

PHYSICS 150: *University Physics I*

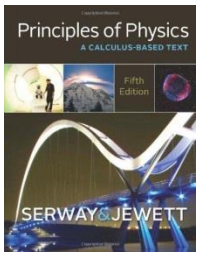
Spring 2015 [Schedule](#) Online Syllabus: www.uwsp.edu/physastr/Documents/kmenning/Physics150.pdf
WebAssign: www.webassign.net/login.html [WebAssign Hints](#)

Instructor:	Dr. Ken Menningen	Office hours:	<u>M</u>	<u>T</u>	<u>W</u>	<u>R</u>	<u>F</u>
Office:	B101 Science Building	9:00am - 10:00am	X	X	X	X	X
Phone:	(715) 346-4871	11:00am - 12:00pm		X		X	
email:	Ken.Menningen@uwsp.edu	1:00pm - 2:00pm			X	X	X
		2:00pm - 3:00pm	X	X			

Course Prerequisites: MATH 120 is a corequisite.

Required text: *Principles of Physics*, Serway and Jewett, 5th edition (available at Text Rental)

Other required materials: Scientific calculator (graphing capability is **not** necessary), a laboratory notebook (quadrille ruled and spiral bound are best), a TurningPoint QT clicker (\$8 rental from the IT Help Desk) and a [WebAssign](#) access code (purchase \$33 bookstore, \$45 from [Cengage online](#), or \$75 from WebAssign. **Note:** the Cengage site displays a calculus book because the same codes provide one-semester WebAssign access for all of their calculus, physics, and chemistry textbooks. They happened to pick a calculus book for display.)



Course Objectives: *University Physics I* satisfies the General Education Program (GEP) Natural Sciences requirement. Upon completing this requirement, students will be able to:

- Identify the basic taxonomy and principles of the scientific method as it pertains to the natural, physical world.
- Infer relationships, make predictions and solve problems based on an analysis of evidence or scientific information.
- Apply scientific concepts, quantitative techniques and methods to solving problems and making decisions.
- Describe the relevance of some aspect of the natural science to their lives and society.

University Physics I is the first of a three-part, calculus-based, introductory physics course sequence designed for science majors. Upon completing this course, students will be able to:

- Explain the fundamental concepts of mechanics, energy, fluids, waves, sound, and gravity.
- Use algebra and calculus to explain measurements and make predictions.
- Explain the usefulness and limitations of applying problem-solving methods to realistic examples.

Attendance: Attendance is not required but it is a disadvantage to miss any lectures because the lectures, demonstrations, and in-class activities will greatly enhance your ability to understand the material. There will often be quizzes or assignments done in class that are worth points. If you are ill, please contact me *before class* to make arrangements. Otherwise late quizzes are not allowed, but I drop the lowest quiz grade.

Grading policy: The grade you earn in this class will be based upon the five assignment types listed below. A grading scale is also given for your reference. Grades are not curved, encouraging you to work together, but I expect each student to hand in their own work. The lowest lab, homework and in-class grades will be dropped at the end of the semester.

Grading Scale		Grade Breakdown	
<u>Letter</u>	<u>Score</u>	<u>Assignment</u>	<u>Weight</u>
A	90-100	Midterm exams	30%
B	79-89	Final exam	20%
C	69-78	Homework	15%
D	60-68	In-class work	10%
F	0-59	Labs	25%

Responsibilities: The grade you earn in this course will be a measure of how well you have learned physics. However, you will have learned physics in the context of a *community*, and that means you have a responsibility to make a positive contribution to that community, by both making an honest effort to participate in class activities and by refraining from

activities that will interfere with your neighbor's ability to learn. You are expected to attend class regularly, participate respectfully and with integrity, and to remain on task during class periods. Likewise, you are expected to refrain from using any electronic device during class periods. Not only does text messaging and web browsing during class prevent you from listening and learning, it also distracts your neighbor and interferes with *their* learning. If a true emergency has arisen, please quietly excuse yourself from the room before attending to the matter. You are expected to refrain from talking at the same time as the instructor, eating or drinking noisily, using e-cigarettes, or any other behavior that might distract your fellow student and interfere with learning.

Exams: Midterm exams are scheduled to occur during lab periods on **February 18, March 25, and April 15**. These dates may change but it's not likely. The comprehensive final exam is scheduled for **Wednesday, May 13 at 12:30 pm**. Late exams are not allowed, but in special cases you may take an exam early. You will be allowed to prepare a reference sheet (8.5×11 in, both sides) to use during the exam. **Cell phones and tablets of any kind are strictly banned from examination periods.** You may bring a calculator that is not more sophisticated than a TI-83 or TI-84, or borrow a calculator from me (please make arrangements with me in advance). Calculators with a full keyboard, such as the TI Nspire or TI Voyage 200, are not permitted for use on exams. English translators for international students are generally allowed, but permission must be requested in advance.

Homework: The **chapter assignments** can be handed in using a web-based system that allows multiple submissions and gives instant feedback. The [WebAssign](#) system requires at least a **\$33 fee**. Some tutorial-style assignments will also be available for bonus points in the WebAssign system. There may also be questions about occasional **news articles** that I will ask you to read. To avoid a zero for late homework you must warn me by phone or email **before they are due** and make special arrangements. If you are too ill to complete the assignment, please see a doctor, and have the doctor write an excuse. You should not believe that the homework problems are sufficient practice for the exam. Instead I recommend that you work out at least five additional problems for each chapter from the textbook. The answers to odd problems are provided in the text and I have the solutions to even problems as well.

In-class work: During nearly every lecture I will present some **response questions** for which you may earn points by using the TurningPoint system. The TurningPoint QT clickers are available for an **\$8 rental fee**, which will be added to your UWSP student bill. You will need your UWSP Student ID to lease a clicker. QT clickers are available at the [TEC:hub](#) (LRC room 206) or at the [IT Help Desk](#) (LRC room 023).

On many days there will be a short **quiz** covering material that you have recently learned. Regard them as a "safe" practice experience for the exam and as some measure of how well you understand the material. In addition, some "**class quizzes**" may be given in which you may confer with other students and vote as a class on the answer. These quizzes might improve your quiz grade but will not hurt it.

Labs: The labs are designed to illustrate and expand upon the topics we cover in the lecture portion of the course. You must complete 10 of the 12 labs to pass the course. The lowest lab grade will be dropped at the end of the semester. The lab grades will be determined from an assessment of your lab notebook. The grading rubric for lab notebook evaluation is given at right. It is best that you hand in your lab notebook at the end of the lab period, but if it has not been completed by then, you must hand it in at the next regularly scheduled lecture session (Friday at 11:00am). A 20 point penalty will be assessed for each day afterward that it is not handed to me by noon.

Community Rights & Responsibilities:

Students with special needs should contact the [Disability and Assistive Technology Center](#) during the first two weeks of the semester in order to request accommodation. An [Exam Accommodation Request Form](#) is available online. Religious beliefs will be accommodated according to UWS 22.03 as long as the student notifies the instructor about the conflict within the first three weeks of class. Students are expected to maintain the highest standards of academic integrity for their work in this course. The University of Wisconsin-Stevens Point dedicated to a safe, supportive and non-discriminatory learning environment. It is the responsibility of all students to familiarize themselves with University policies regarding special accommodations, misconduct, religious beliefs accommodation, discrimination and absence for university sponsored events. (For details please refer to the [Community Rights & Responsibilities](#) documents, including the [Student Academic Standards and Disciplinary Procedures](#) document.)

Content	Points
Introduction (clear, concise statement of purpose and method)	15
Procedure (concise and complete, include description of apparatus)	20
Data (complete, with correct significant figures and uncertainties)	20
Sample calculations (complete, correct as displayed, no unlabeled numbers)	15
Results (error analysis, comparison with known value(s), evaluation of reliability)	20
Conclusion statement (clear, concise summary of method and results)	10
Total points	100