PHYS 252    UNIVERSITY PHYSICS II

BASIC INFORMATION
Course prefix, catalog number, and title: PHYS 252, 6029, University Physics II
Number of credits: 4 credit hours
Term and year: Spring 2015
Classes: Mon, Wen, Fri 9:00 – 9:50 AM (Minard 116), Tue 8:30 – 9:20 AM (Minard 116)

Instructor's name: Prof. Yongki Choi
Office location: South engineering 220A
Office hours: MTW 10:00 – 11:00 AM and by appointment
Phone Number: 701-231-8968
Email Address: yongki.choi@ndsu.edu

Physics Teaching Assistants Office Hours: http://www.ndsu.edu/physics/current_students/ta_office_hours/
Student Success Program Tutoring Hours: http://www.ndsu.edu/studentsuccess/tutoring_schedule/

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
Other required materials:
• Clicker (a small handheld radio frequency device that you will use to answer questions in class)
• Scientific calculator
• Four scantron/opscan sheets and a #2 pencil

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

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<th>Week</th>
<th>Topic</th>
<th>Reading /Assignment</th>
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<td>1</td>
<td>Coulomb’s Law</td>
<td>Chapter 21</td>
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<td>2</td>
<td>Electric Field</td>
<td>Chapter 22</td>
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<td>3</td>
<td>Gauss’ Law</td>
<td>Chapter 23</td>
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<td>4</td>
<td>Electric Potential</td>
<td>Chapter 24</td>
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<td>5</td>
<td>Capacitance</td>
<td>Chapter 25</td>
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<td>5</td>
<td>Midterm EXAM #1 (Covering Chapters 21-24)</td>
<td>Wednesday, Feb. 11 (9:00-9:50)</td>
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<td>6</td>
<td>Current and Resistance</td>
<td>Chapter 26</td>
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<td>7</td>
<td>Circuits</td>
<td>Chapter 27</td>
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<td>8</td>
<td>Magnetic Fields</td>
<td>Chapter 28</td>
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<td>9</td>
<td>Magnetic Fields Due to Currents</td>
<td>Chapter 29</td>
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<td>9</td>
<td>Midterm EXAM #2 (Covering Chapters 25-28)</td>
<td>Wednesday, Mar. 11 (9:00-9:50)</td>
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<td>10</td>
<td>Spring Break</td>
<td>Mar 16-20</td>
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<td>11</td>
<td>Induction and Inductance</td>
<td>Chapter 30</td>
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<td>12</td>
<td>Electromagnetic Oscillations and Alternating Current</td>
<td>Chapter 31</td>
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<td>13</td>
<td>Maxwell’s Equations; Magnetism of Matter</td>
<td>Chapter 32</td>
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<td>14</td>
<td>Electromagnetic Waves</td>
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<td>Midterm EXAM #3 (Covering Chapters 29-32)</td>
<td>Wednesday, Apr. 15 (9:00-9:50)</td>
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<td>15</td>
<td>Images</td>
<td>Chapter 34</td>
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<td>16</td>
<td>Interference</td>
<td>Chapter 35</td>
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<td>17</td>
<td>Diffraction</td>
<td>Chapter 36</td>
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<td>18</td>
<td>Final EXAM (Covering All Chapters 21-36)</td>
<td>Thursday, May 14 (8:00-9:50)</td>
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* Holiday – No Class: Jan 19 (MLK Day), Feb 16 (Presidents’ Day), Spring Break (Mar 16-20), Spring Recess (Apr 3-6)

### EVALUATION PROCEDURES AND GRADING CRITERIA

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

- Homework Assignment 200 points (33.3%) (correct responses to 80% of the homework will earn max. 200 pts)
- Two Midterm Exams 200 points (33.3%) (your best 2 out 3 midterm exam scores)
- Final Exam 200 points (33.3%) (final exam cannot be dropped)
- Total Points 600 points (99.9%)

**NO MAKE-UP EXAMS ARE ALLOWED**

Grades: A=90-100%, B=80-89.9%, C=70–79.9%, D=60–69.9%, F < 60%

### ATTENDANCE

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.

### 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.

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**Source:** NDSU Academic Affairs Committee  
**Updated:** 09/26/2014
EMAIL COMMUNICATION
Please follow following guidelines:

- Use your NDSU email, not your yahoo or gmail account
- Begin your email “Dr. Choi or Prof. Choi”, do not use “Hey” or “Hi there”
- 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

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