Physics 2130 **GENERAL PHYSICS** **Fall 2012**

LECTURE TIME: T, Th 6:00 PM − 7:20 PM.

LECTURE ROOM: 2025 Science Hall

TEXT: PHYSICS by Giambattista, Richardson, and Richardson, McGraw-Hill, Second Edition ISBN: 978-0-07-733968-5

LECTURER: Professor Gil Paz

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COURSE WEB PAGE: WSU Blackboard

OFFICE HOURS: T, Th 2:00 PM − 3:00 PM in Room 360 Physics Building

LABORATORY: PHY 2131 is the laboratory portion of PHY 2130. It is a co-requisite so you must be enrolled in both courses concurrently. The laboratory is a separate course with its own grades and procedures, which will be explained by your laboratory instructor. The experiments in PHY 2131 are designed to complement the material covered in PHY 2130. Your Laboratory Manual is to be purchased separately at the University Bookstore. Labs will begin during the second full week of classes, the week of September 10th.

QUIZ SECTIONS: Quiz sections meet once per week and are important. They allow you to meet together in small groups to ask questions, discuss lecture material, discuss assigned practice problems, etc. In the quiz sections, you will be given short quizzes, which will have questions and problems similar to your homework assignments. Six best quizzes will be counted toward your final quiz score. You will have the opportunity to earn up to **70 points** towards your course grade for the performance of the quiz sections with 60 points reserved for the six best quizzes and 10 points for participation. *No individual make-up quizzes will be given.*

Quiz sections	CRN	Instructor	Room
T 5:00 PM − 5:55 PM	13500	Ryan Gillard	297 Manoogian
T 7:30 PM − 8:25 PM	13501	Kulwinder Dhindsa	154 Manoogian
Th 5:00 PM − 5:55 PM	14019	Ryan Gillard	64 Manoogian
Th 7:30 PM − 8:25 PM	13502	Kulwinder Dhindsa	128 Manoogian

EXAMS: There will be three 50-minute exams in class, consisting of multiple choice questions (no 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. *A group photograph of the class will be taken during each exam.* No electronic devices (other than a calculator) are allowed in the room during the exam (*no iPods, headphones, cell-phones, Blackberries, etc.*). You

will need a stand-alone calculator (standalone excludes calculators on cell phones, for example). Graphing calculators or other calculators with communications capacity will not be allowed.

ONLINE HOMEWORK: The WebAssign online testing system (http://webassign.net) provides online homework submission and grading. If you buy the textbook in the campus store, it should include a WebAssign access card valid for two semesters. Access codes can also be purchased separately. More information is available on the WebAssign website. You should already be enrolled for the course in WebAssign with your username and initial password set to your six character WSU ID (e.g. ab1234) unless you already had a WebAssign account. You should change your password after you first login. In case you need to register manually, this class is called "PHY 2130 F12 Paz". Additional information is available in your WebAssign Student Guide.
The weekly homework assignments are divided into two parts. The first part is common to all the lectures of PHY 2130. It consists of 5 problems each week and it will contribute 20 points to your final grade. The second part is unique to our lecture. It consists of 5 problems each week and it will contribute 20 points to your final grade. Both are due on Sunday 11:59 PM of the appropriate week.

GRADING: Your course grade will be determined by your performance on the three midterm Exams, Online Homework, Quiz Section results, and the 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:

Online Homework	20 points
Additional Online Homework	20 points
Quizzes (best 6), attendance in quiz sections	70 (60+10) points
Three In-class 50 Minute Exams (100 points each)	300 points
Final Exam	190 points
Total	**600 points**

Points accumulated	Percent	Grade
540-600	91-100	A
510-539	85-90	A-
480-509	80-84	B+
450-479	75-79	B
420-449	70-74	B-
390-419	65-69	C+
360-389	60-64	C
330-359	55-59	C-
300-329	50-54	D+
270-299	45-49	D
240-269	40-44	D-
0-239	0-39	F

EXTRA CREDIT: 3 extra credit points will be given for attending a WSU Planetarium session: http://planetarium.wayne.edu/

ADDITIONAL RESOURCES: Additional help and support for this course is available in the Physics Resource Center, in room 172 Physics Building. This will open a few weeks after the beginning of the semester. In addition, both your quiz instructors and I will have regular office hours where we will be available to discuss any difficulties you may have with the course material.

WITHDRAWAL DEADLINE: The deadline to withdraw from the course will be Saturday, November 10th, 2012. Any course withdrawal request on Pipeline after this date will be automatically denied.

ACADEMIC INTEGRITY: All forms of academic dishonesty are forbidden in this class. Specific examples of academic dishonesty include 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.
Selected excerpts from the Student Due Process Policy regarding disruptive behavior are presented below. These policies will be enforced during all academic activities relating to PHY 2130. Students who are disruptive during lectures, exams, or quiz sections will lose points from their final grade for the course. Repeat offenders may fail the course or be brought before the Dean of his or her College for further action.

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.

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 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.

TIPS FOR SUCCEEDING IN INTRODUCTORY PHYSICS:

There are a number of best-practices that are strongly correlated with achieving a high grade in introductory physics courses. These include:
1. **Attend lectures and quiz sections.** Regular class attendance is strongly associated with student success.
2. **Read the preface in the textbook.** In the preface, the authors have given you their best advice on how to use the text successfully.
3. **Complete the assigned reading.** This material should ideally be read both before and the class lecture. Make sure you read the Master the Concepts section at the end of each chapter. This provides a helpful summary of the material covered in this chapter.
4. **Put in the required time.** A typical suggestion is that students should work at least 2 hours outside of the classroom for every hour of lecture. This includes time spend before class getting familiar with the material and after class reviewing the material.
5. **Practice your problem solving skills.** Do the assigned homework, and do supplemental problems from the textbook.
6. **Master the concepts.** It is important to understand the concepts underlying the equations covered in this course. Since a formula sheet will be provided for exams, there is no need to memorize these equations. The challenge is in understanding how to apply them to solve specific problems.
7. **Attend office hours.** This will be most effective if you have specific problems that have arisen as you work through your assigned reading and weekly problems.

TENTATIVE CLASS SCHEDULE (Subject to change)

Week	Class	Date	Day	Topic	Read sections:
1	1	8/30	Th	Introduction	1.1−1.9
2	2	9/4	T	Displacement, Velocity, Acceleration	2.1−2.5
	3	9/6	Th	Free fall,Vectors, 2D Motion	2.6−3.4
3	4	9/11	T	2D Motion, Force, Newtons Laws	3.5, 4.1−4.4
	5	9/13	Th	Free Body Diagrams; Gravity, Friction and Tension	4.5−4.7
4	6	9/18	T	Applications of Newtons Laws	4.8−4.10
	7	9/20	Th	Circular Motion	5.1−5.4, 5.7
5	8	9/25	T	Conservation of Energy; Work, KE and PE	6.1−6.5
	9	9/27	Th	Hooke's Law, Power, Momentum	6.6−7.2
6	10	10/2	T	Catch-up and Review	–
	11	10/4	Th	**Exam I**	**1−5**
7	12	10/9	T	Conservation of Momentum, Collisions	7.3−7.8
	13	10/11	Th	Rotational Motion I: KE, Torque, Equilibrium	8.1−8.5
8	14	10/16	T	Rotational Motion II: Angular Momentum	8.6−8.9
	15	10/18	Th	Pascal's Principle,Pressure, Buoyancy	9.1−9.6
9	16	10/23	T	Catch-up and Review	–
	17	10/25	Th	**Exam II**	**6−8**
10	18	10/30	T	Fluids, Bernouli's Law, Viscosity	9.7− 9.11
	19	11/1	Th	Elasticity, Simple Harmonic Motion	10.1−10.6,10.8−10.10
11	20	11/6	T	Wave Phenomena I	11.1−11.4
	21	11/8	Th	Wave Phenomena II, Sound	11.7,11.10,12.1−12.3
12	22	11/13	T	Sound	12.4−12.9
	23	11/15	Th	Catch-up and Review	–
13	24	11/20	T	**Exam III**	**9−12**
	25	11/22	Th	**Holiday − no class**	
14	26	11/27	T	Temperature; Thermal Expansion; Ideal Gas	13.1−13.5
	27	11/29	Th	Kinetic Theory, Heat Energy	13.6−14.4
15	27	12/4	T	Phase Transitions, Energy Transport	14.5−14.8
	28	12/6	Th	Laws of Thermodynamics, Entropy, Engines	15.1−15.5,15.7−15.9

Tuesday December 18:
Cumulative common Final Exam (1:20−3:50 PM) in 100 General Lectures