Physics 107, Summer 2018

Physics in Everyday life – Online

Instructor: Dr. Prasenjit Guptasarma  
Professor of Physics &  
Chair, Department of Physics  
University of Wisconsin  
Milwaukee, WI 53211

Course: Physics 107 Online, Summer 2018

Office visits/Phone/Skype: By Appointment. Please send email with several time options.

Physics On-line: Physics 107 - Physics in Everyday Life, on-line is taught fully online. Please be patient as we deal with any technical (or other) snags during the course. Please bring any serious problems or suggestions to my attention via e-mail to pg@uwm.edu. For technical issues on Webassign and D2L, please first contact the respective helpdesks first (see contact details later in the syllabus), and then contact me.

Textbook: Title: Physics: A Conceptual World View, 7th edition, with WebAssign, Authors: L. Kirkpatrick & G. Francis. Use any version of the book, including e-book which can be purchased with your Webassign subscription (see below). The e-book option is relatively inexpensive when bundled with Webassign. Check my email.

Webassign (required): Webassign access is required for this course. Webassign www.webassign.net is an online homework program interface through which you will do your homework assignments. Sign-up at no cost for the first couple of weeks or so, after which Webassign requires a subscription – paid directly, or bundled with an e-book or a hardbound book. Feel free to obtain a used book online instead of a new book or an e-book. You must have a Webassign subscription. **On Webassign.net, register with your UWM email id, your complete First Name and Last Name as on PAWS, and create your own password.

The Webassign Class key is:

Final Quiz: On-line, timed quiz can be taken any time August 11-18, 2018 after completing all assignments. This Quiz is mandatory.
About Physics 107

What is Physics 107: Physics in Everyday Life?

PHY 107 is a course that introduces you to the foundations of Classical Physics. At the end of the course, we hope that you will gain an insight into a few key physical principles. These principles have helped humans understand the world around us, and continue to improve the quality of our lives today. Physics 107 satisfies certain General Education Requirements (GER) at UW-Milwaukee, and also certain Natural Science requirements (contact your academic advisor for more information about this).

Differences between Physics 107 (face to face, FTF) and Physics 107 (online)

Most semesters, we try to offer both options (depends upon instructor availability). Instructors may not be the same. The FTF class meets on campus for lectures; quizzes and tests are taken on campus. The online course doesn’t meet in person except for office hours (by appointment). The online course features recorded lecture videos, recorded homework tutorial videos, online homework and online quizzes.

Differences between Physics 107 (lecture) and Physics 108 (lab).

PHY 108 (Laboratory for Physics in Everyday Life) is a hands-on laboratory-format course at UWM. In contrast, PHY 107 (Physics in Everyday Life) is taught at UWM in either lecture-format, or on-line format. The lab and the lecture are offered as two separate courses at UWM, with separate instructors and separately earned credits.

You not required to be registered for both courses (108 and 107) at the same time. PHY 108, the lab, sometimes uses concepts learned in PHY 107. However, we make no attempt to synchronize topics between 107 and 108. PHY 108 Labs can run slightly ahead of topics being covered in PHY 107. Although is possible to take both 107 and 108 in the same semester, you need not do so. Your instructors in Phy 108 give you brief 15-20 minute reviews of relevant topics in lecture-format before you start your experiments.

Can you be a good “on-line student”? My first assumption is that you can focus on your own, that you have good (and regular) study habits, and are somewhat of an autodidact (a self-learner). If you feel you are not a self-learner, or do not have good study habits, you might learn better through a face-to-face lecture course, offered in Fall and Spring. If you need to discuss this question further, or are concerned about it, feel free to contact me by email and we could set up a phone or other appointment.
ACCREDITATION, GER and UW System RELATED INFORMATION

UW System Requirements:

This course seeks to impart:

a. Knowledge of Human Cultures and the Natural World including breadth of knowledge and the ability to think beyond one’s discipline, major, or area of concentration.

b. Critical and Creative Thinking Skills including inquiry, problem solving, and higher order qualitative and quantitative reasoning.

General Education Requirements (GER-NS):

Students in this course will:

A. Understand and apply the major concepts of a natural science discipline, including its breadth and its relationship to other disciplines;

B. Gain elementary knowledge of how to explain and illustrate the relationships between experiments, models, theories and laws.

C. Gain elementary understanding of the process of generating and testing data, and apply this knowledge to the solution of problems.

D. Acquire elementary background knowledge required to apply ethical reasoning to questions, concepts, and practices within a natural science discipline

UNIVERSITY GUIDELINES and LINKS

University guidelines in regard to religious observances, student conduct, sexual misconduct, or similar matters will be strictly enforced in this laboratory. Please consult Appendix C of the University of Wisconsin-Milwaukee Schedule of Classes Bulletin for further information. If you need any accommodation for religious observances, or for other allowed reasons such as a physical disability, you must let your instructor and the supervisor (pg@uwm.edu) know as soon as possible. If in any academic or non-academic difficulty, please feel free to reach out to your lab instructor and lab supervisor. We are here to help you succeed!

Some Useful Links:

D2L: http://d2l.uwm.edu/
PAWS: https://paws.uwm.edu/psp/saprod/?cmd=login

RELATED CAMPUS LINKS:
http://www4.uwm.edu/secu/SyllabusLinks.pdf
https://www4.uwm.edu/secu/docs/faculty/2838_Credit_Hour_Policy.pdf
http://uwm.edu/secu/policies/faculty/

ACADEMIC CALENDAR:
http://www4.uwm.edu/academics/calendar.cfm
# Schedule

**Readings, Lectures, Tutorials, Websites and Assignments**

For the recorded lectures and tutorials in column 1 and 3, make sure to log into D2L and click through the links in the announcements page.

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
<th>Step 6</th>
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<tbody>
<tr>
<td>Read these Chapters in the textbook</td>
<td>Start Working on Webassign Assignment</td>
<td>Listen to these Recorded lectures (Mediasite)</td>
<td>Listen to these Recorded tutorials on mediasite</td>
<td>Submit in a timely manner before midnight on the due date shown on Webassign</td>
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<tr>
<td><strong>Chapter 2:</strong> “Describing Motion” Assignment 1</td>
<td>velocity &amp; acceleration - Part 1</td>
<td>Tutorial - 2</td>
<td>Go to Links 1 below</td>
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<td>velocity &amp; acceleration – Part 2</td>
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<td><strong>Chapter 3:</strong> “Explaining Motion” Assignment 2 Assignment 3</td>
<td>explaining motion -1</td>
<td>Tutorial - 3</td>
<td>Go to Links 2 below</td>
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<td>explaining motion -2</td>
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<td>Assignment 3</td>
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<td>explaining motion - 3 (Force, Mass, and Acceleration)</td>
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<td><strong>Read</strong></td>
<td>Assignment 4</td>
<td>Review above as needed</td>
<td>Tutorial - 4</td>
<td>Go to Links 2 below &amp; Study/Q&amp;A Session #1</td>
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<tr>
<td><strong>Chapter 5:</strong> “Gravity”</td>
<td>Assignment 5</td>
<td>Gravity – 1</td>
<td>Tutorial 5</td>
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<td>Gravity – 2</td>
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<td>Chapter 6:</td>
<td>Assignment 6</td>
<td>Conservation of Momentum and Energy - Part 1</td>
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<th>Link 3</th>
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<td>“Energy”</td>
<td>Assignment 8</td>
<td>Conservation of Energy – 2</td>
<td>Assignment 7</td>
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<td>[also review Chapter 6]</td>
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<th>Browse through</th>
<th>Assignment 10</th>
<th>Physics in Everyday Life - Lecture 2 (This is actually Chapter 13; please ignore the first slide in the lecture)</th>
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<td>Study again</td>
<td>Assignment 11</td>
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<td>“Electric Current”</td>
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Grading

Final Quiz: 30%
Webassign assignments & Study Packets: 60%
Listening to lecture videos through D2L link: 10%
(Time spent listening to lecture videos is like “attendance.” Pay attention to this).

(Note: Some students tend to obsess about whether they are getting full credit for the “attendance” portion of the grade. Most people who have listened to most of the lectures get high credit for this – please don’t keep emailing me to ask if I have kept track of every lecture you’ve attended. The software allows me to run a list of each student and their “attendance” activities).

Lecture Videos, Homework Assignments, Self-Study Packets, and Quizzes:

What you need to keep track of for your grade:

1) Recorded Lecture Videos and other videos.
   (Graded) Be sure to listen to these after logging in through D2L so your time spent listening to the videos can be accounted for.

2) Graded Webassign Assignments
   Be sure to complete these on time.
   Extra Credit assignments help give you a leg up on your grade.

3) Graded Webassign Self-Study Packets.
   Be sure to complete these on time.

4) Graded Webassign final quiz.

Timed Final Quiz: The quiz will not be on a specific date. You will get to take the quiz at your convenience during August 11-18 (Please see D2L and my emails for further instructions). You must complete the Quiz within these specific dates.

You will need to make sure that you assign a time to yourself – a time during you will not be disturbed by anything and will have clear, fast internet access. Once you start taking the quiz, you would need to finish it - you will not be able to pause it or return to it later. There will be no adjustments to this policy as it is really hard to set up a new quiz for someone who has already started it. Missing the Quiz is likely to result in an F.

Assignments and Study Packets with deadlines: You may complete your assignments and study packets at your own pace.
More FAQ’s, and How to do well in this course:

- This class will be taught on-line mainly using self-study worksheets, e-mails, Webassign assignments (for homework and quizzes) and videos. There will be no traditional lectures in a classroom. You will have access to some recorded lectures and videos including lectures by me (Prof. Guptasarma). You must schedule time to listen to these lectures and to do self-study of the book and homework to be able to complete assignments on time.

- As a student who has decided to take an on-line course using a computer, I will assume that you are fairly good with basic tasks on a computer expected of an average college student since approximately the year 2000. In other words, I assume that you know how to get on to the internet, use a mouse (or other pointing device) to click around.

- You may need to open other links on the internet, and read certain types of files.

- You will need a reasonably updated computer running a reasonably updated version of Windows or Mac and good, reliable access to the internet (note that Safari and Mozzila can have compatibility issues with internet sites).

- If you don't already have it, you should download a free copy of Adobe Acrobat Reader from http://get.adobe.com/reader/ so you can read .pdf documents.

- You must regularly read your <@uwm.edu> email and check into D2L. Always be sure to write to me from your UWM email - I rarely open other (non-uwm) emails. Also, please be sure to write the characters “107” somewhere in the subject line.

- Homework will be posted on Webassign.

- Depending upon how skilled you are with a computer or with computer software, there might be times when you need 'tech support'. As far as possible, please do not e-mail me with tech support questions. First contact tech support staff at Webassign, D2L and Mediasite (where the lectures are recorded). See below.

- **Handheld Electronics (phones and tablets) for Webassign/e-book:** Although these mostly work, do NOT depend upon hand-holds and other devices e.g., smartphones, i-pod touch, i-pad, i-phone, android phones and tablets (or even Linux/Unix based systems) – to replace a “mainstream” computer – to do your homework. These don’t always work unless the application has been specifically designed for them. You will need to do your own tech support if you wish to use these devices for this course. They might, or might not, work for Webassign, recorded lectures, and D2L.

- **Internet access:** Please also do not plan to rely on intermittent (or weak) internet access at the last minute, as homework will be due via Webassign, and access gets
automatically denied (see “homework” below) after deadlines. Make sure any such issues are fully resolved during the first week.

- **Emails:** You will find me replying to emails fairly quickly, but please do not expect instant e-mail replies to all your questions. I try my best to reply within 12-36 hours. Sometimes, I might send an email to all students including a reply to your specific questions (this does not mean I am ignoring you!)

- On certain days, I might receive 30-50 emails a day from students in this class. It is almost impossible for anyone to respond to each of them immediately.

- You are likely to hear back from me faster if you write the **topic of your email in the subject line**, with the characters “107” in the subject line. Do not simply click reply to one of my emails on a different topic. UWM’s email browser clumps together all email with the same subject (as with gmail and other modern email interfaces), making it quite difficult to separate one email from another when there are multiple emails on the same subject.

- **Please write the digits "107" in the subject field to avoid the possibility of my losing your email,** and make sure to write your name (and student id, if you can) in your email. I generally avoid opening email from non-UWM addresses (gmail, yahoo, comcast, etc) - use your UWM email.

- You might find it useful to use the tutoring center located in the UWM Golda Meyer library and Math tutoring centers in Bolton and EMS for anyone who may need it. However, you are not allowed to use anyone else to work on your assignments or quizzes. This behavior can result in your entire undergraduate degree being rescinded for cheating.

- **Quizzes – How to study:**

  Previous students have reported that the quiz is relatively easy if you’ve done your homework regularly. Read the book, review Webassign homework questions, review Study Worksheets, video quizzes, quiz study questions, and the D2L Study Packets. Watch lectures and other videos via D2L.

- **Recorded Lectures.& Videos:**

  My recorded lectures and tutorials are available via a link through D2L (announcements page). The time spent by students listening to lectures is loosely monitored by me. Most people who have made an honest attempt to log in and listen to lectures receive high credit for this part of the grade.
- **Interesting Links:** See “Content” and “Links” on D2L.

- **Instructor’s availability:** I will be available by email for any questions, and can meet in my office with an appointment.

**Technical Help on Webassign or D2L**

*Webassign Help:*
1. [http://www.webassign.net/info/help.html](http://www.webassign.net/info/help.html)
2. [http://www.webassign.net/info/contact_us.html](http://www.webassign.net/info/contact_us.html)

*Phone Support*
Toll free: (800) 955-8275
Local: (919) 829-8181
Hours: Monday–Friday, 9 a.m.–8 p.m. ET

*D2L Technical Help, if needed:*
UWM Help Desk: 414-229-4040
GetTechHelp.uwm.edu
Tricks & Tips:

D2L Frequently Asked Questions (FAQ’s):
[http://d2ltipsandtricks.blogspot.com/2012/01/frequently-asked-questions-faqs.html](http://d2ltipsandtricks.blogspot.com/2012/01/frequently-asked-questions-faqs.html)

*Blogs:* [http://d2ltipsandtricks.blogspot.com/](http://d2ltipsandtricks.blogspot.com/)

**Additional Study Resources:**

There are several free tutoring resources on campus, in Bolton Hall and in the library. This tutoring and other help is offered free by the campus and by the Physics department through our teaching assistants and PhD students.

If you have questions about concepts or about how to do a problem, let me know and I can record a lecture with the answer and how to solve such problems. These will be available as “tutorials” on my recorded lectures link.

If you have suggestions about how to improve this course, or how to add other study
resources, please feel free to write to me by email.

**EMAIL CORRESPONDENCE:**

**CONTACT ME FIRST IF YOU HAVE ANY DIFFICULTY WITH THIS COURSE.**

I am usually pretty good at answering emails within 12-36 hours (see instructions above about getting a faster reply).

However, keep in mind that my email load can be quite high on some days: There are times when I can receive 100-200 emails in a day (many on-line students writing to me at the same time, my other students from other courses, my PhD research student and research interns, my research collaborators, emails about my UWM administrative activities, and general spam email which comes into every professor’s e-mailbox because it is a publicly available address on UWM’s website).

I may not be able to respond to every email as soon as you send them. So, if many students ask the same question by email, you may find me sending a bulk reply to everyone. In this case, you may not immediately receive a personalized reply. *This should not stop you from writing to me – you should feel free to write to me as many times as you want to.*

As far as my priority on answering emails: I will answer your Physics/homework/concepts based questions first.

**LOOK OUT FOR A POSSIBLE ADDENDUM (VERSION 2) OF THIS SYLLABUS, WITH MINOR REVISIONS AND ADDITIONAL INFORMATION ABOUT COURSE EVALUATION.**

**I WANT YOU TO COME OUT OF THIS COURSE WITH A STRONGER INTEREST IN PHYSICS AND THE SCIENCES. I HOPE YOU HAVE A LOT OF FUN WITH IT!**