

TEXT: INQUIRY INTO PHYSICS, Sixth Edition (Fifth Ed. is also okay), by Ostdiek and Bord (Thomson).

LECTURE: MW 10:30am – 12:05 pm.

LOCATION: Rm. 0134 STAT

LECTURER: NOPPI WIDJAJA

OFFICE: 243 Physics Research Building (666 W. Hancock)

TELEPHONE: 313-577-2751

E-MAIL: eb8607@wayne.edu

OFFICE HOURS: Monday and Wednesday 12:15 pm – 1:15 pm

LECTURE, READING ASSIGNMENTS and QUIZZES: Note that in addition to exams, short quizzes will be given at the approximate rate of one per week. Grades on quizzes will allow you to earn **extra credit** toward your final grade. Quizzes will be based on lecture material, reading assignments and “Learning Checks” which are presented at the ends of most sections in the text. We will discuss details of this extra credit at the first class meeting.

HOMEWORK: The listed questions and problems from each chapter are homework assignments which you should do along with the reading assignment for each lecture. They will not be collected or graded, but several questions similar to the homework (and "Learning Checks" found in each chapter) will appear on the exams.

(Note that the solutions and answers to the odd-numbered problems are found at the back of your text.)

CHAPTER	QUESTIONS	PROBLEMS
1	3, 7, 8, 11, 17, 23	1, 5, 7, 11, 15, 17, 25
2	3, 16, 20, 27, 28, 30	3, 5, 8, 10, 13, 19, 25
3	4, 8, 17, 20, 27, 29	3, 7, 11, 15, 22, 25, 33
4	7, 13, 17, 22, 25, 28	1, 6, 7, 9, 15, 19, 25
5	9, 12, 16, 17, 19, 24, 30	1, 3, 7, 10, 13, 17, 25
6	9, 15, 17, 21, 27, 32	1, 3, 7, 10, 15, 23, 24
7	7, 9, 15, 21, 25, 26, 28	2, 5, 9, 14, 17, 22
8	5, 10, 15, 20, 33, 34, 35	1, 3, 6, 9, 13
9	1, 7, 10, 12, 19, 31, 34, 38, 44, 47, 56	6, 10, 11
10	2, 6, 17, 20, 28, 30, 35	4, 5, 9, 10, 19
11	5, 6, 11, 13, 20, 23, 25	1, 3, 5, 7, 11, 13
12	2, 3, 5, 6, 8, 10	1

GRADE DETERMINATION: LECTURE ONLY

Best two of first three, regular exams:

(Each exam is worth 30 %) 60%

Final Exam 40 %

100%

Bonus Points

Quizzes 10

GRADING SCALE:

A- / A 85 – 100%

B- / B / B+ 70 – 84%

C- / C / C+ 55 – 69%

D- / D / D+ 40 – 54%

F 0 – 39%

GRADE DETERMINATION: LECTURE PLUS LAB

Best two of first three, regular exams:

(Each exam worth 22.5 %)	45%
Lab	15%
<u>Final Exam</u>	<u>40 %</u>
	100%

Bonus Points

Quizzes	10
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GRADING SCALE:

A- / A	85 – 100%
B- / B / B+	70 – 84%
C- / C / C+	55 – 69%
D- / D / D+	40 – 54%
F	0 – 39%

Note: There are no make-up exams or exams given early. This policy will be discussed in class.

Also Note: Any changes to the above grading scheme will be discussed in class and posted on Blackboard.

Class Schedule

The following class schedule is meant to serve as a general guide to the time line at which material will be covered in the course and is subject to revision. Students will be informed of any changes/updates that take place as we move through the semester.

<u>DATE</u>	<u>LECTURE TOPICS</u>	<u>READING ASSIGNMENT</u>	<u>WEEKLY LAB. EXPTS</u>
M 5/7	Introduction and Physical Quantities, Speed, Velocity, and Acceleration; Vectors; Simple Types of Motion	Prologue, 1.1-1.4	Orientation
W 5/9	Force, Mass, Newton's 1st and 2nd Laws	2.1-2.5	
M 5/14	Types of Motion, Newton's 3rd Law, Gravitation and Tides	2.6-2.9	#2 Measurements and Predictability
W 5/16	Conservation Laws and Linear Momentum, Work and Energy	3.1-3.4	
M 5/21	Conservation of Energy and Collisions, Power, Rotation and Angular Momentum; Catch-up and review	3.5-3.8	#3 Velocity and Acceleration
W 5/23	Matter, Phases and Pressure, Density	4.1-4.3	
M 5/28	No class (Holiday)		#4 Free Fall
W 5/30	First Exam (Chapters 1-3)		
F 6/1	(Scheduled as Monday) Fluid Pressure and Gravity; Archimede's, Pascal's and Bernoulli's Principles	4.4-4.7	
M 6/4	Temperature and Thermal Expansion; 1st Law of Thermo	5.1 – 5.4	#5 Newton's Laws of Motion
W 6/6	Heat Transfer and Specific Heat Capacity; Phase Transitions, Heat Engines and the 2nd Law of Thermo	5.5-5.7	

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M 6/11	Wave Types and Properties, Reflection and Doppler Effect, Wave Diffraction and Interference	6.1 – 6.3	#6 Conservation of momentum
W 6/13	Sound and its Production, Propagation and Perception of Sound	6.4 – 6.6	
M 6/18	Second Exam (Chapters 4-6)		#9 Density and Hydrometers
W 6/20	Electric Charge and Force, Coulomb's Law, Electric Current and Circuits	7.1-7.3	
M 6/25	Ohm's Law, Electric Power, AC and DC	7.4-7.6	#12 Circuits
W 6/27	Magnetism and Electricity Interactions, Electromagnetism	8.1-8.4	
M 7/2	Electromagnetic Waves, Black Body Radiation, EM Waves and our Atmosphere	8.5-8.7	#13 Periodic motion
W 7/4	No Class (Holiday)		
F 7/6	(Scheduled as Wednesday) Optics, Light Waves, Reflection and Mirrors, Refraction, (Lenses and Images)	9.1-9.4	
M 7/9	(Human Eye), Dispersion and Color, Rainbows and Blue Sky	9.5 - 9.7	#15 Wave-like Nature of Light
W 7/11	Quantum Hypothesis, Photoelectric Effect and Photons, Atomic Spectra, Bohr Model of Atom	10.1-10.4	
M 7/16	Third Exam (Chapters 7-9)		#16 Spectroscopy
W 7/18	Quantum Mechanics, Atomic Structure, X-Ray Spectra, Lasers	10.5-10.8	
M 7/23	The Nucleus, Radioactivity: Alpha, Beta and Gamma Decay, Half-Life	11.1-11.4	evaluation and make up
W 7/25	Nuclear Reactions and Binding Energy, Nuclear Fission and Fusion Einstein's Special Theory of Relativity	11.5-11.7 12.1	
M 7/30	Final Exam (Chapters 1-12.1)		

LABORATORY (optional): Location: Rm 142 Physics Res. Bldg. (666 W. Hancock)

Students taking the optional laboratory (which satisfies Liberal Arts Natural Science Laboratory Requirements) will receive 4 credits rather than 3 credits (without lab) for this course. This lab is designed for non-science majors and will give you a better overall hands-on feeling for this course. Your lab grade will be based on your participation in lab and the 10 reports. The lab grade will count for 15 % of your final grade for the course. If you anticipate that you may miss a lab, try to attend one of the other lab meetings during the same week. Work with your lab instructor under such circumstances, to see if the issue can be resolved. **The PHY1020 Laboratory Manual will be available on Blackboard for students to download. It will be essential that you print out a copy of the Manual and bring it to each lab meeting. Note the first lab meets in the week May 14.**

Note: Students will be informed of any changes to the above laboratory grading scheme.

Attention Students with Disabilities:

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.

SDS News:

Effective Fall semester 2010 Student Disability Services will be implementing a revised alternative testing form when a student schedules classroom exams/quizzes administration at SDS. As before the student and instructor each have a portion to complete. Exams are to be mailed to a new password protected email address: sdsexams2010@wayne.edu.