Physics 107

Syllabus I

Reading assignments specify the material that will be covered in class that day; problem assignments are based on that material and are due at the beginning of the next class. You may work with others on the assigned problems but no more than three people should work together. Feel free to discuss the problems with your professor, lab manager, lab assistants or PALS leaders. If you work with others, be sure you each write up your final copy separately.

Only underlined problems are to be turned in. Each is **due at the <u>beginning</u> of the next class.** For example, the problem underlined on the Monday Sept 8th assignment (problem 10) is to be handed in as you walk into class on Wednesday Sept 10th.

No late homework will be accepted without a dean's excuse. Be sure to show how you arrived at your answer; no credit will be given if only an answer is shown. Solutions to all the assigned problems will be posted on Lyceum. Note that there are two sections at the end of each chapter: one is **Questions** and the other is **Problems**. The assignments below are from the Problems section, NOT from the Questions section.

Wed Sept 3	Introduction; What is Physics? Standards of Measurement, Units, and
	Units Conversion.
	Read: Chap One, Sections 1, 2, 3, 4, 5, and 6.
	Do Problems: 26, 31 (the speed of light = 3.0×10^8 m/s); <u>do "Homework</u>
	Set I – Unit Conversions" on Lyceum and hand it in on Friday.
Fri Sept 5	Significant Figures; Kinematics in One Dimension.
	Read: Chapter One, Section 8
	Read: Chapter Three, Sections 1, 2, 3, 4, 5, 6.
	Read: Measurement Uncertainty and Significant Figures (on Lyceum).
	Do Problems: Chapter Three, problems 1, 4, 7, 9, 10.
	Do "Homework Set II – Sig Figs" (on Lyceum) and
	hand it in on Monday.
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Mon Sept 8	Graphical Interpretation of Velocity and Acceleration

Aon Sept 8 Graphical Interpretation of Velocity and Acceleration
 Read: Lab 1 and Lab 1 Homework
 Do Problems: Chapter Three, problems 21, <u>23</u>, 37
 Lab begins this week. Bring your completed pre-lab for Lab 1 to your lab section.

Physics Talk: The Physics of Baseball: "You Can Observe A lot by Watching" Tuesday September 9th, 4:10 pm, Carnegie 204 Refreshments served at 3:45 pm.

Wed Sept 10 One Dimensional Motion with Constant Acceleration. Read: Chap Three, Sections 7 and 8. Do Problems: <u>11</u>, 14, 17, 26, 28, 29.

- Fri Sept 12 *Kinematics in the Lab* Read: Pre-Lab 2 and Lab 2 Do: the Pre-Lab, hand in at the beginning of your lab period
- Mon Sep 15 *Vectors: Geometric and Algebraic Representations.* Read: Chap Two, Sections 1, 2, 3, 4, 6, 8, 10, 11. Do Problems: Chap 2, problems <u>2</u>, 6, 15.
- Wed Sept 17 *Kinematics in Two Dimensions; Projectile Motion.*Read: Chapter Four, Sections 1 and 2.
 Do Problems: Chapter 3: 41, 61 and 65; Chapter Four: 1, <u>6</u>, 8 and 9.
- Fri Sept 19 More Projectile Motion in Two Dimensions.
 Read: Chapter Four, Section 3.
 Do Problems: 12, 15, 17, <u>18</u>, 19, 32.
- Mon Sept 22 Uniform Circular Motion, Angular Speed and Centripetal Acceleration.
 Read: Chapter Four, Section 5
 Do Problems: 49, <u>51</u>, 56, 57 and 61.
 Lab 3/4 begins.
- Wed Sept 24 Non-uniform Circular Motion with Constant Angular Acceleration. Read: Chapter Four, Section 12 (ignore the vector aspects of ω and α). Do Problems: 69, 73; 74; <u>80</u> (in each problem ignore the vector and orientation questions about ω and α).
- Fri Sept 26 First Exam