

**PHYS 112:** Basic Physics II  
Lecture: M, W, F 1-1:50 PM  
Lecture Hall 1 101

Dr. Susan Hoban  
Office hours: M,W: After class or by appointment  
5523 Research Park Dr, Suite 320  
**Email through Blackboard!**

**Prerequisites:** PHYS 111

**Learning Objectives:** Basics Physics II is an algebra-based course for non-physical science majors. This class covers Oscillations and Waves, Optics, Electricity and Magnetism and Modern Physics, highlighting biological applications. This course follows Basic Physics I (PHYS 111).

**Textbook:** *College Physics: A Strategic Approach* by Knight, Jones, and Field, 3rd ed., bundled with Mastering Physics (MP) (or purchase MP access online).

**Registering for Mastering Physics:** Go to <http://www.masteringphysics.com/> and click *Register New Students*, and give your access code (inside your MP package.) The course ID is MPHOBAN112S17. If you registered for MP before, login with your username and password. Due dates for homeworks are noted in bold in the schedule as **MP20**, **MP21**, etc.

**Blackboard:** Log on to myUMBC, click the *Blackboard* tab and then click *PHYS 112 Basic Physics II* in the *My Courses* area for access to course materials, assignments, your grades, helpful advice, and announcements. You should check Blackboard several times per week to see if there are updates in the Announcements or the discussion board.

### **Grading**

Exams 50% (4 exams): 3 midterms (10% each) , 1 cumulative final (20%)

You may use a scientific, non-graphing calculator during exams. You may bring a 3 x 5 card with notes to the exam.

The dates of the mid-term exams are given in the schedule below. The final exam is scheduled for 1 - 3 PM, on May 24 in LH 1. ([UMBC Spring 2017 Final Exam Schedule](#))

Labs 20% (12 labs): Your grade for the lab comprises a prelab, participation and completion of lab activity in the section for which you registered and the lab homework, due at the beginning of the next lab, and a Lab Exam (10% of total lab grade). Labs are worth a total of 1.5 points each (prelab, 0.3 points; lab activity, 0.6 points; lab homework, 0.6 points).

Homework 30%: Doing the homework is how you will learn the material in this course. The homework is assigned online through Mastering Physics (MPHOBAN112S17). The due dates for each assignment are given in Mastering Physics as well as in the schedule below. The assignments are due at the beginning of class on the day they are due. The penalty for late assignments is 10% per day. The titles of the assignments reflect the chapter that is covered, e.g., MP20 indicates that the problems in this assignment are from Chapter 20.

## **Making up work**

Exams: If you must miss an exam for a UMBC-approved reason, you must contact Dr. Hoban prior to the start of the exam. Emails are timestamped, or you may leave a message in the Physics office: 410-455-2513. Arrangements for makeup exams will be made only for those who adhere to this policy. There will be no make-up exam for the final exam.

Labs: If you must miss a lab, make arrangements for a makeup with your lab TA. Makeup labs will be accommodated for UMBC-sanctioned activities only. No makeup work will be accepted after the last class day (5/15).

Homework: Arrangements to make up missed homework will be considered only in extenuating circumstances. Loss of internet connection is not a valid excuse, because computers are available on campus for student use. Do not wait until the last minute!

## **Getting Help**

Dr. Hoban will be available for office hours after class Monday & Wednesday. You may make separate arrangements by contacting Dr. Hoban through Blackboard. Your lab TA is also a resource for getting help. Additional resources include:

- The [Learning Resources Center](http://www.umbc.edu/lrc/tutoring.html) in the Library offers [tutoring](#) services.  
<http://www.umbc.edu/lrc/tutoring.html>

## **Academic integrity**


All instances of academic misconduct will be addressed according to the UMBC Policy on Academic Integrity (<http://www.umbc.edu/integrity/students.html>). Examples include attempting to make use of disallowed materials on exams, attempting to communicate with anyone other than the instructor, TA, or team member (when appropriate) during an exam, altering graded work and submitting it for regrading, asking someone else to take an exam in your place, copying or paraphrasing another's work on homework, asking someone else to do homework and representing it as your own, and permitting or assisting another student to carry out any of the above. Penalties range from a grade of 0 on a homework or exam to an F in the course (at the professor's discretion), and from denotation of academic misconduct on the transcript to expulsion (as determined by official hearing of the Academic Conduct Committee.)

## **Lab Schedule & TAs**

<b>Lecture</b>	<b>MWF 1:00-1:50</b>	<b>TA</b>
<b>Lab 02</b>	<b>W 5:30-7:20</b>	Wang
<b>Lab 03</b>	<b>W 7:30-9:20</b>	Wang
<b>Lab 04</b>	<b>Th 8:30-10:20</b>	Strobach
<b>Lab 05</b>	<b>Th 11:30-1:20</b>	Baum
<b>Lab 06</b>	<b>Th 2:00-3:50</b>	Wang
<b>Lab 07</b>	<b>Th 5:30-7:20</b>	Wang
<b>Lab 08</b>	<b>Th 7:30-9:20</b>	Baum
<b>Lab 09</b>	<b>F 8:00-9:50</b>	Strobach
<b>Lab 10</b>	<b>F 10:00-11:50</b>	Strobach
<b>Lab 11</b>	<b>W 3:30-5:20</b>	Baum

## Schedule

Please read the section in your textbook before coming to class on the date indicated. The sections are listed by Chapter and Section, i.e., 20.1 is Chapter 20, Section 1. The sections covered by the exams are in parentheses.

Day ⇄ Week	MON	WED	FRI	Lab
1 1/30-2/3	20.1-3	20.4-7	21.1,2 <b>MP20</b>	1: Electric Charge (no prelab)
2 2/6-2/10	21.3,4	21.5,6	21.7,8	2: Electric Field (no prelab)
3 2/13-2/17	22.1,2 <b>MP21</b>	22.3,4	22.5,6	3: Electric Current
4 2/20-2/24	<b>Exam 1</b> (20, 21, 22) <b>MP22</b>	23.1,2	23.3,4	4: A Model for Circuits I: Electric Current
5 2/27-3/3	23.5,6	23.7,8	26.1-4 <b>MP23</b>	5: A Model for Circuits II: Voltage and Ohm's Law
6 3/6-3/10	24.1-4 <b>MP 26</b>	24.5,6	24.7,8	6: A Model for Circuits III: Capacitor
7 3/13-3/17	25.1,2 <b>MP24</b>	25.3,4	<b>Exam 2</b> (23, 24, 25.1-4, 26.1-4) <b>MP25</b>	7.1: Modeling the Action Potential I
3/20-3/24	<b>Spring Break -- No Class</b> 			
8 3/27-3/31	15.1-3	15.4,5	15.6,7	7.2: Modeling the Action Potential II
9 4/3-4/7	16.1,2 <b>MP15</b>	16.3,4	16.5-7	8: Wave Model of Light: Interference and Diffraction
10 4/10-4/14	25.5,7 17.1,2 <b>MP16</b>	17.3,4	17.5,6	9: Ray Model of Light: Reflection and Refraction
11 4/17-4/21	18.1,2 <b>MP17</b>	18.3,4	18.5	10: Ray Model of Light: Lenses
12 4/24-4/28	18.6-7	19.2,4,6 <b>MP18</b>	<b>Exam 3</b> (15-19.2,4,6, 25.5,7) <b>MP19</b>	11: Modeling the Human Eye

13 5/1-5/5	25.6, 28.1-4	28.5-8	29.1-4 <b>MP28</b>	Lab Exam
14 5/8-5/12	29.5-9	30.1,3 <b>MP29</b>	30.4,5	No Lab
15 5/15	30.6,7 <b>MP30</b>	---	---	No Lab: Classes end on Tuesday of this week
16	---	5/24 Final Exam	----	Final Exam is cumulative!