Syllabus
Phys120A – Principles of Physics I Spring 2026

Instructor: Diana Forbes
Meeting Location: Julian 249
Meeting Time: 9:10-10:10 am MWF
Office: 239 Julian Science and Mathematics Center
Phone: n/a
E-mail: dianaforbes@depauw.edu
Office hours: Tuesday: 10:00 AM -11: 00 AM, Julian 239 lounge area

Text:

Physics for Scientists and Engineers: A Strategic Approach
5th edition, Volume 1 (Chapters 1 – 21) by Randall D. Knight
Note: You may also purchase the Global Edition.

Course Objectives:

- To strengthen your problem solving skills
- To give you an increased awareness and understanding of the natural world around us
- To have you explore the laws of motion and conservation

Student Outcomes:

Students will be able to:

- Apply Newton's Laws of motion to various situations
- Use conservation laws to analyze motion
- Perform graphical analysis on data

Learning Goals:

Among the DePauw Learning Goals, this course will address:

- **Love of learning:** One of the coolest aspects of physics is its ability to explain the natural world. With a strong foundation in physics you can continue to ask questions about the natural world and find the answers.
- **Understand and value artistic, cultural, and scientific achievements:** In this course we will study the laws of motion which have allowed astounding technical achievements in the 20th and 21st centuries such as air and space travel.
- **Identify and solve well-defined and ill-defined problems:** This is at the heart of doing physics.
- **Demonstrate competency with varied forms of data analysis:** You'll be doing this in the accompanying lab section.

About the Course:

This course will rely heavily on in-class activities rather than the traditional non-stop lecture. These activities are interactive requiring your participation. Therefore, reading the assigned chapter **before** coming to class is essential.

Attendance/Participation:

I expect you to attend class sessions with diligence. Participation (engaging in class activities, submitting assignments, asking questions) is 5% of the course grade and, more importantly, you will learn more by being present mentally. You will be allowed to get excused from a **maximum of 3 labs** for only the following reasons: illness, death in the family, religious observance, or DePauw-related activities. There will not be an option for attending class or lab remotely. **Please be aware that missing two or more weeks of class may result in me withdrawing you from the course.**

Cell Phone Use Policy: **(added 12/17/2025)**

Upon entering class, I would like you to silence or turn off your cell phone, and store it in your backpack. Using your cell phone for any reason during the class is prohibited, and I will call you out if I see it on your desk, in your hand, or on your lap. Cell phone use during class not only makes me feel disrespected, but it's a huge distraction to yourself and those around you.

Reading Quizzes (5% of your total grade):

You will be given one reading quiz per week on a random day. The minimum grade you can get on a reading quiz is an 80%, provided that you participate. I will drop the two lowest reading quiz grades. **If you are absent for acceptable reasons the day of the reading quiz, you must make it up within a week otherwise you'll receive a zero. You must stay after class to make up a quiz if you'd like to get points, and you need to arrange this with me.**

Homework (15% of your total grade):

Homework will be assigned every Friday in Moodle, and you'll have one week to complete it. I'd like you to work and turn in on paper detailed solutions to the problems on the following Friday. **I will NOT accept electronic submissions.** Half of your homework points will come from completion of the STEM Guide policy, discussed below. For the other half of the points, I will choose one problem at random to grade in detail and post numerical answers to the other problems without detailed solutions. If you would like to see a detailed solution, make an appointment with me and we'll talk through it. As you work more physics problems, your understanding of the concepts will increase.

Late homework will lose 10% for every day it's late.

The two lowest homework grades will be dropped.

STEM Guides:

You have 2 STEM guides available in this course. They will be present in our lab on Tuesday's and will have weekly office hours. (I will put their office hour times and locations in the lecture slides once they are cleared to work.) Every week, you will have a homework assignment designated as a STEM Guide problem. Showing one of the STEM guides your solution, correcting it as needed, and getting their signature will constitute 5/10 points on your homework. I'll grade the other half for correctness for a maximum possible total of 10 points. If you are ***absolutely*** unable to make it to the office hours of either STEM guide, you may show me your solution after class or during my office hours.

STEM Guides:
Eva Lynch (evalynch_2027@depauw.edu)
Miyu Aoki (miyuaoki_2026@depauw.edu)

Laboratory Notebook (10.5% of your total grade):

The laboratory for this course will meet on Tuesdays 12:40 – 3:30 PM in Julian 249. I will do my best to keep labs to no more than 2 hours.

You will be collecting data from experiments and working on the analysis using spreadsheets and either the program R or excel. At the end of each lab, I will ask to see your analysis work and pre-lab work (if there is a pre-lab that week). These things will constitute your lab notebook score for the week.

I will do my best to email lab materials and post them to Moodle the weekend before the respective lab.

Laboratory Reports (4.5% of your total grade):

There will be 2 formal lab reports assigned this semester, see the schedule for details. **Late lab reports will lose 20% for every day it's late.** All lab reports must be written individually – **no group lab reports**. Lab reports must also be printed and turned in physically to me. **Do NOT use any A.I. (artificial intelligence) to write any part of your lab report.** I find it extremely harmful and disrespectful, and I will take serious measures if I suspect you of doing so. (Read more in AI policy below.)

Exams:

There will be 2 exams given during lab in addition to the final. Consult the schedule for the dates. The final exam will be **Monday May 11, 2026; 1:00 – 4:00 PM in our classroom**. It will be comprehensive containing material from the entire course. The exams will contain in-depth word problems requiring the synthesis of various concepts.

Grading Distribution and Scale:

Your final grade in the course will be distributed among the following components:

Exam 1: 20%
Exam 2: 20%
Final Exam: 20%
Homework (including STEM Guide problems; drop two lowest): 15%
Lab Notebook: 10.5%
Formal Lab Reports: 4.5%
Reading Quizzes (drop two lowest): 5%
Participation: 5%

I will use the following absolute grading scale:

100–93: A	75-71: C
92–90: A-	70-68: C-
89-87: B+	67-65: D+
86-82: B	64-60: D
81-79: B-	59-57: D-
78-76: C+	56-00: F

Grade Adjustments: **(added 12/17/2025)**

Your grades in this class are earned, not rewarded. Please do not ask me for any grade adjustments on any exams **unless you feel I made a mistake in the grading**. At the end of the semester, if you are on the edge between two letter grades, I will round your score up if you showed **exceptional** effort in my class. This looks like regularly staying after class to ask questions and attending my office hours.

Q Competency:

To receive your Q competency from this class you will need to earn a C or better.

Academic Integrity: **(revised 8/15/2024)**

I encourage you to work on the homework collaboratively in groups, but do not copy someone else's solution and call it your own. I take academic integrity very seriously and fully expect each of you to do the same. Cheating, plagiarism, submission of the work of others, etc. violates DePauw's policy on academic integrity and may result in penalties ranging from a lowered grade to course failure, suspension or expulsion. The policy and discussion of each student's obligations and rights can be found in the Student Handbook. The policy is also available at: http://www.depauw.edu/handbooks/academic/#Toc459018101 Other useful information can be found at https://www.depauw.edu/academics/academic-resources/academic-integrity/ If you have any questions about my expectations regarding academic integrity, including my expectations regarding group work, it is your responsibility to ask me.

Artificial Intelligence Policy: **(revised 12/17/25)**

Do not use A.I. (artificial intelligence) for completing your assignments in this course. This includes the lab reports. I am very good at spotting AI usage in submitted materials. If I have found that you copied anything from AI, even a phrase, I will report you to the Dean of Academic Affairs and proceed with punitive measures, regardless of your overall class performance or rapport with me.

ADA Statement: **(revised 8/15/2024)**

It is the policy and practice of DePauw University to provide reasonable accommodations for students with properly documented disabilities. Written notification from Student Accessibility Services is required. If you are eligible to receive an accommodation and would like to request it for this course, please contact Student Accessibility Services. Allow one-week advance notice to ensure enough time for reasonable accommodations to be made. Otherwise, it is not guaranteed that the accommodation can be provided on a timely basis. Accommodations are not retroactive. Students who have questions about Student Accessibility Services or who have, or think they may have, a disability (psychiatric, attentional, learning, vision, hearing, physical, medical, etc.) are invited to contact Student Accessibility Services for a confidential discussion in Union Building Suite 208 or by phone at 658-6267.

Please also schedule a private and confidential meeting with me to discuss course requirements and your need for accommodations.

Religious Holy Days: **(revised 8/15/2024)**

DePauw University embraces the religious diversity of its students. Accordingly, faculty members are expected to excuse students from class and be flexible with respect to deadlines for required coursework in order to enable students to observe religious holy days. Faculty are also expected to make it possible for students observing holy days to make up any work they miss, provided arrangements are made in advance. Students are expected to notify their instructors of their intent to observe holy days at least one week

in advance of these days. For the sake of this policy, "holy days" are defined as periods of time in which either activities required by normal class participation are prohibited by a religious tradition, or a special worship obligation is required by a religious tradition. ("Religious Holy Days," Section VII, Academic Policies, Academic Handbook)

Students with questions should contact Maureen Knudsen Langdoc, University Chaplain and Associate Dean or Jonathan Martin, Associate Chaplain and Director of the Center for Spiritual Life (spirituallife@depauw.edu; 765-658-6768).

Student Title IX Policy: **(revised 8/15/2024)**

DePauw University affirms its commitment to fairness and equity in all aspects of the educational experience. Harassment and discrimination based on gender or sexuality—including sexual harassment, sexual assault, dating violence, domestic violence, stalking, and Title IX retaliation—prevent students from accessing an equal education and violate university policy as well as the law. Find full information at www.depauw.edu/titleix. If you or someone you know experience behavior that is coercive, discriminatory, harassing, or sexually violent, you are encouraged to contact our Title IX Administrators, Rhyan Smith, JD or Dionne Jackson, Ed.D. at titleixcoordinator@depauw.edu or 765-658-4155.

The Learning Commons (TLC): **(revised 8/15/2024)**

TLC offers support in W (writing), S (speaking and listening), and Q (quantitative reasoning). Peer consultants can help with assignments at any stage of the process. Students can sign up using our online scheduling system depauw.myWConline.com and are encouraged to visit early and often.

Important Resources for Students, Staff, and Faculty: **(created 8/15/2024)**

Counseling Services - https://www.depauw.edu/campus-life/wellness/counseling-services/ or 765-658-4268 or email counselingservices@depauw.edu.

DePauw Health - https://www.depauw.edu/campus-life/wellness/depauwhealth/students/ or (765) 658-4555

Bias Incident Response Team - https://www.depauw.edu/studentaffairs/campus-safety/bias-incident-resources/bias-incident-response-team/

Financial Aid Office at 765-658-4030 or https://www.depauw.edu/offices/financialaid/

Payments/ Business Office at 765-658-4015 or https://www.depauw.edu/offices/finance-administration/student-and-parent-information/payment-services/

Internships, careers and off-campus study - Hubbard Center - https://www.depauw.edu/academics/centers/hubbard/

Office of Student Affairs/Student Life - https://www.depauw.edu/studentaffairs/

CARE Team, for concerns about students - https://www.depauw.edu/studentaffairs/student-services/students-of-concern-team/, care@depauw.edu