

PHYSICS 202: Applied Principles of Physics II

Fall 2021

Course Schedule

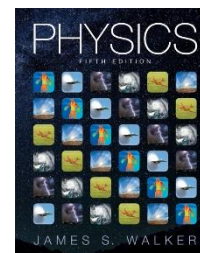
Online Syllabus: www.uwsp.edu/physastr/Documents/kmenning/Physics202.pdf
Some assignments may be completed on [Canvas](#)

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		☺	☺		
Phone:	(715) 346-4871	11:00am – 12:00pm		☺		☺	☺
		2:00pm – 3:00pm	☺	☺	☺	☺	
email:	Ken.Menningen@uwsp.edu	By appointment	☺	☺	☺	☺	☺

Course Prerequisites: Physics 201 or equivalent.

Required text: [Physics](#), J. S. Walker, 5th edition (available at Text Rental)

Other required materials: Scientific calculator (graphing capability is **not** necessary).



Course Objectives: *Applied Principles of Physics II* is a continuation of the algebra-based course sequence designed for pre-professional and general education students. The principal objectives are:

- Explain the fundamental concepts of electricity, magnetism, and optics.
- Use graphs and algebra to explain measurements and make predictions.
- Describe the usefulness and limitations of problem-solving methods for 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. Late exams are not allowed, but in special cases you may take an exam early by making arrangements with me ahead of time.

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 term.

Grading Scale		Grade Breakdown	
<u>Letter</u>	<u>Score</u>	<u>Assignment</u>	<u>Weight</u>
A	90-100	Midterm exams	30%
B	75-89	Final exam	20%
C	60-74	Homework	20%
D	50-59	In-class work	10%
F	0-49	Labs	20%

Exams: Midterm exams are scheduled to occur on **September 27**, **October 25**, and **November 15**. The final exam is scheduled for **Monday, December 13, at 8:00am**. Exam dates might change but it's not likely.

Homework: The homework assignments will be completed on paper. To avoid a zero for late homework you must warn me by phone or email *before it is 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 textbook and I have the solutions to even problems as well.

In-class work: During nearly every lecture there will be a response activity that is worth points in the in-class category. Waivers for absences are only available for university-sponsored events (athletics or class field trip) or military obligations. But keep in mind your lowest score in the in-class category will be dropped, so you get one “freebie.” 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. If you know ahead of time that you will miss a quiz you can make arrangements with me to take the quiz at an alternate time.

Labs: You must complete 8 of the 10 labs to pass the course. Your lab grade will be determined from the scores of the lab assignments you turn in. The labs are designed to illustrate and expand upon the topics we cover in the lecture portion of the course, and are invaluable hands-on experiences.

Tentative Course Schedule:

[For a detailed course schedule with links to lecture content, see the [online course schedule](#)]

Week	Chs.	Topics	Laboratory
1	19	Electric charge	
2	19,20	Electric fields and potential	
3	20,21	Capacitors, Ohm’s law	Lab 1: Electrostatics
4	21	Circuits	Lab 2: Capacitors
5	21,22	Magnetism, Exam I Chs. 19-20	
6	22	Magnetic fields	Lab 3: DC circuits
7	22,23	Magnetic flux	Lab 4: Multi-looped circuits
8	23	Faraday’s law	Lab 5: Electric motors
9	25	EM waves, Exam II Chs. 22, 23, 25	
10	25,26	Polarization, light rays	Lab 6: Faraday’s law
11	26	Reflection and refraction	Lab 7: The credit card reader
12	26,27	Human vision, Exam III Chs. 26-28	
13	27	Optical systems	Lab 8: Plane and Spherical mirrors
14	28	Optical interference	Lab 9: Thin lenses and corrective optics
15	28	Diffraction and resolution	Lab 10: Diffraction and DNA structure

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 [Academic Concerns](#) page, the [Student Conduct Process](#) page, and the [Academic Integrity](#) document.)