Physics 112  
(Edition 2009)  
Class Web Site: http://physics.valpo.edu/courses/p112/  

Instructor:  
Dr. Gary A. Morris  
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Phone: ext. 5516  
E-mail: gary.morris@valpo.edu  

Class Meetings:  

Tu/Th 11:50 am – 1:05 pm, Neils Science Center Room 118  
Class will consist of a variety of activities including lecture, demonstrations, and interactive exercises. We encourage you to make every effort to attend class and have limited sympathy for the problems of students who skip class. If you are late to class or have to leave early, we request that you take a seat near the door so as not to disturb your classmates.  

You are responsible for all the material assigned in the chapters of the text, whether or not the material is specifically covered in lecture. Please come to class prepared to discuss the assigned material from the textbook.  

Our class web site (URL above) will contain class policy, lecture notes, homework assignments, solution sets, previous exams with solutions, current grades, on-line reading quizzes, and links to web sites with materials relevant to the subjects discussed in class.  

Problem Solving Sessions (Optional)  

TBA (Neils Science Center Rm. 118 or 119)  
These optional sessions will last roughly one hour. The purpose of the problem solving sessions is to provide a meeting place for you and your classmates to work together on the assignments for class. During the problem solving sessions, a Valparaiso University faculty member or teaching assistant will be available to provide hints on and help with solving the problems you have encountered in the textbook and on MasteringPhysics.com. Problem Solving Sessions also present you a good opportunity to ask questions about those points from the lecture or the text on which you find yourself somewhat confused. Each help session you attend earns you up to 5 class participation points (see below). Don’t forget to sign in!  

Office Hours:  

T 2 – 5 pm; W 4 – 5 pm; or by appointment.  
If you are having trouble understanding the material presented in class or the work you are to do in the laboratory, please come by and see me during office hours. If you have questions about solving specific homework problems or recommended problems, try to attend the optional Problem Solving Session or talk with your classmates. If those strategies do not succeed, again, feel free to come by and see one me during office hours. And if these hours are inconvenient for you, let me know—we’ll work something out. Oh,
yeah, it’s always best to call ahead, just to verify that I’m in my office before you come. I’m usually around, but sometimes I get called away at the last minute.

Textbooks, Software, and Calculators:

This semester we will be using Walker’s Third Edition of Physics. You will also need access to a computer that has the following software: Adobe Acrobat Reader and web browser software. If you do not have copies of the necessary software, links can be found on our class web site to other sites from which the software may be downloaded free of charge. Finally, you’ll want a calculating device: abacuses tend to be a bit unruly in size and won’t have all the functions you’d like to use. Slide rules seem to have been out of favor for 30 years now. So an electronic calculator that performs standard arithmetic, trigonometric, and exponential functions is probably your best choice.

Homework:

Working problems is important in the process of learning physics. We have therefore made your homework average an important part of your final grade: 35%. You are encouraged to consult your fellow students for assistance in solving the homework problems. HOWEVER, simply copying the answers of your fellow students is a violation of the university honor code. Not to mention the fact that failing to work through the problems on your own will lead to disappointing performance on the exams. The solutions you turn in for credit must be your own work. Late homework will not be accepted, so make sure to get the assignments done on time.

Nearly weekly homework assignments due by 4 pm as scheduled.

There will be a total of 9 homework assignments, each worth 40 or 60 points, and each will be found on www.masteringphysics.com. You should be able to login with last semester’s account, but you will need to enter our course ID, which is MPMORRIS86616. You will find documentation on how to use this software in more detail on our class web site. You may work with others to complete these assignments, but you must turn in your own work. You may not copy the homework from someone else, as that is a violation of the honor code. You are encouraged to attempt the homework on your own before seeking assistance, as that will provide the greatest practice for the exams. Remember, no late homework assignments will be accepted.

~ One Recommended Problem Set for each assignment for EXTRA CREDIT.

Each of the 9 assignments above on MasteringPhysics.com contain additional problems for EXTRA CREDIT as a way for you to earn back points you lost on the mandatory homework. The extra credit problems are due at the same time as the homework assignments. You will find it helpful to work through the recommended problems before attacking the required homework problems. The recommended problems are often instructional in nature and very similar to the ones assigned for credit. Again, try to keep up with the recommended problems. One of them ALWAYS shows up on the mid-term exams. If you’ve done all the recommended problems, you’ll have worked one of the exam problems already before you even take the exam! I’m happy to discuss the solution to any of the assigned problems in the optional Problem Solving Session or during office hours. You are encouraged to work together. Solution guides are available in the library for the end-of-chapter problems and on MasteringPhysics.com for the electronic problems. Note: The extra credit problems can only be applied to the homework assignment with which they are associated, and you cannot earn more than 100% credit on any homework assignment.

Class Participation:

Class periods will consist of a mixture of lecture, demonstrations, and interactive exercises. You will receive credit toward your class participation grade for completing each of these activities. Reading quizzes on the material in our textbook will also provide an opportunity for you to earn additional class participation credit. Finally, there will be surveys taken at the beginning, in the middle, and at the end of
the term. Completing these surveys earns you class participation credit, too. Class participation is worth 5% of your final overall grade.

**One worksheet each class.**
Worksheets will be provided at the beginning of each class. On these worksheets, you will record your solutions and insights into the problems we discuss in class. At the end of class, turn in your worksheet to receive class participation credit. Worksheets will consist of a variety of in-class, interactive, cooperative learning activities. Each worksheet you submit earns you 5 points. With a total of 27 class periods, you can earn 135 points of class participation credit from completing the worksheets.

**~ One on-line reading quiz for each chapter due at the beginning of class as scheduled.**
These 5-question multiple-choice quizzes will be simple and straightforward, designed to help you keep up with the reading assignments. The quizzes will be posted on Valparaiso University’s Blackboard site http://coursevu.valpo.edu. **Make sure your account works as soon as possible so that we can correct problems early in the semester.** Quiz responses are due at 11:50 am (i.e., right before class) on the dates listed in the syllabus. Each quiz is worth 5 points. There will be 12 quizzes over the course of the semester for a total of 60 possible points. The quizzes will be posted about one week before they are due, so you’ll have several days to plow through the text and find all the answers. Once you begin taking the quiz, however, you have 30 minutes to complete it. You MAY use your book, but it is a violation of the honor code to consult other students when answering the quizzes.

**~One help session each week.**
Help sessions are a good place to work together with your fellow students while also having the resource of a faculty member or physics major in the room to help you when you get stuck. They provide yet another way that you can earn class participation credit, just remember to sign-in each week. Attending a help session will earn you the same credit as coming to class, although you must stay for at least an hour and work on physics while you’re there—that’s only fair! With 15 weeks of class, there’s a possible 75 points to be earned.

**Surveys and diagnostic exams.**
You will receive 5 points credit for each of these that you complete. These instruments allow you to communicate directly to me your suggestions for the course, feelings about the course, and background.

**Class Participation Grade**
I will compute your grade based on the percentage of points you accumulate out of 150 points, with a maximum grade of 100%. If you completed all the class participation activities, you could earn > 250 points! Note that you will need to do something more than just come to class in order to get a 100% class participation grade. You may “opt” out of this part of your grade by notifying Prof. Morris by 3/20/2009. If you opt out, your grade will be determined proportionally and entirely on your exam and homework scores.

**Exams:**

**Two mid-term exams**
Two laboratory periods will be used for examinations as noted on the syllabus. During each of these periods, you will be given one multiple-choice section that everyone must work, one essay problem (very similar to the written homework) that everyone must work, and 3 problem sections from which you must choose two to work. Each of these midterm exams will be ~90 minutes long and each is worth 20% of your final grade. If you are unable to make it to a scheduled exam, please contact Dr. Morris, preferably in advance so alternate arrangements can be made.
You will be permitted to bring **ONE 4” x 6” index card** (on which you may put any formulas, notes, etc. that you wish), a **calculator**, and a **pencil or pen** to each exam. You may place anything that you feel relevant on your note card (formulae, solutions to problems, prayers). The note cards must be hand-written: **no photocopied, reduced, or computer generated note cards will be permitted. Violation of this rule is a violation of the honor code.** Note cards must be stapled to and turned in with your exam. They will be returned after the exam has been graded. You are not allowed to use your textbook or any other notes during the exams. Furthermore, you are not allowed to consult your classmates for assistance with exam problems. The exams will not be designed to test your ability to memorize, but rather your ability to think. All relevant constants (including units) will be provided to you on a single sheet at the back of each exam.

**Two optional exam reworks (one for each midterm exam).**

After each exam, you will have the opportunity to turn in revised solutions to the exam, working in the comfort of your own college room or library cubicle. You’re not limited to 2 or 3 hours for the rework, but will have all the time up until it’s due to work on it. You’re free to use whatever resources you deem necessary to solve the problems. By completing the rework, you will get back 1/3 of the difference between your actual exam grade and your score on the rework assignment as credit toward your exam grade.

**Final Exam**

There will be no comprehensive final exam. Instead, Exam 3 on the last third of the course will be administered during the final exam period of 10:30 am – 12:30 pm on Tuesday, May 12, 2009. The format will be the same as the midterm exams, but there will be no rework option. This exam is also worth 20% of your final grade.

**Honor Code:**

You are expected to uphold the Valparaiso University Honor Code as it relates to all work for this course. Please note the rules outlined above for the completion of homework assignments, quizzes, and examinations. We reserve the right to amend these rules, if necessary, during the semester. You are expected to write the university honor code in full on every exam and assignment for this class. We take the honor code very seriously. It is up to YOU, however, to make sure the honor code works! In no case are you allowed to submit solutions to problems copied electronically or otherwise from other students or any web sites.

**Grading:**

<table>
<thead>
<tr>
<th>Class Participation</th>
<th>5%</th>
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<tbody>
<tr>
<td>Homework</td>
<td>35%</td>
</tr>
<tr>
<td>Exams</td>
<td>20% each</td>
</tr>
</tbody>
</table>

The distribution of accumulated scores will assist us in assigning grades at the end of the course. We will, however, try to avoid using a curve. You can check where you stand by checking the Grading page on the class web site. The following represents the toughest possible grade assignment system we will use:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score</th>
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<tbody>
<tr>
<td>A</td>
<td>90 – 100</td>
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<tr>
<td>B</td>
<td>80 – 89</td>
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<tr>
<td>C</td>
<td>70 – 79</td>
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<tr>
<td>D</td>
<td>60 – 69</td>
</tr>
<tr>
<td>F</td>
<td>Below 60</td>
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If your final average is 90% or better, regardless of the distribution of scores, you will get an A- or better. The grade boundaries may, however, shift downward. **Note:** Grading of problem sets and exams will be
based on what actually appears on your paper. Turning in ONLY the answers (correct or otherwise) will yield little or no credit. You must show your work with sufficient detail that the grader(s) can determine your approach, methodology, and logic!

**Make-Up Work:**

There will be no make-ups of missed quizzes. Make-ups for missed homework and exams can only be granted under exceptional circumstances (medical emergency, official university business, etc.). If you know of such impending circumstances, please contact me, preferably by email, in advance (phone mail and personal communications tend to get written on little pieces of paper that quickly become lost in piles of junk in my office) so that alternate arrangements can be made. If it is impossible to notify me in advance by email, please send an email message as soon afterward as possible.

**Appeals:**

You have ONE week from the day on which assignments/exams are returned to appeal your grade. After 5pm on the 7th day, your grade for that assignment/exam becomes final.

**Disability Accommodations:**

Any student with a documented disability needing academic adjustments or accommodations must speak with Dr. Morris during the first two weeks of class. All discussions will remain confidential. Students with disabilities also must contact Disability Support Services.

**Rule 9.01(c) (Adopted from Major League Baseball):**

The instructors have the authority to rule on any point not specifically covered in the above document.