PHYS252, UNIVERSITY PHYSICS II

** COVID-19-RELATED COURSE REQUIREMENTS

Currently (as of January 10, 2022), NDSU is strongly recommending that all people wear masks in indoor spaces when social distancing cannot be maintained. In case of any changes, you will be notified and this syllabus will be updated. Consistent with NDSU's recommendations, **mask will be "Required" in all classroom settings including this class**. **Thus**, **in this class all participants, including those who are fully vaccinated, are "Required" to wear a face covering**. If you fail to properly wear a face covering, you will not be admitted to the classroom. Given the changing conditions associated with the pandemic, this class' faculty member has reserved the right to modify the mask status of the class during the semester. The following will be used as needed: referral to Dean of Students Office or administrative removal from class.

- Students who cannot wear a face covering due to a medical condition or disability, or who are unable to remove a mask without assistance may seek an accommodation through the Disability Services (701-231-8463; https://www.ndsu.edu/disabilityservices/).
- In accordance with NDSU Policy 601, failure to comply with instructions, including the mask requirement, may be handled according to the Code of Student Conduct resolution process and may result in disciplinary sanctions.

BASIC INFORMATION

Course prefix, catalog number, and title: PHYS 252, 10744, University Physics II
Number of credits: 4 credit hours
Term and year: Spring 2022
Classes: Mon, Wen, Fri 9:00 – 9:50 AM (AGHILL CTR 112), Mon 10:00 – 10:50 AM (AGHILL CTR 112)

Instructor's name: Prof. Yongki Choi
Office location: South Engineering 220A or Zoom (by appointment)
Office hours: WF 10:00 – 10:50 AM and by appointment
Phone Number: 701-231-8968
Email Address: yongki.choi@ndsu.edu

Physics Teaching Assistants Office Hours: hhttps://www.ndsu.edu/physics/students/current_students/ta_office_hours/
Student Success Program Tutoring Hours: https://www.ndsu.edu/ace/

BULLETIN DESCRIPTION

Electric charge, field, potential, and current; magnetic field; capacitance; resistance; inductance; RC, RL, LC and RLC circuits; waves; optics
Prerequisite: PHYS 251 or ME 222, Corequisite: MATH 166

COURSE OBJECTIVES

After completing this course, you should be able to:

- Explain concepts in electricity, magnetism, wave, and optics
- Demonstrate the ability to analyze and solve conceptual and practical problems
- Construct quantitative models and descriptive predictions of physical behavior

REQUIRED STUDENT RESOURCES

Optional textbook: *Fundamentals of Physics*, 9^{th} – 11^{th} Edition, by Halliday, Resnick, Walker
Other required materials:

- Clicker or Turning Point website or app: https://kb.ndsu.edu/page.php?id=101669
- Scientific calculator

SYLLABI ON WEB PAGES

Syllabus, Announcements, and Notes will be posted on our Blackboard course homepage: https://bb.ndsu.nodak.edu

HOMEWORK ASSIGNMENTS

Weekly homework will be posted on the web-based *LON-CAPA* homepage (http://www.ndsu.edu/physics/lon_capa). All homework assignments are due on the dates specified. ***Late submission will not receive credit.*** Follow the login instructions to access our course.

LON-CAPA instruction: Your username will be your ***firstname.lastname*** in your NDSU email. For example, if your NDSU email is *albert.einstein@ndsu.edu*, then your username is ***albert.einstein.*** You will establish a password by selecting the "Forgot password?" when you first log-in to the system. For help using LON-CAPA, please contact Physics staff, **Paul Omernik (paul.omernik@ndsu.edu, South Engineering 110**).

COURSE SCHEDULE/OUTLINE/CALENDAR OF EVENTS

Week	Topic	Reading /Assignment
1	Coulomb's Law	Chapter 21
2	Electric Field	Chapter 22
3	Gauss' Law	Chapter 23
4	Electric Potential	Chapter 24
5	Capacitance	Chapter 25
6	Current and Resistance	Chapter 26
7	Circuits	Chapter 27
8	Magnetic Fields	Chapter 28
9	Magnetic Fields Due to Currents	Chapter 29
10	**Spring Break**	**Mar 15-19**
11	Induction and Inductance	Chapter 30
12	Electromagnetic Oscillations and Alternating Current	Chapter 31
13	Maxwell's Equations; Magnetism of Matter	Chapter 32
14	Electromagnetic Waves	Chapter 33
15	Images	Chapter 34
16	Interference/Diffraction	Chapter 35
17	Review	
	Exam 1-4 (covering 3-4 chapters)	

*** HOLIDAY – NO CLASS: JAN 17 (MLK DAY), FEB 21 (PRESIDENTS' DAY), SPRING BREAK (MAR 14-18), SPRING RECESS (APR 15-18)**

EVALUATION PROCEDURES AND GRADING CRITERIA

Final letter grades for the course will be computed using the following weights:

- Homework Assignment 200 points (correct responses to 80% of the homework will earn max. 200 pts)
- Five Exams 400 points (your best 3 out 4 exam scores)
- Total Points 600 points
- Extra credit: Midterm survey (10 points)

NO MAKE-UP EXAMS ARE ALLOWED

Grades: A: > 90 %, B: 80 to < 90%, C: 70 to < 80 %, D: 60 to < 70%, F: < 60 %

EMAIL COMMUNICATION

Please follow following guidelines:

- Use your NDSU email, not your yahoo or gmail account
- Type **Phys252** and **the subject** of your email **in the subject line** (e.g. "**Phys252 missing homework"**)
- Sign your email with **your name and student ID number**

SPECIAL NEEDS

Any students with disabilities or other special needs, who need special accommodations in this course, are invited to share these concerns or requests with the instructor and contact the Disability Services Office (www.ndsu.edu/disabilityservices) as soon as possible.

ACADEMIC HONESTY

The academic community is operated on the basis of honesty, integrity, and fair play. NDSU Policy 335: Code of Academic Responsibility and Conduct applies to cases in which cheating, plagiarism, or other academic misconduct have occurred in an instructional context. Students found guilty of academic misconduct are subject to penalties, up to and possibly including suspension and/or expulsion. Student academic misconduct records are maintained by the Office of Registration and Records. Informational resources about academic honesty for students and instructional staff members can be found at www.ndsu.edu/academichonesty.

ATTENDANCE EXPECTATIONS

According to NDSU Policy 333 (www.ndsu.edu/fileadmin/policy/333.pdf), attendance in classes is expected. Veterans and student service members with special circumstances or who are activated are encouraged to notify the instructor as soon as possible and are encouraged to provide Activation Orders.

- Students are expected to attend every class and remain in class for the duration of the session when it is safe to do so in accordance with NDSU guidance regarding COVID19.
- I will be flexible regarding deadlines for students who are experiencing illness related to COVID-19. Please contact me as early as possible if you think you may not be able to complete an assignment or participate in the course due to illness.
- If you are unable to attend class at the regularly scheduled time due to illness, you can view the lecture notes (or may be lecture recordings) and ask any questions you have via email or zoom session.

COPYRIGHT OF COURSE MATERIALS

According to NDSU Policy 190 (Intellectual property):

- In this course recording the lectures is prohibited with your own personal devices (without prior express approval from the instructor).
- In this course recording the lectures for anything other than personal use is prohibited.

*The instructor reserves the right to adjust or modify this syllabus if it is deemed beneficial to student learning