PHYSICS 112 SYLLABUS/ASSIGNMENT SHEET Spring 2012

LECTURERS        Lecture Time        Office        Phone e-mail
Prof. T. Humanic  8:30 am            PRB 2144      247-8950 humanic.1@osu.edu
Dr. K. Akli       9:30 am            PRB 4114      292-9626 akli.1@osu.edu

Course Manager: Dr. R. Leonard – SMITH 1106F, 292-8065, rleonard@physics.osu.edu
WebAssign Administrator: Dr. K. Bolland – SM 1106D, 292-8065, bolland.1@osu.edu

REQUIRED TEXTS & MATERIALS:
Physics by Cutnell & Johnson, Ohio State University Custom 8th ed or regular 8th ed
Worksheets for Physics 112 Laboratory, 19th ed. (2011)
WebAssign Access Card

POLICIES AND WEBSITE
See the “Welcome to Students of Physics 112” packet for course policies.
Course Home Page: http://www.physics.ohio-state.edu/~phys112/index.html

MIDTERM (in recitation room): WEDNESDAY, May 2, 2012

FINAL EXAM (in recitation room):
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<tr>
<th>LECTURER</th>
<th>RECITATION TIME</th>
<th>FINAL EXAM DATE AND TIME</th>
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<tbody>
<tr>
<td>HUMANIC</td>
<td>10:30 AM</td>
<td>Wednesday, June 6 9:30 AM - 11:18 AM</td>
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<td>AKLI</td>
<td>11:30 AM</td>
<td>Thursday, June 7 11:30 AM - 1:18 PM</td>
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Make no commitment that conflicts with your scheduled final examination. See Dr. Leonard by April 27 if a conflict exists.

SCHEDULE AND ASSIGNMENTS
Reading, homework, etc. assignments below refer to Cutnell & Johnson, 8th ed.
Homework and Pre-labs are submitted on-line via WebAssign web page: https://www.webassign.net/osu/student.html
See On-Line Homework Instruction sheet for login instructions, etc.

Abbreviations: L=lecture, R=recitation, Ch=chapter, P=problem, S= section, Q=question, HW= homework

First Week - NO LAB

Mar 26 R Course Information Distributed
27 L Electric Charge and Force (Read Ch 18 S1-5)
28 R Demonstration problems; Concept Questions
29 L Electric Field (Read Ch 18 S6 – 8)
30 ONLINE HOMEWORK #0 (WebAssign tutorial) due at 6 PM

Second Week
LAB 1: Electric Force & Electric Charge

Apr  2  R  Ch18 Q9, 13, 17; Group Work #1
ONLINE PRELAB #1 DUE AT 11:59 PM
3  L  Electric Field and Electric Potential (Read C18 S8, 10, 11; Ch 19 S1-2)
ONLINE HW #1 DUE AT 11:30 PM (Ch 18: P 3, 12, 21, 37, 39, 41, 29)
4  R  QUIZ 1; Ch 19 Q2, 4; demonstration problems
5  L  Electric Potential (Read Ch 19 S3, 4, 7)

Third Week
LAB 2: Deflection of Electrons

Apr  9  R  Ch 19 Q 6,11; Group Work
ONLINE PRELAB #2 DUE AT 11:59 PM
10  L  Capacitors; Batteries, Current, Ohm’s Law (Read Ch 19 S5; Ch 20 S1,2)
ONLINE HW #2 DUE AT 11:30 PM (Ch 19: P 1, 2, 3, 5, 8, 21, 35, 13, 18, 41, 42 )
11  R  QUIZ 2; Ch 19 Q17; demonstration problems
12  L  Resistance, Power, Series Circuits (Read Ch 20 S3, 4, 6)

Fourth Week
LAB 3: Ohm’s Law

Apr 16  R  Ch 20 Q 3, 5; Group Work #2; tutoring in recitation
ONLINE PRELAB #3 DUE AT 11:59 PM
17  L  Circuits (Read Ch 20 S7 – 9)
ONLINE HW #3 DUE AT 11:30 PM (Ch 19 P44, 43, 63; Ch 20: P4, 7, 12, 24, 42, 46, 23)
18  R  QUIZ 3; Ch 20 Q8, 10, 12; demonstration problems
19  L  More Circuits (Read Ch 20 S9, 11, Example 16 in S15)

Fifth Week
LAB 4: Series and Parallel Circuits

Apr 23  R  Group Work #3; tutoring in recitation
ONLINE PRELAB #4 DUE AT 11:59 PM
24  L  Magnetic Field; Magnetic Force (Read Ch 21 S1 – 4)
ONLINE HW #4 DUE AT 11:30 PM (Ch 20: P50, 53, 55, 64, 67, 70, 74, 116)
25  R  QUIZ 4; Ch 21 Q3, 6, 8; demonstration problems
26  L  Magnetic Force and Applications (Read Ch 21 S5,6)
Sixth Week
LAB 5: Magnetic Force

Apr 30 R  Ch 21 Q 12, 13; demonstration problems
ONLINE PRELAB #5 DUE AT 11:59 PM
May 1 L  Magnetic Fields due to Currents (Read Ch 21 S7 – 10)
ONLINE HW #5 DUE AT 11:30 PM (Ch 21: P2, 72, 5, 79, 17, 31, 30, 33
41, 45, 42)
2 R  MIDTERM (in your recitation room)
3 L  Electromagnetic Induction; Faraday’s Law (Read Ch 22 S1 – 5)

Seventh Week:
LAB 6: Magnetic Fields

May 7 R  Ch 21 Q 16; Ch 22 Q4; Group Work #4; tutoring in recitation
ONLINE PRELAB #6 DUE AT 11:59 PM
8 L  Applications of Faraday’s Law (Read Ch 22 S 5, 6, 7, 10)
ONLINE HW #6 DUE AT 11:30 PM (Ch 21: P55, 56, 73, 59, 80;
Ch 22: P12, 16, 19)
9 R  QUIZ 5; Ch 22 P35; Q9; demonstration problems
10 L  Transformers; Waves, Electromagnetic Waves (Read Ch 22 S9; Ch 16 S1, 2;
Ch 24 S1 – 3)

Friday, May 11 is the Last day to drop without petition to dean of your college.

Eighth Week
LAB 7: Faraday’s Law

May 14 R  Ch 16 Q3; Group Work #5; tutoring in recitation
ONLINE PRELAB #7 DUE AT 11:59 PM
15 L  Polarization (Read Ch 24 S6, Example 10 in S7)
ONLINE HW #7 DUE AT 11:30 PM (Ch 22: P 20, 22, 70, 45, 74, 63;
Ch 24 P2, 7, 13, 21))
16 R  QUIZ 6; Ch 24 Q 10; demonstration problems
17 L  Light Rays; Reflection; Mirrors (Read Ch 25 S1 – 5)

Ninth Week
LAB 8: Image Formation from a Flat mirror

May 21 R  Ch 25 Q6, 7; Group Work #6; tutoring in recitation
ONLINE PRELAB #8 DUE AT 11:59 PM
22 L  Spherical Mirrors; Refraction (Read Ch 25 S 6, 7; Ch 26 S1, 2)
ONLINE HW #8 DUE AT 11:30 PM (Ch 24: P 39, 45, 55;
Ch 25 P3, 5, 6, 20, 23, 39)
23 R  QUIZ 7; Ch 25 Q13, 14; demonstration problems
24 L  Total internal reflection; Lenses (Read Ch 26 S3, 6, 7)
### Tenth Week - NO LAB

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<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Activity</th>
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<tr>
<td>May 28</td>
<td>R</td>
<td>HOLIDAY</td>
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<tr>
<td>May 29</td>
<td>L</td>
<td>Lenses (Read Ch 26 S7, 8) <strong>ONLINE HW #9 DUE AT 11:30 PM</strong> (Ch 25 P 40, 25; Ch 26 P3, 11, 12, 20, 26, 28)</td>
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<tr>
<td>May 30</td>
<td>R</td>
<td>Ch 26 Q1, 5, 12; demonstration problems</td>
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<td>May 31</td>
<td>L</td>
<td>more Lenses and review (Read Ch 26 S8, 9)</td>
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<td>Jun 1</td>
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<td><strong>ONLINE HW #10 DUE AT 11:30 PM, FRIDAY, JUNE 1</strong> (Ch 26 P 50, 51, 53, 117, 122, 65)</td>
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