

Physics 111

(Edition 2004)

Class Web Site: <http://physics.valpo.edu/courses/p111/>

Lecture Instructors:

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Class Meetings:

Tu/Th 11:50 am – 1:05 pm, Neils Science Center Room 118

We encourage you all to make every effort to attend class and have particularly little sympathy for the problems of students who skip class. If you are late to class or have to leave early, we request that you sit in the back of the classroom near the ends of the rows 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 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. Your usage of and comments on the Physics 111 web site will impact future development of this web site.

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, both those to be turned in and the optional problems. During the problem solving sessions, a Valparaiso University faculty member or teaching assistant will be available to provide hints on and help with solving any problems you have encountered in the textbook. They may also be able to provide hints on solving the homework problems. 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 redemption points that can be applied to either your homework grade or your class participation grade (see below). Don't forget to sign in!

Office Hours:

Dr. Morris:

Tu/Th 1 pm – 3 pm; W 2 – 4 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 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 Second Edition of Physics. Also available to you will be the accompanying Student Solution Manual and Study Guide. This guide book, which is optional, contains detailed solutions for many of the end-of-chapter problems that will be assigned as recommended problems. You will also need access to a computer that has the following software: Adobe Acrobat Reader and Microsoft Internet Explorer or Netscape. If you do not have copies of Adobe Acrobat Reader or Microsoft Internet Explorer, 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 20 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: 25%. 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.

~ One on-line problem set (3 - 5 problems) due by 4 pm on Mondays.

The on-line portion of your homework assignment can be found at www.masteringphysics.com. Click on the "Young/Geller" book cover (on the far right) and then click on the "Register" button. Use the following access code to register: USMPC-STOUP-BOULE-AYERS-MYTHS-ACHES. You will then be able to set up your own unique ID and password codes to allow you access to the site all semester. You will also need to enter our course ID when you register. Our course ID is MPMORRIS0008. You will find documentation on how to use this software in more detail on our class web site. This portion of your weekly homework assignment is automatically scored as you complete it. We have been given the opportunity to "test" this web-based instructional tool free of charge this year. Your feedback is important in helping us to decide whether or not to continue using this software next year, so please, speak up and be heard!

There will be a total of 9 Mastering Physics assignments over the semester, each worth 20 points for a total of 180 possible points.

4 written problem sets (3 problems each) due by 4 pm on Mondays as scheduled.

There will be 4 written homework assignments due over the course of the semester. The problems in these assignments are designed to be more conceptually-based than those on Mastering Physics. As a result, there may not (and almost certainly will not) be one correct answer for these problems. Instead, these assignments are designed to get you to think about the physics associated with a variety of situations. We hope you'll find them informative and refreshing. Each problem will be worth 10 points. With 4 assignments with 3 problems each, that presents a total of 120 possible points.

~ One Recommended Problem Set each week, NOT GRADED.

The list will consist both of problems from the end-of-the chapter in Walker as well as from the MasteringPhysics.com web site. You will find it helpful to work through the recommended problems before attacking the required homework problems. The recommended problems, especially those on MasteringPhysics.com, 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. Again, 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.

Homework Grade:

I will compute your grade based on the percentage of points you accumulate out of 250 points with a maximum grade of 100%. Since there are 300 points available, you can miss one written assignment and one MasteringPhysics.com assignment over the course of the semester and still earn a 100% homework grade. But remember, no late homework assignments will be accepted.

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 15% 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 26 class periods, you can earn 130 points of class participation credit from completing the worksheets.

~ One Physlets assignment each week due at the beginning of class on Thursdays.

Physlets are interactive computer modules that allow you to develop a better feel for the physics concepts and equations that we'll be studying in class. Consider them to be your virtual laboratory, allowing you to play around with different variables without the complication of setting up equipment or demos. Each week, you'll be given a list of recommended and required Physlets. You'll be expected to turn in the two required Physlets at the beginning of class on the Thursdays indicated on the syllabus. You should work through the recommended list of Physlets as we go along as well. Don't wait until the week before the test—you'll have far too much else to do that week. Pace yourself. Spend a little time on physics each

day. You'll learn the material much better that way, too. Each Physlet problem is worth 5 points. With 11 total assignments over the semester, that's a possible 110 points.

~ One on-line reading quiz each week due on Tuesdays at the beginning of class.

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 Tuesdays listed in the syllabus. Each quiz is worth 5 points. There will be 10 quizzes over the course of the semester for a total of 50 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 250 points, with a maximum grade of 100%. If you completed all the class participation activities, you could earn well over 300 points!

Exams:

Three mid-term exams

Three lecture 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 75 minutes long and each is worth 12.5% 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 3" X 5" 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.

Three 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

The Final Exam Period will be scheduled by the registrar. For the Final Exam, you will be permitted to use a full sheet of 8.5" X 11" notebook paper with any notes or formulae that you care to place on it. Again, this note sheet **must be hand-written**. If you feel that the space requirements are unfairly confining due to personal penmanship difficulties, please contact Dr. Morris before the exam.

The Final Exam will consist of two parts. The first part of the final will contain three problem sections on material from the last 3 weeks of the course. You choose to work two of the three sections. Your score on these two problems will be worth 7.5% of your final overall grade.

The second part of the Final Exam will contain one multiple-choice section (required), one essay question section (required), and 4 problem sections. You choose to work three of the 4 problem sections in this part of the Final Exam. **Your score on the Second Part of the Final Exam is worth 15% of your final grade. Missing the Final Exam will result in an incomplete in the course until a make-up examination can be completed.**

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:

Class Participation	15%
Homework	25%
Mid Term Exams	12.5% each
Part I of the Final Exam	7.5%
Part II of the Final Exam	15%

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:

A	90 – 100
B	80 – 89
C	70 – 79
D	60 – 69
F	Below 60

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.