

PHYS 205 Winter 2018

CRNs: 25529,25530, 25531, 25533, 25534, 25535, 25537, 26972

Welcome to PHYS 205, the second term of the Algebra based General Physics Lab Sequence at the University of Oregon. This term focuses on Thermodynamics, Waves, and Optics.

Learning Goals for this course:

- Understand the Process of Science.
- Draw meaningful conclusions from observations of the physical world.
- Construct knowledge in a way that does not rely on an outside authority.
- Develop accurate, evidence based, plain language explanations for many of the topics and phenomena discussed in the accompanying lecture course.
- Gain experience collecting and analyzing data, with the ability to extract physical quantities from fit parameters used in graphical representations.

In addition to these global learning goals, there will be learning outcomes associated with each of the labs intended to aid self-assessment. The labs we will be using have been designed to engage you an active role in your learning, self-assessment is an important form of internal feedback for this process. In a very real sense we will be aiming to participate in the process of science in order to learn science.

Course information	
Pre/Co-requisite	Phys 202
Lead Instructor	Dr. Billy Scannell, Office: 144 Willamette; scannell@uoregon.edu Office Hours: 2- 3pm M-F also open door policy or by arrangement
Graduate Student Co-Instructors	25529: Layne Bradshaw, 219 Willamette; layneb@uoregon.edu Office Hour: Fri 1-2 25530: Vinny Roma, 315 Willamette; vroma@uoregon.edu Office Hour: Tues 3-4 25531: Brian Veit, 21x Willamette; bveit@uoregon.edu Office Hour: Fri 11-12 25533: Justin Kittell, 218 Willamette; jkittell@uoregon.edu Office Hour: Thur 11-12 25534: Philip Jahl, 372 Willamette; pjahl@uoregon.edu Office Hour: Thur 3-4 25535: Kara Merfeld, 217 Willamette; kmerfeld@uoregon.edu Office Hour: Wed 5-6 25537: Bruce Edelman, 220 Willamette; bedelman@uoregon.edu Office Hour: Thur 2 ³⁰ - 3 ³⁰ 26972: Jesse Hall, 220 Willamette; jhall4@uoregon.edu Office Hour: Fri 2-3
Lab Book	Course materials will be provided in class and via Canvas.
Preparation	A completed pre-lab is worth 2 points of your lab grade. Prelabs associated with lab activities will be posted to Canvas no later than the Friday prior to that lab. The purpose of the pre-lab is to help you organize your understanding of the goals and procedures of the lab.
Work in the Lab	Plan to stay in the lab until you can show your instructor the completed lab sheets with all questions answered completely. It is to your advantage to complete your lab write-up during or just after your lab section, when what transpired is still fresh in your mind.
Deadlines	Labs and Homework will be due Friday by 5:00PM. You will lose points if they are turned in late. Turn in your completed lab sheets and homework in the homework box slot associated with your lab section.
Follow-ups	Follow-up quizzes to assist and assess conceptual understanding will be posted to Canvas. These will open at 6PM on Friday and must be submitted by 11:59pm the following Sunday. These quizzes are designed to probe the depth of your conceptual understanding in order to assess where assistance may be needed, as such, Follow-up quizzes cannot be made up, however there will be an opportunity to earn back nearly all points missed at the end of the term.
Grading	Grades will be based on Prelabs, Lab Sheets, homework, Follow-up quizzes, and the laboratory final. The lowest non-zero score from each category will be replaced by the mean of your remaining scores. You must attend and complete all labs. Makeup labs will only be granted on an excused absence which must be related to emergency type situation. If you are unable to attend your lab section during a particular week, it is to your benefit to make arrangements with Billy to attend another section.

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	The relative weights will be as follows:	
	Prep sheets: Graded on a 2 or 0 basis. A "2" means you have properly done the prep work	16
	Lab sheets: Graded on a 0-8 basis. The grade will reflect the effort I perceive to have gone into the lab.	64
	Follow up quizzes (5 points each)	40
	Homework (20 points each)	160
	Final Exam	100
	The Approximate Grade Distribution will be as follows: 380-333 = A, 332 - 285 = B, 284 - 238 = C, 237 - 191 = D, 171 or below = F.	

The final exam takes place on Thursday, March 22 at 5pm. It will be mainly conceptual in nature, testing your ability to apply lab type data and observations to the physics principles involved.

The exam will be in room TBA from 5 - 7 pm, Thursday, March 22

Week	LAB
1: 1/8-1/12	Intro, Course Mechanics, Office Hours
2: 1/15-1/19	Temperature, Heat and Thermal Energy
3: 1/22-1/26	Calorimetry and Phase Change
4: 1/29-2/2	Intro to Oscillations
5: 2/5-2/9	Wave speed
6:2/12-2/16	Wave interference
7: 2/19-2/23	Make-up if needed
8: 2/26-3/2	Wave Optics
9: 3/5-3/9	Ray Optics
10: 3/12-3/16	Optics Capstone
Final: Thurs 3/22	5 -7 PM Location TBA