

UNIVERSITY OF NEBRASKA-LINCOLN
COURSE SYLLABUS - PHYS 151 - FALL 2023

M-W-F JH-136 12:30 am to 1:20 am

Faculty Information:

Lectures given by: Dr. Ana Lima-Sharma

Office Hours: Tuesdays and Thursdays from 11:00 am to 1:00 pm, or by appointment or by Zoom. Any changes in hours will be announced in class.

Text-book: College Physics: A Strategic Approach by Randall Knight, Brian Jones, et al. 4th edition.

- 1) if you find an open access book, or any other algebra-based physics book with a similar content, feel free to use as extra-reading. Just be aware that the recommended exercises are from the text-book.
- 2) Pearson publishes this text-book and also provide videos, included in the rental price of the ebook.

OVERVIEW

Attendance

Lectures and recitations attendance is expected by University of Nebraska-Lincoln. Students with more than 90% attendance will be rewarded 5 points towards the final grades. iClicker, group work, volunteering and surprise-tests will be used as proof of attendance for the lectures; participation sheets will be used as proof of attendance for the recitation. Please, read

<https://registrar.unl.edu/academic-standards/policies/class-attendance/>

Inclement Weather or Campus Closure

UNL requires instructional continuity whenever the campus is closed and classes are scheduled. Please, check Canvas for assignments for grade or self-study. Unless there is a long-term campus closure (such as pandemic), other arrangements will be made to continue the course. There is no immediate plan to broadcast classes.

<https://executivevc.unl.edu/academic-excellence/teaching-resources/instructional-continuity-guidance>

Exams

There will be three tests and one final exam in this course. The best grade in the tests will be kept towards the final grade. The lowest grades will be discarded. There will be no make-up exams, unless for extreme situations listed on the UNL policies. The final exam is mandatory. All tests and exams are closed book exams; however, you will be provided with a formula sheet that you might (or not) need.

Standards for Written Work

Any requested work for submission should be handwritten.

Classroom Management and Behavior

Dishonesty, including cheating, plagiarism, or knowing distribution of false information, violent behavior, or aggression will not be tolerated. Intentional disruption, obstruction, or interference with the process of instruction will not be accepted.

Email

All communication should be done in Canvas. Allow 24 to 48 hours to reply. Emails sent on Friday afternoon after 4 pm may be replied on the next Monday.

Plagiarism

Use your own words when doing any work for submission; include full reference (book, article, or video). Referencing materials that were written by others without proper citation is plagiarism and will result in an automatic zero on the assignment.

Group Work

There will be group work and group competitions in the classroom during the semester for extra credit. In order to encourage diversity and inclusion, each student will randomly pick up a number; all the students with the same number will work together throughout the semester in class.

Volunteering

There will be many opportunities for volunteering in activities in the classroom. Participation is essential to build confidence and earn credits towards the final grade.

Surprise-tests

Surprise-tests consist of one question to be completed in 5 minutes by each student without consultation, “closed” books nor discussion with other students. The surprise-tests are a snapshot of your learning. If you don’t know how to solve the problem, it is time to change your study methods. All students are required to submit the surprise-tests as proof of attendance. All students who solve correctly the question will receive extra credit toward the final grade. All students who did not solve the problem correctly will not lose credit. There will be no partial credits for surprise-tests. For those who might suffer from test-anxiety, surprise-tests will give an opportunity to build confidence.

Special Project

You should choose any topic in real life that correlates to what you learned during the semester. More details to be discussed in September.

Chegg.com, Course Hero, and similar.

The use of Chegg.com (or similar) is not accepted. Physics Resource Center provides tutoring help, and recitation. If you need extra help, ask for it.

Safe Space:

This classroom is a safe space for LGBTQ+ students and all students, despite religion, race, sexual orientation, background, or immigration status. If you feel as though you are unsafe, please do not hesitate to reach out.

Recordings, Photographs and Social media

Any kind of recording or pictures in the classroom are forbidden, and any postings on social media will be not tolerated. The professor does not give permission for the use of her image, voice, or class material to be used outside the classroom.

Dating

Classroom is not the place to look for your next date. Please, be respectful of your fellow student. There will always be attractive people in the classroom, and, later, in your workplace; however, it does not imply they are available.

Electronic Devices, Cell Phones, Laptop, etc.

Use of electronic devices during lectures is for class participation, such as Clicker, or for taking notes. You are encouraged to take hand-written notes. You will have plenty of time outside the classroom to google topics that are being discussed in class. However, use of electronics in class is distracting, disruptive, and invalidate your possible participation in volunteering to answer a question. Use of cell phones during evaluations/tests/exams is forbidden, if needed, students may bring a simple calculator (with elementary operations).

Students with Disabilities

Disabilities which require accommodation must be documented with the Services for Students with Disabilities (SSD) Office in the Canfield Administration Building. The Dept. of Physics and Astronomy has a Physics Resource Center that provides tutoring and private tutoring for all students. Students with learning disabilities are encouraged to interact with the tutors on weekly bases. For students with mobility challenges, JH has access ramps, and the classroom is located on the first floor. Please, allow yourself plenty of time to arrive and leave the classroom. SSD has informed me that the class will have a student who will take notes to share with students who have disability.

<https://www.unl.edu/ssd/>

Course Content

This is a science course based on the current accepted scientific theories, it is not meant to challenge your religious views. If you think your religious believes are not in agreement with the content of the course, contact your academic advisor to discuss your situation.

Tips For Success

It is my expectation that you are in college to learn, to excel, and to become a productive member of the society. Face this class as a “job”, where your grade is your “paycheck”.

- You are an active learner; be proactive;
- Read your text-book or other references prior to class;
- Review the material presented in class;
- Study, at least, 30 minutes daily;
- Expect to spend 6 to 10 hours per week with this class;
- Repeat problems/examples 3 times. First time: allow yourself to follow the see the solution as you try. Second time: solve the problem without looking at the solution. Finally, on the third time: solve the problem “out aloud”, as if you were presenting it. This is one of the techniques for sensorial learning and helps you to organize your thought process and memorize better. Many times, you will hear your voice and realize that you need to review the concepts on more time;
- Your brain needs time to process information, allow yourself plenty of study time before the test/exam, so you can adsorb the content and have questions;
- Build confidence: challenge yourself often. Pick a problem, and give yourself a couple of minutes to solve;
- Think like an athlete: practice leads to excellence. When you take an exam, believe you are ready. Athletes train and train (and, then, train more) and they will go to their event with a winning mind-set. Even if they fail, they will update their training routine for the next event. Science is not different, if you are not learning as fast as you want or not getting the grades you think you deserve, it might be time to change your study style. A scientific career is not easy, and it is based on persistence and patience;
- Take good care of your body: eat healthy, exercise, and sleep enough. A healthy body will lead to an efficient brain;
- Your best-friend might be your greatest distraction. Having friends can be emotionally rewarding and fun; however, be mindful of your study time;
- Never allow your love-life to interfere with your academic life. You cannot miss classes or exams because your beloved broke-up with you;
- Always remember why you are attending college and what your goals for the future are.

Grade

$$\text{Final Grade} = [2 \times (\text{HST}) + (\text{SP}) + 3 \times (\text{FE})] / 6 + \sum(\text{extra points})$$

Your final grade will be calculated according to the equation above. HST is your highest score on the three tests, SP is the grade of your special project and FE is the grade on the final test. The extra points you earn (volunteering, surprise tests, group work, competitions, etc) will add to the final grade. There will be no curving. There will be no-make tests, unless special circumstances. There will be no individual extra work, all the extra point (from surprise-tests, group work, volunteering, etc) are available to all students to earn during the semester.

Grade Disputes

If you believe there is a mistake on your grade, you can ask for revision. Grade appeals must be made within two weeks from the time the grade is announced. Grade revision can increase or decrease your grade. You can appeal against the revision and request an oral examination to settle the matter. It will be a public session with another faculty member and students as witnesses.

Grading System:

Some type of A > 85%

Some type of B > 75%

Some type of C > 65%

Some type of D > 55%

Tentative Schedule:

Week 1 – 08/21 - 21-25	Chapter 1-3
Week 2 – 08/28 – 09/01	Chapter 4 -5
Week 3 – 09/04 – 09/08	Labor Day / Review / 1 st Test (09/08)
Week 4 – 09/11 – 09/15	Chapter 6
Week 5 – 09/18 – 09/22	Chapter 7
Week 6 – 09/25 – 09/29	Chapter 8

Week 7 - 10/2 - 10/06	Review / 2 nd Test (10/04) / Chapter 9
Week 8 - 10/09 - 10/13	Chapter 9
Week 9 - 10/16 - 10/20	Fall Break / Chapter 10
Week 10 - 10/23 - 10/27	Chapter 10 and last week to special project topic
Week 11 - 10/30 - 11/03	Chapter 11
Week 12 - 11/6 - 11/10	Review / 3 rd Test (11/08) / Chapter 12
Week 13 - 11/13 - 11/17	Chapter 13
Week 14 - 11/20 - 11/24	Review / Thanksgiving 11/22 to 11/24
Week 15 - 12/04 - 12/08	Special Project submission (12/04) / Pre-exam Review
Week 16 - 12/11 - 12/15	FINAL EXAM - 6:00-8:00 p.m. Tuesday, December 12