Syllabus – College Physics II (PHYS 1302, 2024 Fall)

Note that the descriptions and timelines provided in this syllabus are subject to change at the discretion of the instructor.

Course Information:

Title: College Physics II (PHYS 1302)
Time: Tue & Thu 11:30 am – 12:45 am
Location: SCI 1.210

Instructor Contact Information:

Instructor: Qingyu Zhu (Assistant professor of Physics)
Email: qingyu.zhu@utdallas.edu
Office phone number: 972-883-2883
Office location: WSTC 1.706 (17919 Waterview Pkwy)
Office Hours: 10:20-11:20 am Tu/Th (**SCI 3.253,** on the third floor of the classroom building)

Teaching Assistant (TA) Information:

Manshuo Lin: manshuo.lin@utdallas.edu

Office Hours: 2:30 – 3:30 pm M/W (SCI 3.159)

Course Descriptions

1) Prerequisites & Corequisites

Prerequisites: PHYS 1301 (College Physics I)
Co-requisites: PHYS 1102 (College Physics Laboratory II)

2) Recommended Textbook

College Physics II is a non-calculus-based introduction course into Electricity, Magnetism and Optics. The textbook used in this course is ***College Physics (11th Edition)*** by Young and Adams (Publisher: Pearson). Earlier or newer versions would have nearly the same material.

3) Homework Platform:

The course will use the ***Mastering Physics*** online platform to homework, and subscription (from ~$85 pre-tax) is needed and can be purchased directly on the website. You will need to register at https://mlm.pearson.com/northamerica/masteringphysics/ so that you can access the online homework web site for this class. The course ID for this class is zhu37987.
(Note: Students who purchased multi-term access can simply enter their existing Pearson account username and password to sign in and will not need to make any further payments).

4) Topics:

i. Electrical Charge and Electric Field
ii. Electric Potential and Capacitance
iii. Current, Resistance, and Direct-Current Circuits
iv. Magnetic Field and Magnetic Forces
v. Electromagnetic Induction
vi. Electromagnetic Waves
vii. Geometric Optics
viii. Optical Instruments
ix. Interference and Diffraction
x. Photons, Electrons, and Atmos
xi. Atoms, Molecules and Solids
xii. Nuclear and High-Energy Physics (Depends on time)

5) Learning Objectives/Outcomes

This course is aimed to provide students a comprehensive overview of the fundamental concepts related to the electromagnetism and optics. As a results of the course, the students are expected to demonstrate an understanding of the important concepts of electricity, magnetism, and optics. In addition, the students are expected to develop problem solving skills and apply the knowledge learned in this course to solve problems in the class or problems related to their future career.

6) Tentative schedule

Week	Date	Content	Homework		
			Due	Name	Content
1	8/20	Intro, 17.1			
	8/22	17.2-17.4			
2	8/27	17.5-17.6	8/27	HW1	17.1-17.4
	8/29	17.7-17.9			
3	9/3	18.1-18.3	9/3	HW2	17.5-17.9
	9/5	18.4-18.7			
4	9/10	19.1-19.3	9/10	HW3	18.1-18.7
	9/12	19.4-19.8			
5	9/17	Review 1	9/17	HW4	19.1-19.8
	9/19	Exam 1			
6	9/24	20.1-20.4			
	9/26	20.5-20.9			
7	10/1	21.1-5	10/1	HW5	20.1-20.9
	10/3	21.8-21.12			

8	10/8	23.1-4	10/8	HW6	21.1-21.12
	10/10	23.5-23.6			
9	10/15	23.7-23.8	10/15	HW7	23.1-23.6
	10/17	23.9-23.11			
10	10/22	Review 2	10/22	HW8	23.7-23.11
	10/24	Exam2			
11	10/29	24.1-24.3			
	10/31	24.5-24.6			
12	11/5	25.1-25.5	11/5	HW9	24.1-24.6
	11/7	26.1-26.5			
13	11/12	28.1-28.2	11/12	HW10	25.1-26.5
	11/14	28.3-28.4			
14	11/19	29.1-29.2	11/19	HW11	28.1-28.4
	11/21	30.1-30.5			
15	11/26	Fall break - No class			
	11/28	Fall break - No class			
16	12/3	Review 3	12/3	HW12	29.1-30.5
	12/5	Exam 3			
17	12/10	Final week - No class			
	12/13	Final week - No class			

7) Assessments

Final grade = 66 (Exams) + 24 (Homework) + 10 (Attendance/Quizzes)

Explanations:

i. **3 Exams:**
   a. 22 + 22 + 22 = 66 pts
   b. Closed book but formula sheets will be provided in advance.
   c. Based on class examples and homework
   d. Multiple choice + Fill-in-blank problems
   e. Only scientific calculator is allowed. No cellphone.
   f. Bring a valid picture ID.
   g. **Makeup exams** will only be given under exceptional circumstances with well documented reasons beyond the students' control. Requests should be made to the instructor before each scheduled exam. Students that need this arrangement are expected to justify the reason of your absence. Makeup exams have different problem sets from the original exams and are typically at the same week of the original exams.

ii. **Homework:** 24 pts total
   a. Late submission is not accepted (**Please note that the MasteringPhysics uses Eastern Time**. If the due is 11:00 am on the system, it means that the due time is 10:00 am Central Time.). No handwritten homework will be accepted.
   b. You will be allowed to 20 attempts.
   c. You are welcome to work together on homework, but everyone must do your own problems (you may notice the numbers may be different).
   d. You are strongly recommended to print out your homework problems and do the work on your printouts. It is a convenient way to keep everything together. Successful students have done this in the past.

iii. **Attendance check:** 10 times, 1 pt. for each

iv. **Bonus points: Pretest and Posttest quizzes (1 pt for each)**

Schedule for the Pretest and Posttest quizzes

Instructor	Course Information	Exam Name	Start Date	End Date	Duration
Paul Mac Alevey	PHYS 1302/PHYS 2326.All Sections	Electromag Pretest	8/19/2024	8/30/2024	60 min
		Electromag Posttest	11/11/2024	11/23/2024	60 min

   a. You can do two quizzes as part of your introductory physics course. There are **two extra credit points** associated with the two tests. You will receive a credit point by simply taking each quiz—your grade will NOT depend on your performance. There is no penalty for not taking these two quizzes.
   b. The quizzes will be taken at the testing center on the first floor of the **Synergy Park North 2 building (SPN2)**. Students register for the quizzes at https://ets.utdallas.edu/testing-center. If you really need to do the test at the OSA test center, please send your accommodation letter to Dr. Alevey (paulmac@utdallas.edu) and he can help you with this request. The test is delivered through eLearning, but on an eLearning site (with Dr. Paul Mac Alevey as the instructor) separate from the one used for lectures of this class. The quizzes are not available to be done without an in-person proctor.
   c. The test center requires students to reserve the test time online at least 48 hours before the intended exam time. For example, if you are taking an exam on Monday, May 23rd @ 1:00 P.M., you should have completed your registration before/by Saturday, May 21st @ 12:59 P.M. This means that you cannot register two days before the end of the above test windows. It is strongly recommended to reserve a time for the posttest while reserving a time for the pretest (to avoid the possibility of forgetting to arrange the posttest near the end of the semester and losing the opportunity of obtaining the extra credit).

d. Please refer to the testing center guidelines on how to schedule, reschedule, cancel your test and how to take it during your scheduled time: https://ets.utdallas.edu/testing-center/students/.

Grading:
A+ (> 97), A (93 - 96.9), A- (90 – 92.9), B+ (87 – 89.9), B (83 – 86.9), B- (80 - 82.9)
C+ (77 - 79.9), C (73 - 76.9), C- (70 - 72.9), D+ (67 – 69.9), D (63 – 66.9), D- (60- 62.9), **F (< 60)**

8) Code of conduct and University policies:

i. Successful participation in this class is defined as consistently adhering to University and classroom requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the Student Code of Conduct.
ii. **Academic Integrity:** Each student is expected to exercise independent scholarly thought, expression, and aptitude. Copying or assisting in copying of homework assignments or exams, in whole or in part, from the internet, other students or from assignments from other sections/ semesters will be considered to be an act of academic dishonesty, which, once suspected, will be reported to University. Students who violate University rules on academic dishonesty are subject to disciplinary sanctions, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students, and the University, policies on academic dishonesty will be strictly enforced. See more information on under the Student Code of Conduct – UTSP5003. Those students who do not comply will be referred to the Office of Community Standards and Conduct for disciplinary action.
iii. **Disability Services:** It is the policy and practice of UTD to make reasonable accommodations for students with properly documented disabilities. However, written notification from the Office of Student AccessAbility (OSA) is required. If you are eligible to receive an accommodation and would like to request it for this course, please contact the Office of Student AccessAbility. This office evaluates the students' needs and provides an assessment. Bring the assessment to your professor. We are committed to meeting every student's needs. Please allow **one week** advance notice.
iv. In the event of public emergency, inclement weather, etc., that leads to unexpected closure of the university, class will not meet. Please follow the university announcement for its closure and reopening. After the event, look for Announcement on eLearning about the class reschedule.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."