zoom

Zoom link: https://hancockcollege.zoom.us/j/7450455154

Student Learning Outcomes (SLOs)

1. PHYS162 SLO1 - Recognize and apply fundamental physical concepts.
2. PHYS162 SLO2 - Determine values (using calculus, trigonometry, and algebra) given a set of physical conditions.
3. PHYS162 SLO3 - Synthesize physical principles to analyze complex or novel situations using calculus, trigonometry, and algebra.
4. PHYS162 SLO4 - Record and analyze observations of physical systems.

Exam Dress Code

- No information may be on your clothing, shoes, body, etc.
- No clothing with large pockets (e.g., cargo shorts or hoodies with "kangaroo pockets").
- No hats or head covering of any kind (except when worn for medical or religious reasons; if a hooded garment is worn, the hood must remain down).
- No headphones or ear buds of any kind.
- If any electronic device (other than a scientific calculator) is seen near you during the exam it is assumed you are cheating. You will receive a zero for the exam and lose the exam adjustment benefit.
- All materials other than pencils, pens, eraser, and your scientific calculator must be stored against a wall not near your seat during the exam. If you are worried about an item being left against the wall, don't bring it to the test.

Appropriate use of AI

AI is particularly good at helping students complete assignments without learning. We all know this. That said, it is insane not to use it if you can use it well. Here is my current understanding of appropriate use of AI for this class:

- *Lab work:* Lab work includes (but is not limited to) coding assignments, lab report submissions, and oral presentations. **You are expected to write your own first drafts without any use of AI!** You can use AI as a copy editor for your lab submissions as long as you first write a rough draft on your own. Keep records of all rough drafts and a log of any prompts given to AI if you use it. You may be asked to show your rough drafts and your prompt log for any submission. If you are unwilling or unable to show drafts and prompt logs immediately upon request, you get a zero and will be reported for cheating. You will also lose the right to have your worst exam score counted as only 8% against your grade (instead of 20%).
- *Exams:* No electronic devices of any kind (e.g., smart glasses, smart watches, phones, smart pens, cameras, microphones, fitness trackers, wireless communication devices, etc.) are allowed during exams. The one exception is a scientific calculator. You may be asked to explain your work on the exam at any time for any question. If you are unwilling or unable to explain your work you get a zero on the entire exam and will be reported for cheating. You will also lose the right to have your worst exam score counted as only 8% against your grade (instead of 20%).

Course Materials

- A *scientific* (NOT *graphing*) calculator is required for this course. Use one of the models found on the approved list on NCEES website. Scroll to the bottom and look at the bottom right corner of the website for the most up to date list of allowable models. Models most commonly used by students are TI-36X & TI-30X (from Texas instruments) or fx-115 & fx-991 (from Casio).
- Physics Workbook, Volumes 3 & 5 (for lectures & homework)
    - Vol. 3 On Amazon: https://www.amazon.com/Physics-Workbook-Robert-J-Jorstad/dp/B0DM6DB46S
    - Vol. 5 On Amazon: https://www.amazon.com/Physics-Workbook-5-Robert-Jorstad/dp/B0DM8VVS6L

  Note: by putting this on Amazon I was able to offer students a lower price than bookstore used to charge.
- Free books online at Openstax
    - For oscillations & waves: https://openstax.org/details/books/university-physics-volume-1
    - For thermo: https://openstax.org/details/books/university-physics-volume-2
    - For optics & modern: https://openstax.org/books/university-physics-volume-3
- Fundamentals of Physics by Halliday or Physics for Scientists and Engineers by Serway are more reputable textbooks. If you find a hard copy of an old edition of either of these books for cheap, that is a fantastic substitute for Openstax books.

Optional, some people have found Schaum's Outlines helpful. There are two different versions: 3000 Solved Problems in Physics (good for both 140's and 160's) and Schaum's College Physics (good for 140's or the non-calculus problems of 160's). There should be a copy on reserve in the library you could look at to see if it might be good for you. I might still have a copy of each near the front desk in M205 you could skim through as well…

Attendance Policies

- Generally, if you miss class for ANY reason you will receive zero credit for any assignments, pre-labs, quizzes, or exams turned in that day. Unless otherwise specified, assignments collected in class must be turned in at the *beginning* of class. No late work is accepted.
- It is the student's responsibility to obtain any notes or assignments for any missed class.
- Students are responsible for dropping the course should they choose to stop attending. Furthermore, students who miss three or more classes may be dropped from the course by the instructor without notice. If you are absent in lab the first week of class you may be dropped without notice.
- In extremely rare circumstances, an absence may be given special consideration. Please discuss these matters with me in person *outside of class time*.
    - Vacation is never acceptable. This includes leaving for holidays early.
    - Medical *appointments* such as medical or dental visits are NOT acceptable excuses. These must be arranged outside of class time.
    - Any unusual situation not listed above will be handled on a case-by-case basis at the instructor's discretion.
- FYI – Labs often require extra work from multiple personnel to prepare, set-up/tear-down, & coordinate. It is for these reasons there may be instances when lab work cannot be made up.
- If you attended lab for the entire lab period but failed to submit a report on time, I will give you 4 points out of 10 for the missing report.
- I will add 10 free points to lab scores at the end of the semester to accommodate all participation issues. Scores over 100% for the lab portion of the class are not allowed.
- If you miss an exam there are no make-up exam opportunities. This includes missing class due to illness (including documented illness) or death in the family. **You get a zero for any missed exams.** This course does not have a cumulative final due to the tremendous amount of content covered. As a result, I cannot allow the final exam to replace your worst mid-term. Fortunately, I do reduce the weight of your worst exam so it will not prevent you from passing the course with a good grade should you legitimately fall ill on the day of an exam. Consult the grade calculator for this course to see what I mean: http://www.robjorstad.com/Grade_Calc_162_with_lab.xlsx

Grading Policies

- Homework is required for learning but will not be graded.
- The sum total of all lab assignments is worth 20% of your total grade.
- Four exams combine to comprise 80% of your total grade.
- Note: in PHYS 162, the final exam is NOT cumulative (hooray!).
- If your final exam score is greater than your lowest midterm, I will allow it to improve your worst mid-term score using the following algorithm:
  - I will weight your *worst* exam worth 8% of the overall grade.
  - I'll weight the average of the *best* 3 exams as 72% of the overall grade.

  Example:

***Before* Adjustment**		***After* Adjustment**	
Exam 1	83	Worst Exam	0
Exam 2	73	Average of the other three exams	$\frac{83+73+63}{3}=73$
Exam 3	**0**		
Exam 4	63		
Lab Average	87	Lab Average	87
Overall Course Grade	61.2%	*Adjusted* Overall Course Grade	70.0%

- I generally grade on a 91-80-70-60 scale.
  I reserve the right to modify this scale.
  I am very stingy on the A/B borderline.
- A grade calculator can be found online at the following link:
  http://www.robjorstad.com/Grade_Calc_162_with_lab.xlsx
- **I will disallow the aforementioned grade adjustment for any students caught cheating on any assignment (including labs).**

Student Accessibility Services

The fundamental principles of nondiscrimination and accommodation in academic programs are set forth in Section 504 of the Rehabilitation Act of 1973 the Americans With Disabilities Act of 1990 (ADA), and the ADA Amendments Act of 2008 (ADAAA). Necessary accommodations are those services that allow an individual with a disability to have equal access to college courses, facilities and services. The goal of LAP is to ensure equal access while supporting student independence, integration and self-advocacy.

Contact Information is as follows:

SM Campus: Building A, Room A304

LVC Campus: Building 1, Room 102N

SM Phone: 805-922-6966 ext. 3274

LVC Phone: 805-735-3366 ext. 5274

V-Phone: 805-266-7874 -or-
866-327-6218

Website: LAP Website

Standards of Student Conduct

Please review the following document for information regarding Standards of Student Conduct guidelines, principles of discipline, standards of conduct, academic and classroom disciplinary procedures, student grievance procedures, and suspension and expulsion.

Please click here to access the Standards of Student Conduct:
https://catalog.hancockcollege.edu/current/policies/conduct.php

Non-discrimination Statement

The Board of Trustees of the Allan Hancock Joint Community College District recognizes that diversity in the academic environment fosters cultural awareness, mutual understanding and respect, harmony and creativity, while providing positive images for all students. The board commits the district to the active promotion of campus diversity, including recruitment and selection of qualified employees from a wide variety of backgrounds and equal employment opportunities in all aspects of employment, including assignments, promotions, and transfers. In addition, the Board of Trustees recognizes that to be effective, an equal employment opportunity plan must be developed, reviewed and adopted in compliance with Education Code and Title 5 requirements.

Discrimination on the basis of gender, including all forms of sexual harassment, is strictly forbidden by Title VII of the Civil Rights Act, Title IX, and the college policy on sexual harassment. All student discrimination complaints should be addressed to the associate superintendent/vice president of student services, Allan Hancock College, 800 S College Dr, Santa Maria CA, 93454-6399, 1-805-922-6966 ext. 3267. All employee discrimination complaints should be addressed to the director of human resources, Allan Hancock College, 800 S College Dr, Santa Maria CA, 93454-6399, 1-805-922-6966 ext. 3338. The district is also committed to equal access and reasonable accommodations for students with disabilities.

The coordinator for Americans with Disabilities Act (ADA) for students is the director, Learning Assistance Program, Allan Hancock College, 800 S College Dr, Santa Maria CA, 93454-6399, 1-805-922-6966 ext. 3380. All other ADA discrimination complaints should be addressed to the director, human resources, Allan Hancock College, 800 S College Dr, Santa Maria CA, 93454-6399.

College Policies & Procedures

Please click here for further information regarding Allan Hancock College Policies and Procedures related to students: https://catalog.hancockcollege.edu/current/policies/