

TIME (for lectures): M,W,F 1:55 PM-2:50 PM **ROOM:** 2009 Science Hall

TEXT: Fundamentals of Physics by Halliday, Resnick, and Walker, 10th edition.
Tutorials in Introductory Physics by McDermott and Shaffer.
Available at the Campus Bookstore.

LECTURER: Gil Paz, Assistant Professor

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COURSE WEB PAGE: WSU Blackboard

OFFICE HOURS: W: 3:00 PM - 5:00 PM or by appointment
Room 360, Physics Building.

LEARNING OUTCOMES: The learning outcomes for of this course, which are the traditional goals in Physics, are that you will be able to apply basic physical laws to analyze real-life or unstructured situations (“word problems”), both descriptively and numerically, for the aspects covered in this course. You should be able to analyze both existing situations, and situations that you or someone else want to construct.

DISCUSSION SECTIONS: Discussion sections meet once per week. The goal of the discussion section is to enhance your learning and grades in the course. The discussion section is using the “learning communities” format. The section will be divided into teams, 6 to 7 people each, which work together every week. You will spend most of the time “doing”, not just watching and taking notes. This is called active learning. There are several reasons for using this format:

- Data show that active learning works. Other courses at WSU have repeatedly seen a 1% grade increase for *each* session students attend. This is about *one letter grade* over the semester.
- Active learning communities have expanded to physics courses in response to demand from previous students.
- You will learn more and remember more.
- Active learning communities are more fun!

Each week there will be an announcement on Blackboard listing what you should bring to the discussion group that week. Each week you will spend some time on learning activities. During the beginning of the first meeting, you will meet your group and get to know each other. One regular activity will be to work on the homework for that week. For

every meeting after the first, there will be a quiz, which will have questions and problems similar to your homework assignments. On the weeks before exams, there will be a review. The discussion grade will contribute 15% to the full course grade: 10% for the ten best quizzes and 5% for attendance and participation. No make-up quizzes will be given.

Discussion Section	CRN	Room
Th 12:50PM - 02:40PM	14533/13507	245 Physics Building
M 03:00PM - 04:50PM	10998/13515	134 State Hall
M 03:00PM - 04:50PM	18031/18032	027 State Hall

EXAMS: There will be three mid-term 55-minute exams in class, consisting of multiple choice questions (no partial credit) and one or two long-answer problems (with the possibility of earning partial credit). The lowest exam score may be replaced by half of your earned score on the Final Exam. Therefore, no makeup exams will be given. You **MUST** bring your Wayne State ID to the exam and present it to a proctor when asked during the exam. No electronic devices (other than a calculator) are allowed in the room during the exam (no iPods, headphones, cell-phones, Blackberries, etc.). Exams will not be graded on a curve.

GRADING: Your course grade will be determined by your performance in three midterm Exams, Discussion Section results, and a Final Exam. The Final Exam will cover the material presented during the entire semester. The overall course grade will be determined on the basis of the following distribution:

Three In-class Midterms	51 points (17×3=51 points)
Discussion section classwork	5 points
Discussion section quizzes	10 points
Final Exam	34 points
Total	100 points

Grade	Cumulated Score	Grade	Cumulated Score
A	91-100	C	60-64
A-	85-90	C-	55-59
B+	80-84	D+	50-54
B	75-79	D	45-49
B-	70-74	D-	40-44
C+	65-69	F	0-39

TENTATIVE CLASS SCHEDULE (Subject to change)

Date	Chapters covered
8/27 - 10/1	Ch 1-7
10/3 (F)	Exam 1 (Ch 1-3, Sec 4.1-4.5, Ch 5, and Sec 6.1)
10/6 - 10/22	Ch 7, 8, 13, 9
10/24 (F)	Exam 2 (Sec 6.2-6.3; Ch 7-8; Sec 13.1-13.3, 13.5, 13.7; Sec 9.1-9.3)
10/27-11/24	Ch 9-12, 15-17
11/21 (F)	Exam 3 (Sec 9.4-9.8; Ch 10; Sec 11.1-11.2, Sec 11.4-11.8; Sec 12.1-12.2; Ch 15; Sec 16.1-16.2)
12/1-12/8	Ch 18-19
12/10 (W)	Final (Ch 1-3; Sec 4.1-4.5; Ch 5-8; Sec 9.1-9.8; Ch 10; Sec 11.1-11.2, 11.4-11.8; Sec 12.1-12.2; Sec 13.1-13.3, 13.5, 13.7; Ch 15; Sec 16.1-16.5, 16.7; Sec 17.1-17.4, 17.7; Sec 18.1-18.2, 18.4-18.6; Sec 19.1-19.2, 19.7-19.9)

December 10 Wednesday Final Exam (1:20 PM-3:50 PM) Cumulative
The Final Exam schedule is determined by the University. It cannot be changed.

LABORATORY: PHY 2171 is the laboratory portion, which is treated as a separate part of the course with its own grades and procedures which will be explained by your laboratory instructor. The experiments provide tangible demonstration and reinforcement of the ideas presented in this course. In addition, the laboratory is meant to show the importance of experiments in science. Labs will begin week of September 8-12. Laboratory manuals will be posted online at Blackboard.

HOMEWORK ASSIGNMENT: The homework assignments contains problems, some of which will be discussed at the section; additional problems to give you more practice; and questions, which help you develop conceptual understanding. The homework assignments are not graded, but it is highly recommended that you do them.

Chapter	HW problems	Additional HW problems	Questions
1	1, 12, 27, 37, 47	None	None
2	11, 17, 19, 28, 44, 69	7, 21, 23, 49, 80	1, 4, 5
3	2, 9, 12, 34	15, 16, 30, 63	2, 13
4	2, 6, 11, 22, 26, 59	5, 19, 43, 49, 67	7, 9, 13
5	10, 14, 17, 27, 49, 51	7, 24, 31, 57	1, 3, 6
6	9, 20, 36, 41, 47, 63	15, 25, 39, 43, 57, 70	4, 6, 9
7	1, 9, 19, 27, 37, 45, 58	5, 13, 17, 62, 67	2, 5, 9
8	5, 19, 31, 39, 43, 57	7, 21, 34, 40, 60, 69	1, 5, 11
9	2, 13, 21, 25, 46, 50, 64, 74	4, 9, 32, 47, 54	2, 5, 6
10	5, 15, 25, 33, 37, 47, 53, 61	63, 87	3, 5
11	2, 9, 21, 27, 37, 51, 60	12	6, 11
12	3, 9, 20, 28, 76	None	3, 4
13	3, 8, 20, 40, 48, 63	16, 41, 48, 65	3, 4
14	N/A	N/A	N/A
15	2, 13, 30, 33, 38, 47, 57	16, 27, 41, 61	3, 4
16	3, 17, 29, 31, 41	74	1, 4
17	2, 9, 23, 27, 56, 57	55	2, 7
18	5, 31, 45, 55, 57	23, 28, 51, 56	4, 7
19	1, 5, 13, 47, 51, 54	50	None
20	N/A	N/A	N/A

ADDITIONAL STUDY HELP: If you have difficulty doing homework or lab work, or understanding some of the course material, you can get help from the Physics Resource Center, in room 172 Physics Building (the center will open in a couple of weeks after the beginning of the semester).

HONORS: A separate Honors Discussion Section is on Monday 3:00 PM-4:50 PM at 027 State Hall. In order to receive honors credit you must do weekly *graded* honors homework assignments and write a final short paper on a topic related to the course.

STUDENT DISABILITY SERVICES: If you have a documented disability that requires accommodations, you will need to register with Student Disability Services (SDS) for coordination of your academic accommodations. The Student Disability Services (SDS) office is located at 1600 David Adamany Undergraduate Library in the Student Academic Success Services department. SDS telephone number is 313-577-1851 or 313-577-3365 (TDD only). Once you have your accommodations in place, I will be glad to meet with you privately during my office hours to discuss your special needs. Student Disability Services mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University. Please be aware that a delay in getting SDS accommodation letters for the current semester may hinder the availability or facilitation of those accommodations in a timely manner. Therefore, it is in your best interest to get your accommodation letters as early in the semester as possible.

ACADEMIC INTEGRITY: All forms of academic dishonesty are forbidden in this class. Examples of academic dishonesty include all variations of cheating during exams as well as changing test answers for re-grading. Continuing to write after the exam time is up will result in the grade of zero for that exam. All forms of academic dishonesty will be prosecuted to the fullest extent as outlined in the Student Due Process Policy of the University.

Excerpts from the University's Student Due Process Policy regarding disruptive behavior are outlined below. This policy will be enforced during all academic activities relating to PHY 2170/5 especially lecture and discussion classes. A student who is being disruptive in discussion class will lose 10 points per occurrence from their total score. A student who is disruptive during lecture runs the risk of losing one exam score. Repeat offenders will have their course grade down-graded and if necessary, they will receive an F for the course. Lastly, a student may be brought before the Dean of his or her College for further action.

The most important consequence of cheating/plagiarism or any other form of academic dishonesty, whether or not it is detected, is that you will not be able to do the work, and moreover you will not have the confidence that you can do that part of the course work. The ability to step up in the outside world and say with confidence, "I can do that" is surely one of the primary benefits of a college-level course, and is the source of many of the other benefits. You may "get away" with cheating once or even more than once, but the main penalty, far worse than any grade punishment, is that your college education, which is one of the best things you can do for yourself, will not have the benefits you are looking for.

Wayne State University STUDENT DUE PROCESS POLICY

1.0 PREAMBLE

1. As provided by the Board of Governors in WSUCA 2.31.01, "Student Rights and Responsibilities," and as mandated by academic tradition, the students of Wayne State University possess specific rights and responsibilities. Students are expected to conduct themselves in a manner conducive to an environment, which encourages the free exchange of ideas and information. Students, as integral members of the academic community, have the right to the assurance that their rights are protected from arbitrary and capricious acts on the part of any other member of the academic community. This Student Due Process Policy is designed to assure that students who are alleged to have engaged in unacceptable conduct receive fair and impartial consideration as specified in this policy.

4.0 PROHIBITED CONDUCT

The following conduct is subject to disciplinary action when it occurs on University premises, or in connection with a University course or University documents, or at a University-sponsored activity:

4.1 All forms of academic dishonesty.

4.3 Physical abuse of another person, or conduct which threatens or endangers another, or verbal or physical threats which cause reasonable apprehension of harm.

4.6 Disorderly behavior that interferes with activities authorized, sponsored, or permitted by the University such as teaching, research, administration, and including disorderly behavior that interferes with the freedom of expression of others.

5.0 DISCIPLINARY SANCTIONS Students found to have committed an act, or acts of misconduct may be subject to one or more of the following sanctions, which shall take effect immediately upon imposition, unless otherwise stated in writing, except as provided in this policy.

5.1 Disciplinary Reprimand. Notification that the student has committed an act of misconduct, and warning that another offense may result in the imposition of a more serious sanction.

5.2 Disciplinary Probation. A disciplinary status which does not interfere with the student's right to enroll in and attend classes, but which includes specified requirements or restrictions (as, for example, restrictions upon the student's representing the University in any extracurricular activity, or running for or holding office in any student group or organization) for a specific period of time as determined in the particular case.

5.3 Suspension. A denial of the privilege of continuing or enrolling as a student anywhere within the

University, and denial of any and all rights and privileges conferred by student status, for a specified period of time. At the termination of the suspension the student will be entitled to resume his/her education without meeting any special academic entrance requirements.

5.4 Expulsion.

5.5 Restitution.

5.6 Transcript disciplinary Record.

5.7 Other Sanction.

10.0 PRELIMINARY PROCEDURE

10.1 When a faculty member is persuaded that academic dishonesty has occurred, the faculty member may, without using the mechanism of filing a charge, adjust the grade downward (including downgrading to a failing grade) for the test, paper, or other course-related activity in question, or for the entire course.

TIPS FOR SUCCEEDING IN INTRODUCTORY PHYSICS:

There is no secret to succeeding at Introductory Physics. The things you must do to achieve your best results are amazingly clear and should not be unknown to you. Previous experience with many, many students has shown the following traits/habits seem to be common to most students who excel in the introductory physics course.

1. **Come to class.** At every university I have been associated with studies have been taken to find out what best predicts student success. Regular class attendance is the thing that is most associated with student success. Perhaps this is obvious, but many students do not show up and wonder why they are doing poorly.
2. **Get a book. Read it.** Use it. There are LOTS of very good hints and ideas in the Preface. Most students do not read the Preface, but in it the authors have given you their best advice on how to use the text successfully.
3. **Actually read the text.** This is preferably done before the class lecture, and if possible, afterward as well. Make sure you read the Review & Summary section at the end of each chapter it is critical to summarize what youve learned.
4. **Put in the time.** The text book recommends (and we agree) that you should be spending at least 2 hours outside of the class for every hour of lecture. This is at least 6 hours per week. It is best to spend time both before class getting familiar with the material, and after class reviewing the material.
5. **Practice, practice, practice.** Do the assigned homework, do the extra credit problems, and do book problems. You can watch Michael Jordan play basketball for 3 hours a day, every day, and you will never get better at basketball - not unless you yourself put in the practice.
6. **Strive for understanding.** Many students feel if they just get the answer from a TA or help center person, they have accomplished the task. This is incorrect. You have accomplished your task when you truly understand the problem, how to set it up, how to solve it, and what it is asking. Just completing the problem to get some random answer is not enough. Realize that we provide you the formulas you will need, thus memorization is not terribly helpful.
7. **Attend your instructors office hours.** This will be most effective if you bring your book and your homework problems and ask him/her to help you identify your sticking points. Open-ended statements like, I dont get any of it, will not be helpful in this setting.