

PIKEVILLE COLLEGE  
SPRING 2010  
COURSE REQUIREMENT SHEET

Course Prefix & Number: PHY 224

Course Title: General Physics II

Course Credit Hours: 4 Credits

Official Course Description: Basic principles of classical physics which will discuss wave motion, sound, electricity, magnetism, light, and optics. Three hours lecture and three hours laboratory work each week.

Course prerequisites: Grade of "C" or better in PHY 223.

Professor's Name: Dr. Robert Arts

Professor's Phone Number: 218-5476

- Leave a message if you call; don't assume just because you tried to call that I know that you tried to call.

Professor's Home Phone Number: 437-0103

- As with the office phone, please leave a message if you call. Also, please do not call after 9:00 p.m. or before 6:00 a.m.

Professor's E-mail: rarts@pc.edu

- I do not generally check email past 9:00 p.m. So, please do not assume if you send a late message that you'll get a reply that evening. Please plan ahead if you need to ask a question and expect a timely reply
- Also, please at least check for a reply if you send me an email. Far too often I get the question "Did you get my email" and my response is "Yes, I sent you a reply" to which I get the response "Oh, I did not check." So, please don't send me a message unless you actually care about the response!

Professor's Office Location: Room 214B  
Armington Science Building

Professor's Office Hours: Monday, Wednesday and Friday = 9:00 a.m. - 9:50 a.m.  
& 11:00 a.m. - 11:50 a.m.

- Please feel free to contact me for alternate meeting times if these times are not convenient for you and you wish to see me.

Required Text & Supplies:

- Serway & Vuille (2009). "College physics," 8<sup>th</sup> ed. Cengage: Belmont, CA. ISBN: 978-0-495-38693-3
- Web Assign Access for "College Physics," 8<sup>th</sup> ed. by Serway & Vuille

Course Website:

- <http://campus.pc.edu/~rarts/courses/physics/224/physics224.html>

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Course Outcomes:

*Critical Thinking*

Most students take this course to fulfill the related studies requirements for the biology and chemistry degree programs, so the level of instruction is not as rigorous as a course for students who plan to major in physics. However, you will be expected to comprehend fundamental concepts and apply physical reasoning to a variety of situations. Many students find physics difficult because it goes beyond memorization by requiring higher level thinking skills (levels 4 through 6 below). Learning physics is also like learning a foreign language since new words and symbols must be understood and applied correctly within the context of various physical situations.

Bloom's Taxonomy of the Cognitive Domain:

1. Knowledge - memorization of facts, words, and symbols
2. Comprehension - understanding the meaning of knowledge
3. Application - applying concepts to various situations
4. Analysis - breaking apart complex ideas
5. Synthesis - putting individual ideas together to form a complete explanation
6. Evaluation - judging the merits of individual ideas and making decisions

Not only are these skills needed for physics, but employers consistently rank critical thinking and problem-solving ability near the top of their list of desired traits in valued employees.

Upon completion of the course the student will have learned to:

- Analyze experimental data to determine patterns, relationships, perspectives, and credibility; use computer spreadsheets, and graphing programs to assist in quantitative analysis; and consider the possible effects of measurement errors on calculations. (Analysis)
- Identify the characteristics of waves associated with vibrations and oscillatory motion. (Knowledge)
- Analyze the motion of light and sound waves in terms of frequency, wave speed and wavelength. (Analysis)
- Identify the wave characteristics of diffraction and interference. (Knowledge)
- Identify the characteristics of light waves as they bounce off the boundary between two media. (Comprehension)
- Evaluate the formation of images from mirrors and lenses using graphical methods and the mirror/lens equations. (Evaluation)
- Identify the characteristics of light waves as they travel from one media into another. (Knowledge)
- Identify the characteristics of electric and magnetic fields surrounding charged particles. (Knowledge)
- Evaluate the force between two charged particles as a function of the distance between the particles. (Evaluate)
- Evaluate the relationship between electric current, voltage, resistance, and capacitance. (Evaluation)
- Compare and contrast the characteristics of current, voltage, resistance, and capacitance in series and parallel circuits. (Analysis)
- Identify the formation of magnetic fields from moving electric charges. (Knowledge)
- Analyze the characteristics of electric fields and the electric potential surrounding point charges. (Analysis)
- Summarize the effects of forces on magnetic fields produced by moving charged particles and current carrying wires. (Evaluation)
- Apply the concepts of magnetic flux, Faraday's Law, Lenz's Law to electromagnetic induction. (Application)
- Analyze the dual nature of light with reference to diffraction, interference, polarization. (Analysis)

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Course Contribution to the General Education Outcomes:

<b>General Education Outcomes</b>	<b>Course Contribution</b>
1) The Pikeville College graduate will demonstrate effective oral and written communication skills.	Successful completion of PHY 224 will contribute to a student's being able to demonstrate this outcome by adequately writing answers to open response essay-type questions on each of the required examinations.
2) The Pikeville College graduate will demonstrate effective quantitative skills.	Successful completion of PHY 224 will contribute to a student's being able to demonstrate this outcome by applying specific mathematical equations in order to answer questions within each of the required assignments.
3) The Pikeville College graduate will demonstrate independent and critical thinking.	Successful completion of PHY 224 will contribute to a student's being able to demonstrate this outcome by performing data analysis, concept application, and information synthesis in their analysis of physics concepts.
4) The Pikeville College graduate will demonstrate cultural awareness.	N/A
5) The Pikeville College graduate will demonstrate historical awareness.	N/A
6) The Pikeville College graduate will demonstrate basic scientific knowledge.	Successful completion of PHY 224 will contribute to a student's being able to demonstrate this outcome by applying the student's knowledge of physics to real-world physical situations.
7) The Pikeville College graduate will demonstrate awareness of social science concepts.	N/A
8) The Pikeville College graduate will demonstrate ethical awareness.	N/A
9) The Pikeville College graduate will demonstrate the ability to integrate knowledge across disciplines.	Successful completion of PHY 224 will contribute to a student's being able to demonstrate this outcome by drawing together elements from chemistry, physics, engineering and mathematics.
10) The Pikeville College graduate will demonstrate effective use of technology.	N/A

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Course Outline:

DAY	DATE	MATERIAL
Wednesday	1/6/2010	Introduction
Friday	1/8/2010	Vibrations and Waves
Monday	1/11/2010	Vibrations and Waves
Wednesday	1/13/2010	Vibrations and Waves
Friday	1/15/2010	Sound HW#1 (Vibrations and Waves) Due Quiz #1 - Vibrations & Waves
Monday	1/18/2010	No Class - Martin Luther King Holiday
Wednesday	1/20/2010	Sound
Friday	1/22/2010	Sound Quiz #2 - Sound
Monday	1/25/2010	Sound HW#2 (Sound) Due
Wednesday	1/27/2010	Exam #1: Vibrations, Waves, and Sound UQAWA #1 for V, W, & S due by 9:00 p.m. via email
Friday	1/29/2010	Electric Charge, Force, and Fields
Monday	2/1/2010	Electric Charge, Force, and Fields
Wednesday	2/3/2010	Electric Charge, Force, and Fields
Friday	2/5/2010	Electric Charge, Force, and Fields Quiz #3 - Electric Charge, Force, and Fields
Monday	2/8/2010	Electric Potential, Energy, and Capacitance
Wednesday	2/10/2010	Electric Potential, Energy, and Capacitance
Friday	2/12/2010	Electric Potential, Energy, and Capacitance
Monday	2/15/2010	Electric Current and Resistance HW#3 (Electric Charge, Force, and Fields; Electric Potential, Energy, & Capacitance) Due
Wednesday	2/17/2010	Electric Current and Resistance
Friday	2/19/2010	Basic Electric Circuits Quiz #4 - Electric Potential, Energy, & Capacitance; Electric Current & Resistance
Monday	2/22/2010	Basic Electric Circuits
Wednesday	2/24/2010	Basic Electric Circuits HW#4 (Resistance & Basic Electric Circuits) Due
Friday	2/26/2010	Exam #2: Charges, Electricity, & Circuits UQAWA #2 for Electricity due by 9:00 p.m. via email
Monday	3/1/2010	Magnetism
Wednesday	3/3/2010	Magnetism

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Course Outline Continued:

Friday	3/5/2010	Magnetism Quiz #5 - Magnetism
Monday	3/8/2010	No Class - Spring Break
Wednesday	3/10/2010	No Class - Spring Break
Friday	3/12/2010	No Class - Spring Break
Monday	3/15/2010	Magnetism
Wednesday	3/17/2010	Electromagnetic Induction HW#5 (Magnetism) Due
Friday	3/19/2010	Electromagnetic Induction
Monday	3/22/2010	Electromagnetic Induction
Wednesday	3/24/2010	Electromagnetic Induction
Friday	3/26/2010	AC Circuits Quiz #6 - Electromagnetic Induction HW#6 (Electromagnetic Induction) Due
Monday	3/29/2010	Exam #3: Magnetism, Electromagnetic Induction, & AC Circuits UQAWA #3 for Magnetism due by 9:00 p.m. via email
Wednesday	3/31/2010	Geometrical Optics: Reflection and Refraction of Light
Friday	4/2/2010	No Class - Good Friday
Monday	4/5/2010	Geometrical Optics: Reflection and Refraction of Light
Wednesday	4/7/2010	Geometrical Optics: Reflection and Refraction of Light
Friday	4/9/2010	Mirrors and Lenses
Monday	4/12/2010	Mirrors and Lenses
Wednesday	4/14/2010	Mirrors and Lenses
Friday	4/16/2010	Physical Optics: The Wave Nature of Light HW#7 (Reflection & Refraction; Mirrors & Lenses) Due Quiz #7 - Reflection & Refraction; Mirrors & Lenses
Monday	4/19/2010	Physical Optics: The Wave Nature of Light
Wednesday	4/21/2010	Physical Optics: The Wave Nature of Light
Friday	4/23/2010	Physical Optics: The Wave Nature of Light Last day to submit extra credit work Quiz #8 - Physical Optics
Monday	4/26/2010	Physical Optics: The Wave Nature of Light HW#8 (Physical Optics) Due UQAWA #4 for Light & Optics due by 9:00 p.m. via email
Friday	4/30/2010	Exam #4: Light & Optics

- You are responsible for the complete content of anything said during each lecture & laboratory session. Online lecture notes are provided to you so you are aware of what is intended to be covered each day. If you do not wish to purchase a text that is okay. You'll not need the text to completing your homework assignments but you may find it a useful reference to read in addition to the lecture and online lecture notes.

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Course Structure:

We will be meeting MWF each week to discuss aspects of four physics topics: vibrations, waves, & sound; electricity; magnetism; and light & optics.

Assignments

HOMEWORK: All of your homework assignments will come from the WebAssign online homework service. You are responsible for downloading the homework and submitting the assignment answers, back to the web, prior to the due date and time. You will need to begin the process by:

- a) Visiting our course website at  
<http://campus.pc.edu/~rarts/courses/physics/224/physics224.html>
  - b) Select the "WebAssign Self Enrollment" link. This guide will step you through the procedure of accessing your WebAssign course area and registering; from the access card acquired from the bookstore or purchased directly online.
  - c) Download the student guide (if so desired)
  - d) Open "HW#1 – Vibrations & Waves"; you may print a copy or work from the browser screen.
  - e) Work at least one homework problem and submit its answer before the next class meeting; this way I can see that everyone has registered with the system okay and is not experiencing any major problems. Continue submitting answers until due date and time. The solutions to your HW set will be available after the due date and time has passed.
- Homework assignments are worth up to 100 percentage points each and as a total comprise 12% of your total course grade. The assignments are generally due by midnight (11:59 p.m. EST) on the day (M - F) after that homework chapter's material has been completely covered. The assignment's due date and time are indicated with the homework set. There are eight (8) homework assignments for the semester you must complete. All problems have a particular significance to your understanding of the material presented. The WebAssign system will not accept late work for any reason....so get the problems in on time!

UQAWA: A Universal Qualitative Analysis Writing Assignment (UQAWA) is a method of assessing and enhancing a certain aspect of your critical thinking skills, namely, the ability to

1. Determine which physical quantities are relevant to understanding a given physical situation;
2. Determine which equations relating those quantities are relevant to understanding the situation;
3. Use those equations to qualitatively describe how the physical situation will play out.

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For example, if you're asked why a block of lead is heavier than an equal-sized block of aluminum, you should know first that the densities, masses and volumes of the two blocks are the relevant quantities. Next you should recall that density  $\rho$  is the ratio of mass ( $m$ ) over volume ( $V$ ). Hence, for blocks of equal volume  $V$ , the mass of the lead block is  $m_{\text{Pb}} = \rho_{\text{Pb}} V$  while the mass of the aluminum block is  $m_{\text{Al}} = \rho_{\text{Al}} V$ . So, the fact that  $\rho_{\text{Pb}} > \rho_{\text{Al}}$  makes the mass of the lead block greater, and hence it feels heavier.

UQAWA's should be concise, i.e., they should be short, but all of the necessary pieces should be included. Most UQAWA's should be less than two pages of type-written material. Which brings me to another point: UQAWA's should be typed. You will need to get to know how to use the equation editor on your word processor. Ask for help if you need it.

All UQAWA's will be divided into the following four sections:

- Description of Phenomenon
- Relevant Quantities
- Relevant Equations
- Explanation of Phenomenon

There will be four UQAWAs assigned this semester; corresponding to the four topic areas we're going to cover (Vibrations, Waves, & Sound; Electricity; Magnetism; and Optics). Each UQAWA assignment is worth up to 100 percentage points each and the total of the four assignments comprise 12% of your total course grade.

- UQAWA's are to be submitted via email (rarts@pc.edu) to Dr. Arts.
- A more complete UQAWA Description, a UQAWA Example, and the UQAWA Grading Rubric are each available for download from our course website.

**QUIZZES:** These quizzes will generally be 5 - 10 multiple choice concept questions relating to the week's lectures and laboratory. To receive full credit for a problem, both the correct answer (1/2 credit) and a reasonable explanation (1/2 credit) must be given for each problem. These assessments are worth up to 100 percentage points each and will be given every week during the last fifteen to twenty minutes of the Friday lecture class; of which there will be approximately eight (8) quizzes given this term. The total of the eight quizzes comprise 16% of your final course grade.

**EXAMS:** Exams will generally consist of several multiple choice concept questions (similar to your quiz questions) and one open response application problem (similar to your homework assignments) from **each** topic covered by the exam. The four exams scheduled this semester (Exam #1 – Exam #4) correspond with the four topic areas we're going to cover. Each exam is worth up to 100 percentage points each and the total comprises 40% of your total course grade.

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LAB: In the laboratory you will learn based on your own direct observations of physical phenomena and what you can infer and reason from these observations in collaboration with your fellow students and the laboratory instructor. You will learn science as you do science. You will reinforce and apply your new ideas in homework and other in-class activities as well as pulling elements from those exercises into the laboratory. You will realize that thinking scientifically is not mysterious but a process that can help you better understand the world around you.

- Require Text: Arts, R. (2010). Laboratory physics: Part II. Pikeville, KY: Pikeville College Press.
- \*Available for download from the course website\*

There will be eight (8) formal laboratories completed this semester along with four (4) challenge activities. The formal laboratories will be graded based on the pre-laboratory quiz and the laboratory reports that are completed during the semester. Each of the eight formal laboratories is worth up to 100 percentage points each and is each individually worth up to 1.5% of your final course grade. The challenges will be graded based on your in-lab participation and note taking completed during the challenge; as well as your final result. Each of the four challenges is worth up to 100 percentage points each and is each individually worth up to 2% of your final course grade. The sum total of the formal laboratories and the challenges comprises 20%\*\* of your final course grade.

***\*\*You MUST pass the lab (based on the points earned from the total points available in the laboratory (formal labs and challenges)) with at least a 60% in order to pass the entire course. A total laboratory grade lower than 60% will result in an overall failing grade for the entire course!***

- PARTNERS: Most work in the laboratory will be done with partners in groups of two or three. It is important that partners engage in discussion of their experiences and ideas and avoid working in different sections of the laboratories as isolated individuals. Additionally, we may change group members during the semester. If you feel strongly that you are in a group with which you are incompatible, please discuss this with me as soon as possible.
- LAB REPORTS: Lab work will be evaluated on your ability to not only perform each laboratory experiment but to communicate those results in written form. Report writing is a required part of many occupations. Professional scientists and engineers, for example, after carrying out a design or analysis task, typically write up the results in the form of a report. Good report writing is therefore an essential skill in modern society. In all cases, the written report is a vehicle for dissemination of information. Bear in mind that I will read your report, and that you want me to understand what you are trying to say. A good report must therefore be written in a clear and concise style, and must convey the information in a logical step-by-step sequence so that I am led inexorably to the same conclusion that you arrived at.

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- In the experiments proposed in this course you will be given specific objectives towards which to work. In order to meet those objectives, you must develop a logical argument, which culminates in a conclusion. The report should therefore follow a carefully considered, step-by-step logical sequence in order to arrive at that conclusion. Along the way you must convince me at each stage that you have done the right thing and that you have made the correct interpretation of your results. When writing your reports, it may help to imagine that I know nothing about the experiment. That is, you must then provide the necessary background, inform me of what you actually did, and persuade me of your conclusions. If you develop a logical and complete argument, then I will arrive at the same conclusion.
  - A “Physics Laboratory Report Expectations” is available from the course website. Please ask me if you have any questions regarding these expectations.
  - Each of your laboratory reports will be scrutinized very carefully for completeness, the comprehensiveness your conclusions, and the final percentage error/difference that you find (if applicable). A grading rubric can also be found on the course website.
- There is also a PRE-LABORATORY QUIZ associated with each laboratory to be completed this semester. I expect that you have read and are at least moderately familiar with the laboratory to be completed each week; in particular with the theory behind the experiment(s) we are conducting and the basic procedure that you will follow. In order to better prepare you for the lab and to encourage you to actually read the lab prior to walking in the door, a pre-laboratory quiz will be administered prior to the beginning of each laboratory. The quiz will generally consist of several questions related to the lab; its theory, and/or procedure. The answers to all of the questions can be found in the corresponding lab; so if you have actually read through the lab prior to coming to class, you will have no trouble answering the questions. 10% of each of your formal laboratory report grades will come from the evaluation of this pre-laboratory quiz.
- For the "challenges".....you will again work with your lab partner(s) to work toward achieving the goal of each specific challenge within the time limit of the laboratory. Generally, these challenges are exploratory, i.e. no specific instructions will be given as to what to do in order to reach your goal. You and your partner(s) will have to recall the underlying physics, develop the experimental technique that you wish to use, conduct your experiment(s), and attempt to achieve the goal of the challenge.
  - After introducing you to the challenge and goals, I will set you free in the lab. My role will be purely as an observer and as an aid in retrieving supplies, measuring devices or anything else you might request. I will generally offer no advice or recommendations. Your group will have to decide on everything, from what to measure....to how to measure what you need in order to achieve the goal of the challenge.

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**Approximate Laboratory Breakdown:**

<u>WEEK OF</u>	<u>LAB #</u>	<u>DESCRIPTION</u>
1/4	No Lab	Too Early
1/11	--	Safety and Informational meeting!!
1/18	No Lab	Martin Luther King Holiday
1/25	1	Standing Waves in a String
2/1	2	Speed of Sound in Air
2/8	C1	<i>V, W, &amp; S Challenge</i>
2/15	3	Electric Field & Equipotentials
2/22	4	Resistance Measurements
3/1	C2	<i>Black Box Circuit Challenge</i>
3/8	No Lab	Spring Break
3/15	5	The e/m Ratio for the Electron
3/22	6	Magnetic Fields & Induction
3/29	C3	<i>Magnetism Challenge</i>
4/5	7	Reflection & Refraction
4/12	8	Spherical Mirrors and Lenses
4/19	C4	<i>Laser Target Shoot Challenge</i>
4/26	No Lab	Finals Week

Each laboratory session is scheduled for a three-hour block of time. As such, the eight formal laboratories have been designed to allow you the time to not only complete the experiment(s) ask of you but to complete the required report/summary of conclusions as well. Thus, at the end of each laboratory period, you will submit your final work prior to leaving the lab.

In addition, all work for the challenge activities will be completed and handed in before leaving the laboratory on those corresponding days as well.

**Tutoring Center:**

- Staffed by members of the faculty, staff, and student body, the tutoring center provides a variety of services to Pikeville College students through peer tutoring, computer tutorials in math and English, and a videotaped lecture series in math.
- The Tutoring Center is located in the Armington Science Center, Room 301; it is open Monday through Friday from 9:00 a.m. - 5:00 p.m. and evening services by appointment. All Tutoring Center services are free. You can arrange tutoring services by contacting the ACE Program at 218-5701 or 218-5719.

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Use of Technology:

The course is a lecture format but utilizes a significant number of online resources.

- You may view the course lecture notes and related course materials by accessing my web page. The URL is below: <http://campus.pc.edu/~rarts>

Select "The Courses I Teach" then "Physics 224 – General Physics II" to access the General Physics II Home Page. When accessing the "Sample Homeworks, Quizzes and Exams" you will need to use the following user name and password:

User Name: \_\_\_\_\_

Password: \_\_\_\_\_

Course Requirements & Evaluation:

The final course grade will be based on the breakdown below:

Homework:	12% (8 @ 1.5% each)
UQAWA:	12% (4 @ 3% each)
Quizzes:	16% (8 @ 2% each)
Exams 1-4:	40% (4 @ 10% each)
Lab:	<u>20% (8 labs at 1.5% each + 4 challenges @ 2% each)</u>
TOTAL:	100%

\*\* Grade Determination Scale: The grade scale for the class is based on the 10% grade range listed below:

<u>Grade Range</u>	<u>Letter Grade</u>
100.0% - 90.0%	A
89.9% - 80.0%	B
79.9% - 70.0%	C
69.9% - 60.0%	D
59.9% - 0.0%	F

- Your final average in the class will include the points from any extra credit that you complete. Extra credit can only serve to help move you into a higher grade bracket.
- I reserve the right to move you into a higher grade bracket if you have a border-line grade and if it is deemed appropriate.

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Late Assignment Policy: As all the material is important to your understanding of the course, absence from the lecture requires you to make up or submit any missed assignments. I will only give permission for a make-up provided a valid excuse is presented within **24 hours** of the missed assignment. In addition, if you are aware of an upcoming lecture meeting that will be missed due to prior obligations, please contact me ahead of time to make arrangements to complete or turn in any assignments that are due that day. I acknowledge that many of you have additional responsibilities outside of this class (work, family obligations, school functions, etc.). However, this is no excuse for missing class and/or missing class work. Do not assume that I will ask you to make up or submit any missed work; because I will not. It is your responsibility to contact me and make these arrangements! Finally, if you are aware that you will not be in class on the day when an assignment is due, you are still responsible for submitting that assignment on time! This means that you have three options:

- Submit the work early
- Send your work with a friend to drop off for you
- Understand that there will be a deduction (10% per day late) if you submit the assignment when you return (after the due date).

Based on the assignments listed for this course, this policy primarily applies to the submission of your laboratory reports and UQAWA assignments. The online HW system will not allow you to complete work after the specified due date and time. However, if for some reason you need extended time to submit the homework the same deduction policy will apply. You will have to get my permission to submit late homework as I will have to allow the online system to accept your work. Also, as previously mentioned, you are able to download the solutions to your homework set after the due date and time has passed. If for some reason you have completed this step, you will NOT be allowed to now submit your late work as you already have a copy of the solutions!

Missed Exam/Quiz Policy: In addition to the “late assignment policy” outlined previously, any quiz/exam that is not attempted during the designated class time (ex: a make-up quiz/exam or a quiz/exam taken early) will follow a different format than that outlined in previous descriptions. Generally speaking, any and all make-up/advanced work will be 100% essay-type questions (open response).

Attendance Policy: All the material is important to your understanding of the concepts presented. In addition, the pace of the class is quite rapid. Therefore, you are strongly encouraged to attend all classes. Failure to attend class will only serve to hurt your chances in the course. In addition, attendance is required for all laboratories. By not attending a particular laboratory you only serve to hurt your chances for a good grade in the course. Don't expect to make up a missed laboratory unless you submit a valid excuse within the 24 hour require notification window. If you cannot attend a scheduled class meeting, please contact me or the division secretary (Libby @ 218-5460) prior to your absence.

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Withdrawal Policy:

- From the first day of class until the *Last day to receive a grade of "W"* (see the Academic Calendar for this specific date), you may officially withdraw from a class and receive a grade of W. However, in the unlikely event that you wish to withdraw from the course I'd appreciate you contacting me first. I will do what I can in order to help keep you enrolled in the course; if there is anything that can be done.
- After this cutoff date through the end of class work (again, see the Academic Calendar for the specific date), I will allow you to withdraw with a grade of "WP" only under extraordinary circumstance such as illness, accident, etc. If you have stopped showing up, have not contacted me, and wish to withdraw after the "W" date, then I will not be as receptive to helping you and you may simply have to live with the consequences of your actions; i.e. receiving an "F" or a "WF." You are an adult and I will treat you as such. From the same standpoint, if you treat me with the respect I deserve than I will be willing to do the same for you. Please keep an open line of communication at all times regarding your involvement in this course.

Academic Conduct: "Instances of plagiarism or academic dishonesty may result in the student receiving a failing grade for the activity, being requested to withdraw from the course (W) (WP) (WF), or receiving a failing grade for the course according to the perceived intent and extent of the instance(s) of academic dishonesty."

- This means don't copy your friend's homework assignments, UQAWAs, laboratory reports, etc.! Do your own work!

ADA Information:

- Pikeville College works to ensure that students with disabilities receive appropriate accommodations in accordance with the requirements of the American Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973. Students with disabilities requiring accommodations should contact the Disabilities Resource Office located in the Student Services Counselor's Office. Accommodations are made on an individual basis according to documented need. Additional information can be found in the College Catalog and the Student Handbook.

Contact Information:

Kathy Petot  
Disabilities Resource Office/Student Services Counselor's Office  
kpetot@pc.edu  
Administration Building (Lower Level)  
(606) 218-5232

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Extra Credit:

\*\*\* Extra credit for the course will be available in the following forms:

- Research Paper: 3-5 pages, typed (12 point Times New Roman font & 1" margins), double-spaced, and three or more unique references. The paper must relate directly to physics but can be biographical, historical, or subject oriented. Worth up to 10 points
- Journal Article Summary: Select a PHYSICS article from a scientific journal from which to do a summary. The summary includes reading the article, summarizing it, and evaluating it in a logical, clear, and scientific manner. The summary is to be no less than two typed (12 point Times New Roman font & 1" margins), double-spaced pages. Worth up to 5 points
  - o The topics/sources for the papers and article summaries are to be approved by me prior to their onset. The papers/article summaries must include a cover page, a copy of the article (if applicable), and a bibliography (if applicable).
- Out-of-class activity/laboratory: Occasionally, particular topics have practical applications to the real world. For these topics, I will have out-of-class laboratory projects (or a corresponding physics-related activity) available that will provide a practical demonstration of a concept. Worth up to 15 points
- Quiz/Exam Rework: Upon receipt of a graded quiz or exam (excluding the final exam), you may rework the quiz/exam **on a separate sheet of paper**. The rework should include the complete solution or explanation of (if no mathematical solution is necessary) the missed problems. Rewriting the question(s) is not required. Quiz reworks are worth up to two (2) points each and exam reworks are worth up to five (5) points each. Points are awarded based on the completeness and accuracy of the rework. Reworks are to be turned in within one week after the initial graded quiz/exam has been returned. Please do not ask to turn these items in any later...it is only beneficial to you to complete this work within a dedicated and focused period of time after its initial attempt.
  - o The points generated from the extra credit will be credited to your final course grade. The most extra credit possible, in any combination of the above, is 100 points. The 100 points of extra credit correspond to a **3.0%** increase in your final grade. Failure to do the extra credit assignments will not lower your grade in any way. They are intended to help you not hurt you. **No more than ONE extra credit assignment can be completed/submitted for any class day, unless I indicate otherwise.**
  - FURTHER, no extra credit should be done at the expense of your required course work for this or any other course. Extra credit is optional and should be treated as such. If you are caught abusing this policy (skipping classes, etc.) for the sake of completing extra credit assignments you will lose your ability to acquire extra credit for this course.

PIKEVILLE COLLEGE  
SPRING 2010  
COURSE REQUIREMENT SHEET

Final Thoughts:

*Studying for Exams and Quizzes:*

On the course web page I have provided you with sample homework assignments, exams and quizzes; each of which contain a solution. DO NOT assume by simply taking or memorizing these samples that you will be able to pass the in-class exams or quizzes; or do exceptional well on a particular homework assignment. They are provided as examples of sample questions relevant to the course material NOT necessarily the questions you will definitely see. Certainly those questions are good ones and they may show up on an in class exam, quiz, or homework assignment but do not assume so. Read the notes, come to class, pay attention, ask questions, and generally attempt to understand the material covered for each exam or quiz. Basically, STUDY!!

- You are responsible for the complete content of anything said during each lecture. Online lecture notes and PowerPoint slides are provided to you so you are aware of what is intended to be covered each day. If you do not wish to purchase a text that is okay. You'll not need the text to complete your homework assignments but you may find it a useful reference to read in addition to the lecture and online lecture materials.

Disclaimer:

The schedules and policies associated with this course may be subject to revision or change as a consequence of changing circumstances or events. I will provide you with reasonable notification prior to any major changes in course policies or procedures.

## Course Requirement Sheet Acknowledgment Form Spring 2010

I, \_\_\_\_\_, have received a copy of the Course  
(Printed Name)

Requirement Sheet for Physics 224 - General Physics II (Lecture and Laboratory)  
and understand all the policies and procedures outlined therein.

\_\_\_\_\_  
(Signature) (Date)

**Please fill out the information requested below. Please Print Clearly!!**

Major: \_\_\_\_\_

Contact Phone Number: \_\_\_\_\_

E-mail Address (the one you actually use): \_\_\_\_\_

Medical information that the instructor should be aware of : \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- This Course Requirement Sheet Acknowledgment Form is to be filled out and returned to me by the end of the first class period!