University of Mississippi

Department of Physics and Astronomy

Physics 213: General Physics I

Section 1

Syllabus

Instructor: Dr. James Bonifacio
Office: Lewis 211A
Email: jjbonifa@go.olemiss.edu

Fall 2023

Course Description:

This course is the first part of an algebra-based treatment of introductory physics. Topics include Newtonian mechanics, energy, rotational motion, fluids, oscillations and waves. Of the courses Phys 107, Phys 211, and Phys 213, only one can be counted towards a degree.

Course Objectives:

- Develop conceptual reasoning and physical understanding.
- Improve numerical problem solving skills.
- Solve problems including kinematic equations, forces, conservation of energy and momentum, rotational equilibrium, hydrostatics, and fluid dynamics.
- Understand wave motion and the properties of sound.

Prerequisite:

(Math 121 and Math 123) or Math 125 or Math 261

Corequisite:

Phys 223: Laboratory Physics I

Locations and times:

Classes: Monday, Wednesday, and Friday from 13:00 to 13:50. Location: Lewis 101.
Testing: Thursdays 19:00 to 20:50.
Office hours: Feel free to attend any of these sessions:

- Dr. Bonifacio: Wed and Fri 12:00–12:50pm, Lewis 104
- Dr. Meyer: Tues and Thurs 9:15–10:00am, Brevard Lounge
- Dr. Meyer: Wed 2:00–3:50pm and Fri 3:00–3:50pm, Lewis 104

Optional textbook:

College Physics, 11th edition by Serway and Vuille.

Required Materials:

Scientific calculator (not on phone) such as TI-30XS MultiView or TI-36X Pro.

Grading:

Homework	120 points (24×5 points each)
Jump-start problems	120 points (28×5 points each, drop lowest 4)
Pre-class quizzes	120 points (40×3 points each)
Exam 1	120 points
Exam 2	120 points
Exam 3	120 points
Final exam	120 points
Total	840 points

Grading scale:

Letter grade	Points range	Percentage range
A	[772.8, 840]	[92, 100]
A-	[756, 772.8)	[90, 92)
B+	[730.8, 756)	[87, 90)
B	[688.8, 730.8)	[82, 87)
B-	[672, 688.8)	[80, 82)
C+	[646.8, 672)	[77, 80)
C	[588, 646.8)	[70, 77)
D	[504, 588)	[60, 70)
F	[0, 504)	[0, 60)

Homework

Solutions to two problems, worth 5 points each, should be turned in via Blackboard on Fridays by 11:59 pm Central Time. You can write your work on paper and then use a free phone app (Adobe Scan, Tiny Scanner, etc.) or a physical scanner to create the pdf to upload. Or, if you have a tablet, you can do your work on there and save it as a pdf.

The solutions to these problems will be posted on Blackboard shortly after the due date, so I won't be able to accept late submissions without prior permission – if you have a special circumstance or issue, email me on or before the due date.

Jump-start problems:

During class, we will do example problems (led by me) and practice problems (led by you). Over the course of the semester, 28 of the practice problems, called jump-start problems, will be turned in for credit worth 5 points each. The problems will be due one week later before midnight. If you have to be absent for a non-excused reason, you will get a zero on the problem done in class that day, but the lowest four scores (including zeros) will be dropped. If you have an excused absence or some special circumstance, email me to get the practice problem in advance.

Exams:

There will be three exams during term and a **mandatory comprehensive final**, as shown on the schedule on the last page. The dates of the exams and final will not change unless class is canceled for unforeseen reasons (weather, emergency, etc.). The chapters covered on each exam may change, if needed. The final exam covers all the material. No make-up exams will be given unless arrangements are made in advance or in case of unforeseeable emergencies.

The lowest midterm exam score (including a zero) can be replaced with the final exam score, if the final exam score is higher than the lowest midterm exam score. At the end of the term, the Blackboard gradebook will show this adjustment in a column marked "Replace Lowest," which will add on the point difference between your final exam and lowest midterm grade IF the final was higher.

Attendance

Consistent lecture attendance is important for your learning and your grade. Please scan your ID at the scanners in the classroom when you enter every class you attend. You will be able to make up any work you miss due to isolating, quarantining, or getting tested for COVID. Please do not come to class if you are feeling ill!

Plan for success:

- **Before each class**, watch the posted lecture videos and complete the associated quizzes.
- **During each class**, keep your phone in your backpack to avoid temptation. Try each problem yourself to the best of your ability. Solving the in-class problems builds the problem-solving skills you will need to complete the homework and exam problems.
- **After each class**, compare your solution to the in-class problem to the solution I will provide. Finish and submit the jump-start problems we start in class. Make note of anywhere you struggled or have questions and make a plan for how to strengthen that skill.
- **Early in the week**, start the homework so you have a chance to seek out help if necessary.
- **Anytime** you need it, seek out additional help from:
  - Supplemental Instruction – schedule is posted in the left sidebar of our Blackboard course.

- Drop-In Group Study – work together with other students or ask me questions. The schedule is on the second page of the syllabus.
- HPAO tutoring – schedule on their website soon.
- Tutoring from the lab TAs – schedule on the door of Lewis 104.
- Set up a 1:1 appointment with me – just send me an email with a list of times you are available. Also do this if you need to talk about something confidential that requires privacy.

Academic Honesty

You may work with other students on the homework questions, but you cannot copy their work. Make sure that all work submitted is your own, so that you would be able to fully explain it to me or redo a similar problem if asked. Uploading the materials from this class to Chegg, Coursehero, or other cheating websites or using any solutions that are posted there would violate the UM Standards of Honesty. Consequences for academic dishonesty depend on the seriousness of the offense and will be at least a zero on the assignment or exam and may include an overall grade of F.

Student Support Services:

The University Counseling Center is a professional facility offered by the University of Mississippi to assist students, faculty, and staff with many types of life stressors that interrupt day-to-day functioning, including the stressors associated with the COVID-19 pandemic. They offer individual counseling, couple's counseling, group counseling, stress management, crisis intervention, assessments and referrals, outreach programs, consultations, and substance abuse services. There is no fee for currently enrolled University students and everything you say to your counselor is confidential. You can contact the Counseling Center for information about mental health issues at https://counseling.olemiss.edu, counslg@olemiss.edu, 662-915-3784, and 320 Lester Hall. You can schedule an appointment or get information about appointments by calling the UCC at 662-915-3784.

University-wide Policies:

Attendance: The university requires that all students have a verified attendance at least once during the first two weeks of the semester for each course. If your attendance is not verified, you will be dropped from the course and any financial aid will be adjusted accordingly. Please see http://olemiss.edu/gotoclass for more information.

Academic integrity and honesty: Students are expected to adhere to the University of Mississippi Creed and the Standards of Honesty as described in Policy Code ACA.AR.600.001 and the M Book. Students are reminded that cheating in any form will not be tolerated. Performance on all tests and assignments shall represent the individual work of the student. Those who violate the Standards of Honesty will be reported and subject to the appropriate sanction, which may include expulsion from the University.

Intellectual property: All materials distributed electronically and in hard copy in this class are protected under intellectual copyright. Any attempt to upload these documents to a file sharing service or to profit from their distribution by any means constitutes theft and will be in violation of intellectual property law and the UM Academic Conduct Code unless expressly permitted for by the instructor.

Nondiscrimination policy: The University complies with all applicable laws regarding affirmative action and equal opportunity in all its activities and programs and does not discriminate against anyone protected by law because of age, color, disability, national origin, race, religion, sex, sexual orientation, handicap, or status as a veteran or disabled veteran.

Disability Access and Inclusion: The University of Mississippi is committed to the creation of inclusive learning environments for all students. If there are aspects of the instruction or design of this course that result in barriers to your full inclusion and participation, or to accurate assessment of your achievement, please contact the course instructor as soon as possible. Barriers may include, but are not necessarily limited to, timed exams and in-class assignments, difficulty with the acquisition of lecture content, inaccessible web content, and the use of non-captioned or non-transcribed video and audio files. If you are approved through SDS, you must log in to your Rebel Access portal to request approved accommodations. If you are not yet approved through SDS, you must contact Student Disability Services (at 662-915-7128 or sds@olemiss.edu) so the office can (i) determine your eligibility for accommodations, (ii) disseminate to your instructors a Faculty Notification Letter, (iii) facilitate the removal of barriers, and (iv) ensure you have equal access to the same opportunities for success that are available to all students.

Examinations and last week of class:
Regulations governing all examinations—A student's failure to appear for an examination without an acceptable excuse, inability to present valid identification, absence from the room during the course of an examination without the consent of the examiner, or attempting any portion of an examination without submitting his or her answers shall result in failure of the examination. Tardiness beyond 15 minutes forfeits a student's right to an examination.
Final examinations—A final examination, to be given at the time posted in the examination schedule, is required in each undergraduate course, unless the appropriate chair and dean have approved an exception. A student who has three or four final examinations in one day may arrange with the course instructor to take the noon or 7:30 p.m. examination at another time. In order to give a final examination at any time other than that shown in the posted examination schedule, an instructor must have prior approval of the department chair and dean.
Last week of class—The following guidelines exist to allow sufficient time for students and instructors to prepare for final examinations. These guidelines apply to the week preceding final examinations for undergraduate courses held during Fall and Spring semesters.

- During the period of Wednesday through Friday of the last week of class, instructors are not to give exams, tests, or quizzes that contribute more than 10% of the final grade for a class. An instructor can obtain approval of the department chair and dean to give an exam, test, or quiz, of this weight, during this three day period. Instructors should return graded work and/or inform students of their grades on exams, tests, or quizzes prior to the beginning of finals week.

- Exceptions to the above statement are automatically made for lab-based courses, technical writing courses, seminar courses that assign a term paper, and senior design courses that assign a multi-faceted project in lieu of a final exam. Major projects of the above types, which contribute more than 10% of the final grade and which are due during this Last Week period, should be assigned in the syllabus at the beginning of the semester and any substantial change in the assignment should be made known to students before the drop deadline.

Phys 213 Section 1: 1:00pm MWF in Lewis 101.

Planned schedule: Please watch the videos for these sections before class each day.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1 8/21 – 8/25	Syllabus 1.7 – 1.8		1.9		1.10
Week 2 8/28 – 9/1	2.1 – 2.2		2.3		2.4 HW 1, 2 due
Week 3 9/4 – 9/8	Labor Day No class		3.1 – 3.2		3.3 HW 3, 4 due
Week 4 9/11 – 9/15	4.1 - 4.3		4.4	**Exam 1, Ch. 1-3**	4.5 HW 5, 6 due
Week 5 9/18 – 9/22	4.6		4.7		5.1 – 5.2 part 1 HW 7, 8 due
Week 6 9/25 – 9/29	5.2 part 2 – 5.4		5.5 - 5.6		5.7 – 5.8 HW 9, 10 due
Week 7 10/2 – 10/6	6.1 – 6.2		6.3 – 6.4		7.1 – 7.2 HW 11, 12 due
Week 8 10/9– 10/13	7.3 – 7.4		7.5 parts 1 and 2	**Exam 2, Ch. 4-6**	7.5 part 3 HW 13, 14 due
Week 9 10/16– 10/20	8.1		8.2		8.3 HW 15, 16 due
Week 10 10/23–10/27	8.4		8.5 – 8.6		9.1 – 9.3 HW 17, 18 due
Week 11 10/30 – 11/3	9.4 – 9.5		9.6 – 9.7		9.8, 9.10 HW 19, 20 due
Week 12 11/6– 11/10	10.1 – 10.3		13.1 – 13.2	**Exam 3, Ch. 7-9**	13.3 – 13.4 HW 21, 22 due
Week 13 11/13– 11/17	13.5 – 13.6		13.7 – 13.11		14.1 – 14.3 HW 23, 24 due
Break Week 11/20– 11/24	No class	No class	No class	No class	No class
Week 14 11/27 – 12/1	14.4 – 14.5		14.6		Optional: 14.7 - 14.13
Finals Week 12/4 – 12/8			**Final 213-1 W 12:00 noon**		