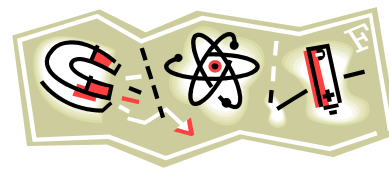


Physics 100 Syllabus



Welcome to Physics 100! I'm looking forward to spending an exciting and fun quarter with you as we explore the world of physics together.

General Info

Class Location: Building 28, room 228

Instructor: Åsa Bradley, MS (medical physics) & MFA (creative nonfiction)

Phone: Office (509) 533 3837 (Not good at checking messages)
Cell (509) 209 4194 (Use only for text message and always identify yourself, I don't have you in my contacts)

Email: Asa.Bradley@sfcc.spokane.edu (Best mode of contact)

Class web page: <http://faculty.spokanefalls.edu/AutoWebs/Default.asp?id=2332>

or www.spokanefalls.edu -> student resources -> faculty websites -> Bradley, Asa

This is where you find copies of the syllabus, schedule, and class handouts.

The syllabus and schedule is also available on Canvas (<https://ccs.instructure.com/login>).

Office: 28-235 (On the west side of the building, facing the quad.)

Office hours: See the back of your calendar, the class webpage, or Canvas for specific office hours. Basically, you are always welcome to speak with me, or we can schedule an appointment that fits your schedule.



Course Description

You may not know it, but you actually do physics every day. By taking this course, you gain a deeper understanding of how the world around you is influenced and governed by science. As we explore the physics principles in class and lab, you'll be surprised over how much physics you already know! We'll also study the culture of physics; its history, principles, laws, recent developments, and impact on society. The topics covered include: motion, Newton's laws, work, energy, waves, electromagnetism, nuclear, and quantum. The main emphasis of this course is to understand the principles of physics and their relationship to each other and the surrounding environment. Math is kept to a minimal.

Prerequisites

A reasonable fluency in the English language is expected, as is basic mathematic skills such as: multiplication, division, subtraction, and addition.

Required Materials

The following materials are required for the course:



- **Text Book + Online Access to Mastering Physics**, you have several purchase options:

1) The publisher and our bookstore sells a hardcover version of **Conceptual Physics – 12th edition by Paul G. Hewitt + Mastering Physics Access Code, ISBN 9780321908605**. (Most expensive option)

3) The publisher and our bookstore also sells a package that includes Mastering Physics access and a binder version of the book: <http://bit.ly/2gk8fDm> (Medium priced option.)

2) The publisher sells a package that includes access to Mastering Physics and an e-only version of the textbook: <http://bit.ly/2holFD1> (Least expensive option)

Note: ISBN numbers may vary depending on how the books are bundled. If you purchase from a different source than the ones described above, check correct edition (12th).

- **Simple Calculator** (You are not allowed to use your cell phone during tests.)

Course Objectives

Physics 100 is one of the SFCC courses that teach you the skills described in the first item on the *College Learning Abilities* list: “Analysis/Problem Solving: Students will access, evaluate and apply information from a variety of sources in a variety of contexts.” By the end of the quarter, you will:

- Understand the nature of science and the scientific method.
- Know some of the main characters who contributed to the development of science as we know it today.
- Have the skills necessary to use science to better understand the world around you.
- Understand the language of science and how to apply it.
- Be able to explain physics principles and how they are used in technology and other aspects of everyday life.
- Be able to conduct laboratory experiments by recording observations, analyzing data, and explaining the results.
- Make the connection between science and other academic and vocational subjects.



Assignments and Exams

Class Assignments – Depending on what we are studying, class assignments may be done as part of the lecture, or assigned as take-homes. Expect an in-class assignment each day, worth 5 – 20 points each. Your lowest in-class assignment is dropped from your final grade.

Online Homework – This will be assigned in Mastering Physics. Each module studied in class will have homework associated with the topics. Due dates are listed on the tentative calendar. **Homework is not accepted late.**

Team Sessions – These sessions provide a mini-review and also shows you what kind of questions you can expect on the exam. Bring your book to Team Sessions, the questions you’ll be answering comes from the book. In order to participate in these sessions, you must have completed at least **50% of each of the assignments** that you are about to be tested on. Each Team Session is worth 20 points. **There are no make-ups for these.**

Exams – You’ll have at least three of these, plus one cumulative final exam. If you stay on top of reading the chapters and complete the homework for each chapter, you will do reasonably well on the exam. Each exam is worth 100 points, and the final is worth 150. **I don’t give make-up exams.** If you know ahead of time that you will be absent during an exam, I can arrange for you to take it before the scheduled time.

Labs – We’ll do 5-8 labs through the quarter during our regularly scheduled class times. Lab descriptions and procedures are available at the beginning of each lab session. Lab experiments are done as a group. Before you leave lab, make sure your lab station is neat and clean. Labs are due at the end of the period, unless otherwise specified. Each lab is worth 25 points. Your lowest grade will be dropped from your final average. **There are no make-up labs.**

Late Work

Since you got a calendar at the beginning of class, it is your duty to stay on top of when assignments are due. Therefore, I don’t accept any late work. That said, sometimes life happens and you may find yourself in a situation where you can’t get the assignment in on time. If that occurs, talk to me and we can probably work something out. However, keep in mind that I usually give a 20% per school day (even on days we don’t have class) penalty on late work.



Missing Class/Late Arrival

If your late arrival will disrupt class activities or force your group to backtrack, you may be asked to leave and not participate in class that day. If you miss class but *notified me before the start of the lesson* and have already dropped a zero in-class grade, I will work with you to make up an in-class assignment. **You are only allowed to do this once.**

Evaluation and Grading

Your grade will be determined according to the percentage you achieve of the total points from the home work, lab, quizzes, and exams according to the following table:

Percentage	Numerical Grade	Letter Grade
≥ 95	4.0	A
≥ 92 but < 95	3.9	A-
≥ 90 but < 92	3.7	
≥ 87 but < 90	3.5	
≥ 85 but < 87	3.3	B+
≥ 80 but < 85	3.0	B
≥ 75 but < 80	2.7	B-
≥ 70 but < 75	2.3	C+
≥ 65 but < 70	2.0	C
≥ 60 but < 65	1.7	C-
≥ 55 but < 60	1.3	D+
≥ 50 but < 55	1.0	D
< 50	0.0	F



I reserve the right to consider factors such as attendance, exceptional participation, extraordinary work, cheating, etc. in determining the final grade. Depending on these factors, your grade may be different than the distribution described in the table above.

NOTE: I use the grade book on Canvas to record your grades. You are responsible for logging in regularly to stay up to date on how you're doing in the class and to make sure no mistakes or ambiguity occurs. Visit: <https://ccs.instructure.com/login> for more information.



Academic Integrity and Conduct

You are expected to behave with integrity during lecture, lab, and any other activities involved in this class. Please respect everyone in the class room. **Turn off your mobile phone or keep it on vibrating during lecture and lab. If you absolutely have to take a call, please step outside the room before starting your conversation. If I see you texting, I will ask you to leave.** If you are not going to pay attention in class, then I'd rather you left rather than distract me and your fellow students.

Dishonesty and cheating will not be tolerated during this course. It is unfair to your fellow classmates and the college community at large. While cooperative efforts on homework and lab are encouraged, it is not tolerated during exams. You may want to read the student *Conduct Code and Rules of Enforcement*. Depending on the magnitude of the offence, expulsion from SFCC, expulsion from class, or loss of grade are likely consequences. It is often hard to tell the person that is cheating from the person enabling the cheating. If you allow someone to copy your exam answers, it is very likely that you yourself will also be included in any resulting disciplinary action.

My classroom is part of the Safe Zone program. In order for learning to take place, students must feel safe; this safety is due all students, not only those who share your values and beliefs. For this reason, courtesy, thoughtfulness, and acceptance are essential in our discussions in and out of the classroom. Acceptance should not be confused with agreement; one need not agree with a person to listen, but one must listen well in order to disagree respectfully. Every student in this course has a voice and so deserves the courtesy of attentive listening and the freedom to express diverse ideas. If at any time, you feel that you are not receiving this courtesy from me or your fellow students please bring it to my attention immediately.



Emergency and Safety Procedures



Should an emergency occur, stay calm and collected during the evacuation process. I know this is easier said than done. Always bring your belongings with you. You may not be allowed back into the classroom for some time. Evacuation locations will be announced in class. Laboratory safety procedures will be discussed in more detail while in lab. As a general rule, never play with the equipment or turn the equipment on until instructed to do so. If you wear a pacemaker or have other health issues, please see me before the labs. Some of the experiments use very high voltages.

Classroom and Other Accommodations

If you have a health condition or disability, which may require accommodations in order to effectively participate in this class, please contact me after class or contact Disability Support Services in Building 17-201, phone 533-4166. Information about disability will be regarded as confidential.

Study Tips

You are responsible for your own learning. I am here to help you along the way, but am only one of many study resources available. Ultimately, it is your responsibility to learn the material required. Here are some tips:

- **Read each chapter before coming to class**, even if you only have time for a quick read through. Studies show that the second time you are exposed to a concept, you retain more than if it is the first time you encounter it. Also, by reading through the chapter, you can write down any questions you may have, or note any sections that seem unclear to you and then bring them up during class discussion. (I love questions in class!)
- Continuously work through the assigned home work exercises. It helps you keep up with class discussion and better prepares you for the exams. **Don't try to do all the home work a day or two before they are due**, you probably won't be able to cram it all in. And don't just copy the answers from the back of the book. It won't teach you anything.
- If anything is unclear, **ask questions during class** discussion or come and see me. It is better to clear up things as early as possible, since the concepts build on each other. If you are confused one week and don't clear it up, you'll be double confused the week after—and probably twice as frustrated as well.
- **If at any point you feel frustrated or overwhelmed, come and see me!** My job is to make sure that this class is enjoyable and interesting. It should not be a struggle or a source of frustration. It should be fun! 😊

A Suggestion for How to Read College Textbooks*

This method teaches how to read your textbook paragraph-by-paragraph instead of big sections of text. You “hunt” for key words and questions, which makes it easier to stay alert and pay attention. It takes longer than just reading a chapter straight through, but ultimately you spend less time preparing for tests. Here's how:

1. After you finish a paragraph, decide if any information in that paragraph is worth highlighting or underlining.
2. Using your highlighter or pen, highlight or underline the most important key words or phrases.
3. Write a number (starting with #1) in the margin of the text next to the highlighted or underlined material.
4. Put the same number on your notepad and write a question based on the information you have just highlighted or underlined in the textbook. Since the information you highlighted or underlined is the answer to the question you wrote, you do not have to write the answer in your notes.
5. Proceed with your studying and reading, and every time you find important information, assign it a number and follow the same process.
6. As you finish a chapter or a section, you can quickly test your retention of what you have just learned by going over the questions in your notes and answering them from memory.

Although this method might seem slower at first, the idea is that you only crack open your book once and end up with a nice set of review questions to study for exams from. The only time you'll return to the book is if you're unsure of the answer to one of your questions. To check an answer, simply find the number in the margin that corresponds to your question.

* Adapted from a method written by Al Soprano, Community College of Southern Nevada, North Las Vegas
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