UIC

Physics 108

*Introductory Physics II—Laboratory and Discussion*

Spring 2015

**Instructors’ Information**

<table>
<thead>
<tr>
<th>Name</th>
<th>E-mail</th>
<th>Office Hours</th>
<th>Office Hours Location</th>
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<tbody>
<tr>
<td>Discussion TA</td>
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<tr>
<td>Laboratory TA</td>
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**Coordinators:** Brian Stafford (bstaff3@uic.edu) and Ryan Sellers(rseller2@uic.edu)

**Course Website:** [http://physicsweb.phy.uic.edu/108/](http://physicsweb.phy.uic.edu/108/)

**Laboratory Website:** All Lab Workbooks can be found at: [https://physicsweb.phy.uic.edu/uglab/108/](https://physicsweb.phy.uic.edu/uglab/108/)

**General Information**

The purpose of Physics 108 is to help you explore the natural phenomena of electricity and magnetism through hands-on experience in the laboratory. You will be observing and analyzing these concepts as they are put into action in a computer-based format. The discussion sections will always precede the lab sections and are designed to help you use the concepts you have learned in the lab frame-of-mind through group problems and class discussions with the TA.

Please be sure you have also registered for Physics 107. **Physics 107 and Physics 108 must be taken simultaneously.** The prerequisites for this course are high school algebra and trigonometry. If you do not feel confident in your ability to do algebra and trigonometry, you should spend time during the first few weeks of class reviewing these concepts or seeking help, as they are fundamental mathematical tools that are used throughout the whole course.
Discussion

Discussion sections are an opportunity for you to work through problems with your TA and other students that lead you from a textbook frame-of-mind to a lab frame-of-mind.

Homework

Homework assignments will be posted on the course website. It is your responsibility to print the homework, complete it, and turn it in at the beginning of discussion. There will be 10 homework assignments throughout the semester. The homework will cover the information given in the lab workbook for the particular experiment that will be performed that week; see the course outline below. The lab workbooks can be found on the lab website at https://physicsweb.phy.uic.edu/uglab/108/. You must read the entire lab workbook for the experiment before coming to discussion in order to be able to complete all in-class assignments (group problems and quiz) in time. This is also vital for completing the labs during your lab section in time.

Group Problems

Group problems will be handed out and completed during discussion. You may work in groups of 3 or 4, and you may use your notes. This is your opportunity to use the expertise of your TA and the collaboration with other students to help you understand the concepts better and prepare you for lab. Group problems will be turned in at the end of discussion. You will receive full credit for the group problems if you fully participate (TA’s discretion).

Quizzes

Ten quizzes will be given throughout the semester during the last 10 minutes of discussion. You may use your group problems, but you must work alone. They will cover the concepts discussed during that discussion, focusing on lab-type problems.

Solutions to the homework, group problems, and quizzes will be posted on the course website on the following week.

Laboratory

There will be 10 labs throughout the semester, and you must complete all of them in order to receive credit for the course. Lab reports will be completed during the lab on the computer and saved to the central server at the end of the lab. The server automatically collects all saved files at the end of the lab, therefore, no extra time can be given to students who do not finish in time. It is very important that you read the lab workbooks (on the lab website at https://physicsweb.phy.uic.edu/uglab/108/) before coming to discussion and lab and that you work efficiently and ask lots of questions to your TA in order to finish in time. You will be working in groups of 2.

The final lab of the semester uses small radiation sources. These are not dangerous when used properly. A short radiation safety quiz will be made available to you later in the semester to ensure that you understand how to handle the material properly. The quiz is not part of your grade, but is a mandatory prerequisite to attend the final lab, which is mandatory for completion of this course.
Grades

This course does not have a set grading scale. Your score is determined in comparison with the overall performance of PHYS 108 students. Keep in mind that average scores for this course are generally quite high, meaning that many semesters it may take more than a 90% to get an A. You will be informed of your current grade at mid-term. You can also email the coordinators (listed at the top of this syllabus) at any time to get your up-to-date grade. The different components of this course will be weighted as follows:

<table>
<thead>
<tr>
<th>Laboratory</th>
<th>Discussion</th>
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<tbody>
<tr>
<td>Lab Reports . . . 50%</td>
<td>Homework . . . . 10%</td>
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<tr>
<td>Participation . . 10%</td>
<td>Group Problems . . . 15%</td>
</tr>
<tr>
<td>Quizzes . . . . . . . 15%</td>
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<tr>
<td>Total . . . . . . . . 60%</td>
<td>Total . . . . . . . . 40%</td>
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Absence and Tardiness Policy

Discussion

If you have an excused absence (illness with a doctor’s note, religious observation, athletic competition, etc.), please provide documentation to your TA in advance or as soon as you become aware of your emergency so that he/she can work with you to schedule a make-up session. Make-up sessions can only be given during the same week as the missed discussion because the solutions will be posted the following week. This can be accomplished by either a) participating in another discussion section on the same topic (preferred) or b) in the office hour of one of the TAs. It is your responsibility to contact your discussion TA and notify them how you will be making up discussion work. Class time will not be specifically set aside for making up discussion work. If you wish to attend another discussion section during the week it must be approved by both discussion TAs. No make-ups will be given for unexcused absences, and you will receive zero points on that week’s homework, group problems, and quiz.

If you are tardy to discussion, it is up to your TA’s discretion how much credit you will receive for the group problems.

Laboratory

If you have an excused absence, please provide documentation to your TA in advance or as soon as you become aware of your emergency. Then, you may make-up the missed lab during the next make-up week. You must coordinate with your TA in advance to make up during the make-up week. Remember, all labs must be completed in order to receive credit for the course!

If you are tardy to lab, it is up to your TA’s discretion whether you will be allowed to do the experiment. You may be asked to do the experiment without a partner or to make it up at another time.
Late Registration and Withdrawal

Friday, January 23 – Last day to complete late registration; last day to add a course(s) or make section changes; last day to drop individual courses via Student Self-Service without receiving W (withdrawn) grade on academic record.

Friday, January 23 – Last day to submit Withdrawal from Term Request via Student Self-Service and receive 100% cancellation of tuition and fees.

Friday, March 20 – Last day for undergraduate students to use optional late drop in college office and receive grade of W on academic record. For more information, please see: http://www.uic.edu/depts/oar/registration/drop_policy_undergrad.html.

Information for Students with Disabilities

Students with disabilities who require accommodation for access and participation in this course must be registered with the Office of Disability Services (ODS). Please contact ODS at 312-413-2183 (voice) or 312-413-0123 (TTY). Please also inform your instructors of the need for accommodations. For more information please visit http://www.uic.edu/depts/oaa/disability_resources/index.html.

UIC Senate Policy on Religious Holidays

The faculty of the University of Illinois at Chicago shall make every effort to avoid scheduling examinations or requiring that student projects be turned in or completed on religious holidays. Students who wish to observe their religious holidays shall notify the faculty member by the tenth day of the semester of the date when they will be absent unless the religious holiday is observed on or before the tenth day of the semester. In such cases, the student shall notify the faculty member at least five days in advance of the date when he/she will be absent. The faculty member shall make every reasonable effort to honor the request, not penalize the student for missing the class, and if an examination or project is due during the absence, give the student an exam or assignment equivalent to the one completed by those students in attendance. If the student feels aggrieved, he/she may request remedy through the campus grievance procedure. For more information please visit http://www.uic.edu/depts/oa/docs/religiousholidays_07_12.pdf and http://www.uic.edu/depts/oa/docs/ReligiousHolidaysFY20132015.pdf.

Academic Integrity

As an academic community, the University of Illinois at Chicago is committed to providing an environment in which research, learning, and scholarship can flourish and in which all endeavors are guided by academic and professional integrity. All members of the campus community—students, staff, faculty, administrators—share the responsibility of insuring that these standards are upheld so that such an environment exists. Instances of academic misconduct by students, and as defined herein, shall be handled pursuant to the Student Disciplinary Policy. For more information please visit http://www.uic.edu/depts/dos/studentconduct.html.
<table>
<thead>
<tr>
<th>WEEK</th>
<th>DISCUSSION</th>
<th>LAB</th>
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| 1    | HW Due: None  
Group Probs: None  
Quiz: None | No Lab |
| 2    | Jan 19 – Jan 23  
Labor Day Week– No Classes | |
| 3    | Jan 26 – Jan 30  
HW Due: #1 (on Exp. #1)  
Group Probs: #1 (Electrostatics)  
Quiz: #1 | Exp. #1:  
“Electrostatics” |
| 4    | Feb 2 – Feb 6 Wed. – Fri. Only  
HW Due: #2 (on Exp. #2)  
Group Probs: #2 (DC Circuits)  
Quiz: #2 | Exp. #2:  
“DC Circuits” |
| 5    | Feb 9 – Feb 13 Mon. – Tues. Only  
HW Due: #2 (on Exp. #2)  
Group Probs: #2 (DC Circuits)  
Quiz: #2 | Exp. #2:  
“DC Circuits” |
| 6    | Feb 16 – Feb 20  
HW Due: #3 (on Exp #3)  
Group Probs: #3 (RC Circuits)  
Quiz: #3 | Exp. #3:  
“RC Circuits” |
| 7    | Feb 23 – Feb 27  
HW Due: #4 (on Exp. #4)  
Group Probs: #4 (Magnetic Fields)  
Quiz: #4 | Exp. #4:  
“Magnetic Fields” |
| 8    | Mar 2 – Mar 6  
HW Due: #5 (on Exp. #5)  
Group Probs: #5 (Induction)  
Quiz: #5 | Exp. #5:  
“Induction” |
| 9    | Mar 9 – Mar 13  
HW Due: #6 (on Exp. #6)  
Group Probs: #6 (EM Radiation)  
Quiz: #6 | Exp. #6:  
“EM Radiation” |
| 10   | Mar 16 – Mar 20  
Make-Up Labs – Coordinate make-ups with your TA | Make-Up Labs |
|      | Mar 23 – Mar 27  
Spring Break | |
| 11   | Mar 30 – Apr 3  
HW Due: #7 (on Exp. #7)  
Group Probs: #7 (Physical Optics)  
Quiz: None | Exp. #7:  
“Physical Optics” |
| 12   | Apr 6 – Apr 10  
HW Due: #8 (on Exp. #8)  
Group Probs: #8 (Geometric Optics)  
Quiz: #8 | Exp. #8:  
“Geometric Optics” |
| 13   | Apr 13 – Apr 17  
Make-Up Labs – Coordinate make-ups with your TA | Make-Up Labs |
| 14   | Apr 20 – Apr 24  
HW Due: #9 (on Exp. #9)  
Group Probs: #9 (PE Effect)  
Quiz: #9 | Exp. #9:  
“PE Effect” |
| 15   | Apr 27 – May 1  
HW Due: #10  
Group Probs: #10 (Radiation and Statistics)  
Quiz: #10 | Exp. #10:  
“Radiation and Statistics” |
| 16   | May 4 – May 8  
Final Exams – No Classes | |