

PHYS 112-001 General Physics II (Spring 2017)

LOCATION AND TIME: MPCB 101, Tu Th 9:00-10:15 am

Please do not be late for class. Tardiness is disruptive and inconsiderate to others.

INSTRUCTOR: Jim Brennan, MPCB-312, jbrennan@boisestate.edu

OFFICE HOURS: Tu-Th 10:30-11:30 am, MWF 1:30-2:30 pm, or by appointment

PHYSICS DEPARTMENT PHONE: 208-426-3775

Week	Monday Date	Topic	Lab/Exam
1	1/9	Ch. 20 Electric Fields and Forces	NO LAB
2	1/16	Ch. 21, Electric Potential	Lab 1: Electrostatics
3	1/23	Ch. 22, Current and Resistance	Lab 2: Electric Field Mapping
4	1/30	Ch. 23, Circuits (23.1-23.7)	Lab 3: Ohm's Law (handout)
5	2/6	Ch. 24, Magnetic Fields and Forces	Exam 1 Ch. 20-22; Mon - Tues Lab 4: Capacitors
6	2/13	Ch. 25, Electromagnetic Induction and Electromagnetic Waves	Lab 5: Electrical Energy (handout)
7	2/20	Ch. 15, Traveling Waves and Sound	Lab 6: Field in a Coil
8	2/27	Ch. 16, Superposition and Standing Waves	Lab 7: Earth's Magnetic Field
9	3/6	Ch. 17, Wave Optics	Exam 2, Ch. 23-25; Mon - Tues Lab 8: Waves, Traveling and Standing
10	3/13	Ch. 18, Ray Optics	Lab 9: Resonant Air Columns
	3/20	SPRING BREAK	
11	3/27	Ch. 19, Optical Instruments	Lab 10: Double Slit
12	4/3	Ch. 28, Quantum Physics (28.2-28.7)	Lab 11: Reflection and Refraction
13	4/10	Ch. 29 Atoms and Molecules	Exam 3, Ch. 15-18; Mon - Tues Lab 12: Lenses
14	4/17	Ch. 30, Nuclear Physics	Lab 13: Spectral Lines
15	4/24	Finish Class and Review	Lab 14: Two-Step Radioactive Decay
16	5/1	Finals Week	Exam 4, Ch. 19, 28-30 Wk 15 Sat to Wk 16 Fri

COURSE DESCRIPTION: PHYS 111-112 GENERAL PHYSICS (3-3-4).

Mechanics, sound, heat, light, magnetism and electricity. This course satisfies the science requirement for the bachelor of arts and bachelor of science curricula and may be taken by forestry, pre-dental and pre-medical students. Recommended background: high school physics or PHYS 101. PREREQ: for PHYS 111: MATH 144 or MATH 147 or satisfactory placement score into MATH 170. PREREQ: for PHYS 112: PHYS 111.

TEXTBOOKS AND REQUIRED MATERIALS:

- Knight, Jones, and Field, *College Physics*, 3rd ed., Pearson, 2015
- Lab book: Riemann, Exercises in Physics PHYS-112
- A scientific or graphing calculator
- To earn participation credit, you will need to actively participate in class. We will be using REEF Education for polling questions during lecture, and you will need to establish a REEF account. You can purchase an i>clicker device from the bookstore, or you can use the *REEF Polling by i>clicker app* available from either Google Play or the iTunes App Store. A 6-month subscription costs \$14.99. You must register you REEF account in Blackboard to get the points. To do this click the 'Assignments' link on the course Blackboard page, and then click the 'REEF Polling' link. This will take you to a new page and just follow its instructions to complete your registration.

COURSE EVALUATION: The following letter schema is used.

Grades Scored Between	Will Equal
97 % and 100 %	A+
93 % and Less Than 97%	A
90 % and Less Than 93%	A-
87 % and Less Than 90%	B+
83 % and Less Than 87%	B
80 % and Less Than 83%	B-
77 % and Less Than 80%	C+
73 % and Less Than 77%	C
70 % and Less Than 73%	C-
67 % and Less Than 70%	D+
63 % and Less Than 67%	D
60 % and Less Than 63%	D-
0 % and Less Than 60%	F

Your current grades will be posted in the Gradebook in Blackboard. A single grade is assigned for the entire course, including the lab. There are seven equally weighted categories: Four exams, online homework, participation, and lab. The lowest one of the seven items will be dropped (except for lab and Exam 4, which cannot be dropped). **The grade calculated by this formula is the grade you will get. Please do not ask me to give you a higher grade.**

PLEASE check the Blackboard grade book, Mastering Physics, and your REEF account periodically and make sure your grades are correct. It is your responsibility to keep track of your class standing. You have one week from the day points are posted for a participation activity, assignment, or extra credit opportunity to inform me of missing or incorrect points. After that the posted score can no longer be changed and will stand as posted. There is no possibility to make up work at the end of the semester (dead and finals week) because you are suddenly aware of a low class percentage. Do not wait until finals week to determine that you are not passing the course, because it is too late. If you notice you have a missing score during finals week, it is too late!

EXAMS: Exams are based on the textbook readings, the examples in the text, the homework, and the class lectures. There will be four exams (including the final exam, which is just Exam 4).

All four course exams will take place in the Simplot Micron Academic Success Hub Room 213 (2nd Floor). **You must schedule your exam time in advance.** Schedule your exam at <https://testing.boisestate.edu>

Once your exam is scheduled, you must be on time. If you are late for your appointment you may not be allowed to take your exam. It is the student's responsibility to understand the policies and procedures of the Testing Center, which shall be enforced in full.

Policies for our exams, including some test center policies:

- Schedule your appointments early. If you procrastinate you might find that you must schedule your exam during an inconvenient time or that the appointment spots might fill up.
- The Testing Center requires a valid BSU student ID.
- You are allowed to bring a US standard-size sheet of paper (8.5 by 11.0 inches [215.9 by 279.4 mm]) with handwritten formulas and notes to the exam. You may use both side of the sheet of paper. Be sure to write your name on your formula sheets. They will be collected after you finish your exam.
- If English is not your primary language then you may bring a language dictionary.
- Make sure that you bring your scientific calculator. Bring extra batteries in case the calculator dies.
- Exceeding the 90-minute time limit on an exam will result in a score deduction of one point per minute, unless you have prior permission for extended time.
- No cell phones are allowed in the Testing Center.
- Any example of academic dishonesty (including but not limited to using non-sanctioned test aids, crib-sheets during the exam, using cell phones, observing the work of others in the testing center, etc.) will be reported and taken seriously by the department and the university. Repercussions can include a zero on the exam, an F in the course, or expulsion from the university, at the prerogative of the instructor/department and the Dean of Students.

MISSED EXAMS: If you have a compelling reason to miss an exam you must make arrangements with the instructor PRIOR to the exam. If no arrangements are made prior to the exam a grade of zero will be given for the exam.

ONLINE HOMEWORK: You will need an account with Mastering Physics. If you bought the textbook bundle from the BSU bookstore then it included an access code. Otherwise you can pay by credit card when you first access Mastering Physics. Mastering Physics for this course is only accessible through our course Blackboard site. **DO NOT SIGN UP AT MASTERINGPHYSICS.COM.** You can also pay for the e-text version of the textbook, if you prefer, when you register with Mastering Physics.

Click on the Mastering Physics link on the left side of the Blackboard page. The homework is correlated with the sections covered and must be completed as scheduled on the website in order to facilitate classroom discussion. Some exam questions will be problems from the homework. Pay attention to the homework due dates because

you only get full credit for homework problems submitted before the deadline. Homework due dates will not be extended for individual students.

LABS: Students must register for a laboratory section. There will be 14 lab activities available. The lowest lab score of the 14 labs will be dropped at the end of the semester. If you have to miss a lab, you can attend a different lab section that week with PRIOR permission from both the lab instructors. This can be done a maximum of two times during a semester.

PARTICIPATION: Part of your grade is based on class participation. This may include:

- Lecture questions. During the class some questions will be posed for you to consider, and the responses tallied using REEF software.
- Interactive lecture demonstrations and/or group exercises. Some demos in class will be done allowing students to predict the outcome, discuss with peers, then the demo/experiment will be performed. Again the correct answer is not important, just the attempt.
- Activities or assignments based on reading the text.
- Practice quizzes, worksheets and other in-class activities that the instructor chooses. Graded assignments will be returned to you in lab. **It is your responsibility to retain all assignments.** It is your proof of completion.

ASSIGNED READINGS & STUDENT CONTRIBUTIONS: Class lectures relate closely to the assigned readings in the text. Students are expected to attend all lectures and participate actively in class. Consult the syllabus and read the assigned pages **before** the material is covered in class. As you read, write down any questions you have about the reading and the numbered examples, and ask questions in class. Changes to the syllabus, schedule and/or assignments may be announced in class. It is the student's responsibility to be aware of any such changes. Students may be dropped from the class for excessive non-attendance.

All registered BSU students receive a Boise State email and Blackboard account. It is the student's responsibility to access both accounts regularly to avoid missing important messages and deadlines. All students are expected to conform to the BSU Student Code of Conduct. All persons are expected to act in such a manner as to maintain a positive and productive learning environment with respect for one another.

EXTRA CREDIT: Up to 3% of the final grade may be extra credit assignments, at the instructor's discretion. Extra credit opportunities will be posted as Blackboard assignments.

BRONCOCARD: All students taking Boise State classes are charged a fee of \$25 for a Boise State picture ID card, called a BroncoCard, at the time of registration. A currently valid BroncoCard is required for this class, and must be presented in order to take course exams. For information on how to get a BroncoCard, please visit <https://broncocard.boisestate.edu/how-to-get-a-broncocard/>

PHYSICS TUTORING: Times and locations for free drop-in tutoring sessions where you can get additional help can be found here: <http://aae.boisestate.edu/tutoring> and on the blackboard site for this course.

SAFE ASSIGN: The instructor may require that assignments be submitted via Safe Assign in Blackboard in order to check for plagiarism. The lab section will also require the use of Safe Assign for lab reports.

ACADEMIC DISHONESTY: Plagiarism occurs when a person passes in another person's work as his or her own or borrows directly from another's work without documentation. It doesn't matter if the work is that of a published author, an unpublished co-worker, or another student. Plagiarism also occurs when a person passes off another person's ideas as his or her own; merely casting another writer's ideas in different words doesn't free one from the obligation to document one's source. Academic integrity will be strongly enforced in this course. Any student caught cheating on any assignment, lab, activity, or exam may fail the assignment, lab, activity, or exam

in question or fail this course dependent on a hearing with the course instructor. Academic Dishonesty is defined in the Student Code of Conduct (Article 2, Section 18). It is strongly suggested that you read and understand these definitions: <http://deanofstudents.boisestate.edu/student-code-of-conduct>.

A student who engages in academic dishonesty will be referred to the Office of Student Rights and Responsibilities for disciplinary action. Other penalties may include academic probation, suspension, or expulsion from school.

Examples of academic dishonesty include (but are not limited to):

- Using non-sanctioned test aids (crib-sheets) during the exam
- Using cell phones in the testing center
- Observing the work of others in the testing center
- Copying test questions to take out of the testing center
- Possessing copies of tests, test questions, or test banks without instructor permission
- Submitting lab reports that are not your own original work
- Resubmitting lab reports that you wrote in a previous class
- Submitting REEF responses for another student or for a class you are not attending

SYLLABUS: The syllabus describes the intended progression of the course. The syllabus and homework assignments will be revised as needed. I reserve the right to modify the syllabus and schedule at any time. Revisions will be documented in an announcement on the Blackboard course site.

DISABILITY SERVICES: Students with disabilities needing accommodations to fully participate in this class should contact the Educational Access Center (EAC). All accommodations must be approved through the EAC prior to being implemented. To learn more about the accommodation process, visit the EAC's website at <https://eac.boisestate.edu>.