

Physics 100—Physics for Poets (Spring 2007)

Class Time: M W F 1:30-2:20PM Classroom: PSB 217

Instructor: S.L. Olsen Office: WAT 233 Office hrs: Wed. 11:00-12:00

Backup: M.D. Jones Office: WAT 228 Office hrs: TBA

Home Page: <http://www.phys.hawaii.edu/~solsen/physics100.html>

(You can find HW assignments, old exams, and other useful information here.)

Text: *Lecture notes* S.L.Olsen. (Available at the Campus Center Copy Store.)

Homework: Homework will be distributed each Wednesday and due the following Wednesday.

A passing grade on at least 70% of the HW assignments is a class requirement.

Tests: There will be two “mid-term” exams (in-class, on dates indicated below) and a **final exam on 5/11/07 (Friday), 2:15PM**. Everyone must take the final at the scheduled time. (Airplane reservations are not acceptable excuses for missing exams.)

Grade: Your course grade will be derived from: HW (1/3rd); mid-terms (1/3rd); final (1/3rd).

Tentative Schedule (1/8/07)			
1/8	Introduction (Notes: 1.1-1.2)	1/10	Powers of 10 (1.3-1.4)
1/12		1/12	Speed, velocity and acceleration (2.1-2.2)
1/15	HOLIDAY (M. L. King Jr. Day)	1/17	Projectiles and inertial reference frames (2.3-2.4)
1/19		1/19	Newton’s three laws of motion (3)
1/22	Momentum (4)	1/24	Work, energy and power (5)
1/26		1/26	Angular momentum (6.1-6.3)
1/29	Conservation of angular momentum (6.4-6.5)	1/31	Conservation laws and symmetries (7)
2/2		2/2	Vibrations and waves (8.1-8.3)
2/5	Sound and the Doppler effect (8.4-8.5)	2/7	Temperature and heat (9.1)
2/9		2/9	The laws of thermo- dynamics (9.2-9.3)
2/12	Universal gravitation (10)	2/14	Electrical Force (11)
2/16		2/16	Action at a distance (12)
2/19	HOLIDAY President’s Day	2/21	Electrical currents (13)
2/23		2/23	EXAM Chapts 1-13
2/26	Magnetism (14)	2/28	Electromagnetism (15)
3/2		3/2	“...and then there was light” (16)
3/5	Reflection and refraction (17.1-17.4)	3/7	Wave properties of light: diffraction (17.5)
3/9		3/9	Color; Doppler revisited (17.6-17.7)
3/12	The principle of relativity (18.1-18.3)	3/14	Time as the fourth dimension (18.4)
3/16		3/16	Twin paradox? etc. (18.5-18.6)
3/19	$E = mc^2$ (19)	3/21	EXAM Chapts 13 - 19
3/23		3/23	Black-body radiation hypothesis (20.3-20.5)
3/26	SPRING BREAK		
4/2	Planck’s quantum hypothesis (20.3-20.5)	4/4	Photons (21)
4/6		4/6	HOLIDAY Good Friday
4/9	Particles? Wave?? both??? (22)	4/11	The Bohr atom (23)
4/13		4/13	Atomic physics (24)
4/16	Nuclear physics (25.1-25.4)	4/18	Fusion and fission (25.5-25.7)
4/20		4/20	The elementary particle zoo (26)
4/23	Quarks (27)	4/25	The solar system, galaxy & dark matter (28)
4/27		4/27	Einstein’s happiest thought (30)
4/30	Cosmology (31)	5/2	The Big Bang and the first 3 minutes (32)
5/4		5/4	STUDY PERIOD