INTRODUCTORY PHYSICS FOR SCIENTISTS AND ENGINEERS

Physics 1212  Tu & Th  Period 3  11:00-12:15pm  Room 202  Spring Semester 2020

PHYS 1212 is the second semester of a two semester course in introductory physics. It is a four credit hour course requiring a working knowledge of calculus, trigonometry, algebra, and geometry.

Instructor  Prof. Michael Geller
Office: Room 251 Physics Building
Office hours: Tuesdays 4:30pm
Email: mgeller@uga.edu

Please contact the course assistant for questions about your grades or to view a homework or exam.

Course Assistant  to be announced

Web Page  https://uga.view.usg.edu (ELC website)

When do labs start?
The labs begin the second week of classes, January 13-17. Please read through the online lab syllabus and the first experiment before the first lab.

Course Format
This course consists of two lectures and one laboratory per week. The lectures will be used primarily to supplement the material discussed in the book, not present it comprehensively. You will be expected to study assigned material before it is discussed in class. If you do not study the assigned material on your own or do not do the assigned reading before coming to class you will have difficulty in this course. You will be responsible for all the assigned material—it may appear in the homework or on an exam—even if it is not discussed in class.

You must also be registered for one of the laboratory sections which will meet once a week for two hours. The laboratory is required. Graduate teaching assistants will be assigned to be your lab instructors. They will assign you a laboratory grade at the end of the semester. I will include that grade in your overall grade for the course. Questions about the laboratory exercises should be directed to your lab instructor.

Required Course Materials

Physics for Scientists and Engineers (4th edition), by R. D. Knight (Pearson). Earlier editions are also acceptable. You do not need a Mastering Physics license for this course.

Scientific calculator.

Homework
Homework assignments will be posted on the ELC, collected in class, and graded and returned by the course assistant.
Exams
There will be three in-class midterm exams and a cumulative final exam. The two best midterm scores will be used to determine your course grade, the remaining one will be dropped. All midterm exams will be closed book and closed notes; no written notes, equation sheets, or additional sheets of paper are allowed during the exams, including the final. Calculators (including graphing calculators) are allowed, but the use of laptop or other computers is forbidden. Texting or the use of cell phones during exams is considered cheating. There will no make-up exams given: If you miss a midterm exam it will count as your dropped exam, regardless of whether or not the absence is excused and approved by the university. Exams are property of the Department of Physics and Astronomy and are not returned (however the course assistant will let you view your exams).

Grading
Your final grade will be determined according to:

- Homework (lowest score dropped) 10%
- Midterm exams (lowest score dropped) 50%
- Lab grade 15%
- Final exam 25%

The grading scale is as follows (points rounded to the nearest integer):

- A  89 - 100%
- A- 86 - 88%
- B+ 83 - 85%
- B  79 - 82%
- B- 76 - 78%
- C+ 73 - 75%
- C  69 - 72%
- C- 66 - 68%
- D  50- 65%
- F  0 - 49%

Course Schedule (tentative)

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Topic</th>
<th>Book chapter</th>
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<tbody>
<tr>
<td>1</td>
<td>Tu Jan 7</td>
<td>Electric charge and force</td>
<td>22</td>
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<td>2</td>
<td>Th Jan 9</td>
<td>Electric charge and force</td>
<td>22</td>
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<tr>
<td>3</td>
<td>Tu Jan 14</td>
<td>Electric field</td>
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<td>4</td>
<td>Th Jan 16</td>
<td>Electric field</td>
<td>23</td>
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<td>5</td>
<td>Tu Jan 21</td>
<td>Gauss’s law</td>
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<tr>
<td>6</td>
<td>Th Jan 23</td>
<td>Gauss’s law</td>
<td>24</td>
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<tr>
<td>7</td>
<td>Tu Jan 28</td>
<td>Electric potential</td>
<td>25</td>
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<td>8</td>
<td>Th Jan 30</td>
<td>Potential and field</td>
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<td>9</td>
<td>Tu Feb 4</td>
<td>Potential and field</td>
<td>26</td>
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<td>10</td>
<td>Th Feb 6</td>
<td>Review of chapters 22-26</td>
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<td>11</td>
<td>Tu Feb 11</td>
<td><strong>Exam 1</strong></td>
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<td>12</td>
<td>Th Feb 13</td>
<td>Current and resistance</td>
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<td>13</td>
<td>Tu Feb 18</td>
<td>Electric circuits</td>
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<td>14</td>
<td>Th Feb 20</td>
<td>Electric circuits</td>
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<tr>
<td>15</td>
<td>Tu Feb 25</td>
<td>Magnetic field</td>
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<td>16</td>
<td>Th Feb 27</td>
<td>Magnetic field</td>
<td>29</td>
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<td>17</td>
<td>Tu Mar 3</td>
<td>Electromagnetic induction</td>
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<td>18</td>
<td>Th Mar 5</td>
<td>Electromagnetic induction</td>
<td>30</td>
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<tr>
<td>19</td>
<td>Tu Mar 17</td>
<td>Review of chapters 27-30</td>
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</table>
20       Th Mar 19       Exam 2
21       Tu Mar 24       Electromagnetic fields 31
22       Th Mar 26       Electromagnetic fields 31
23       Tu Mar 31       AC circuits 32
24       Th Apr 2        Wave optics 33
25       Tu Apr 7        Wave optics 33
26       Th Apr 9        Ray optics 34
27       Tu Apr 14       Ray optics 34
28       Th Apr 16       Review of chapters 31-34
29       Tu Apr 21       Exam 3
30       Th Apr 23       Course review
              Tu May 5       Final Exam (noon-3:00pm)

Academic Honesty

All academic work must meet the standards contained in the document *A Culture of Honesty*, available at [www.uga.edu/honesty](http://www.uga.edu/honesty). Every student is responsible for knowing and understanding this policy. If you have any questions concerning this you are obligated to ask me for clarification. Anyone caught cheating will be reported to the university and will receive an F for the course.

General Information

This syllabus is a general plan for the course and deviations may be necessary. You are responsible for attending every lecture. Each student is responsible for the material discussed in class and the announcements made in class. Absence from class does not relieve one of this responsibility.

If you are *retaking* the course and are happy with the final lab grade you received previously, you do not have to attend the lab. You do have to remain registered for the lab, but you do not have to attend. Please contact Tom Barnello, the Lab Coordinator (tjbar@uga.edu) before the end of the drop/add period so that your seat may be made available to another student. If you would like to improve your lab grade, you must attend the lab and do all of the lab exercises again and take another lab final.