DEPARTMENT OF PHYSICS
PHYSICS 2B(a)

Winter Quarter, 2006 January 9, 2006

INSTRUCTOR: Ivan K. Schuller
EMAIL ischuller@ucsd.edu
OFFICE: 3230 Mayer Hall, Ext. 42540
OFFICE HOURS Tu 11 a.m.-12 p.m.; Th 5 p.m.-6 p.m.
COURSE COORDINATOR: Patti Hey, 118 Urey Hall Addition, Ext. 21468
TEACHING ASSISTANT: Jui Yu Chiu <jchiu@physics.ucsd.edu>

COURSE SCHEDULE:

	DAY	TIME	PLACE
LECTURES	**MW**	9:00a - 9:50a	WLH 2005
	TU	8:00a - 8:50a	CENTR 119
QUIZZES	**F**	9:00-9:50 a.m.	WLH 2005
DISCUSSION	**W**	5:00p - 5:50p	CENTR 119
PROBLEM SESSION	**TH**	8:00p-9:50p	PCYNH 122

COURSE TEXT:
Richard Wolfson, Jay M. Pasachoff, Physics For Scientists and Engineers, Third Edition, Addison Wesley.

COURSE FORMAT:
This is the second quarter of a four-quarter introductory physics sequence. The course is aimed at students majoring in science and engineering (e.g., computer science, mathematics, biology, chemistry, pre-med).
Prerequisites: Physics 2A, Math 20B, and concurrent enrollment in Mathematics 20C. There will be no exceptions.
Discussion Section: Supervised by the TA. This is a 50-minute weekly session led by the TA to work on many problems. These will be informal periods focusing on understanding of theory and methodology and problem solving. You are advised to attend them and to make them successful by active participation. Discussion section is scheduled to facilitate the review of the topic and the preparation for the quiz on Friday.
Problem Session: Your problem session TA will be happy to answer any questions concerning the lecture material or the problems at the end of the chapters.

HOMEWORK ASSIGNMENTS:

There will be no official homework assignments to be handed in, but you are expected to study the examples in the text and work out the assigned problems at the end of each chapter. Your grade in the course will be determined by how well you can answer questions and do problems such as these. Note that the quiz and exam problems will not be exactly equal to the ones in the homework.

QUIZZES: Weekly closed-book quizzes will be given on Friday in accordance with attached course outline. Quizzes will be multiple choice.

1. Before or at the first quiz you will be assigned a code number. This number will be your code number for the session and will be used on each quiz thereafter in place of your name.
2. You will have to provide your own scantron card, scantron form No. X101864-PAR. These are sold at the library for about $0.15 each. You will need a No.2 pencil to fill in the scantron card.

No scantron card or no pencil, no credit for the quiz. You should write your code number, course number, session number and quarter, on the space provided. Detailed instructions will be given by the TA at the first quiz.

3. You may bring a calculator to the quiz (but not a laptop computer). You may bring a cheat-card: must be a 5x7 handwritten card.
4. Recorded grades will be posted by code number on the course web site.
5. Any appeal to the grading of quizzes should be made in writing to the teaching assistant, within one week of the posting of the grades for that quiz. You must provide a written explanation as to why you are appealing the grade (be specific). No complaints will be accepted at later dates.
6. Your overall quiz grades will be computed from the best 6 of the 8 quizzes and will count 70% towards the final grade. Two of the quizzes can therefore be used for absences without penalty. Therefore **there will be no make-up quizzes.**
7. There will be no makeup quiz, for medical or other reasons. If you anticipate missing more than 2 quizzes for serious reasons, see the instructor beforehand.

FINAL EXAM AND COURSE GRADE SCHEDULE:

	DAY	TIME	PLACE
FINAL EXAM	**Wednesday, March 22**	8:00 am-11:00 am	TBA

Course Grade **Quizzes – 70% (best 6 of 8) (100 points/quiz)** **Final Exam – 30% (300 points)**

WHOM TO SEE:
Sharmila Poddar, 116 Urey Hall Addition, Physics Dept. Student Affairs Office, if you have any trouble using StudentLink/WebReg to add/change/drop, drop from wait-lists, have any questions about adding or dropping the course or to get appropriate authorization for such actions.
The *Teaching Assistant* if you have questions relating to problem solving methods or grades received on quizzes.
The *Instructor*, if you have basic questions about the subject matter, or if you have administrative problems, which you cannot solve with the TA.

ADD/DROP:
Use StudentLink/WebReg to add/change/drop, drop from waitlists.
No add/drop cards will be signed by the instructor or TA.

DEADLINES:
Last day to add ..... Friday, January 20, 2006
Drop without "W" on transcript ..... Friday, February 3,2006
Drop without penalty of "F" (and with "W" appearing on transcript) ..... Friday, March 10, 2006

No drops allowed after March 10, 2006

ACADEMIC DISHONESTY:

Please read "Responsibility for Disposition of Cases of Academic Dishonesty" in the UCSD General Catalog. The rules on academic dishonesty will be strictly enforced.

REMEMBER

This is considered by students to be a difficult course.

- Calculus will be used extensively
- Study after every class, starting with the first class
- Do all homework on time and attend discussion sections
- Do not expect quiz and test problems which are identical to the homework ones. You must understand concepts, not just physics numbers.
- No excuses whatsoever will be accepted for skipping quizzes or tests
- Participate actively in the class, ask questions, etc.
- Film and Video Reserves (Geisel Library, 1st floor, west side) carries a series of taped lectures by Prof. Goodstein from CalTech.

  Title: Gravity, Electricity & Magnetism
  (The Mechanical Universe and Beyond)
  Call #: FVLV1642-26, volume 6

  Viewing this tape may help you out greatly and is strongly recommended.

TENTATIVE COURSE OUTLINE

PHYSICS 2B
I. Schuller
2006

January 9, 2006
Winter Quarter

LECTURE	TOPIC OF LECTURE	QUIZ TOPIC (Date)	ASSIGNED PROBLEMS
1	Electric Charge Coulomb's Law		Ch. 23 – 11,19,22,24
2	Electric Field	Ch 23 (January 20)	Ch. 23 – 30,39,46,48,50,68,78
3-6	Gauss' Law, Ch 24	Ch. 24 (January 27)	Ch 24 – 9,10,26,31,36,41,54,63
7-9	Electric Potential, Ch 25	Ch 25 (February 3)	Ch 25 – 8,28,35,39,50
10-12	Capacitors, Ch 26 Current,Ch 27	Ch 26, 27 (February 10)	Ch 26 – 15,36,37,47,54 Ch 27 – 10,36,39,50,71
13-15	Circuits, Ch 28	Ch 28 (February 17)	Ch 28 – 22,26,29,31,43,55
16-18	Magnetic Field, Ch 29 Sources of Magnetic Field (I), Ch 30	Ch 29 (February 24)	Ch 29 – 13,22,27,36,38,53 Ch 30 – 10,15,17,24
19-21	Sources of Magnetic Field (II), Ch 30 Induction (I), Ch 31	Ch. 30 (March 3)	Ch 30 – 36,40,45,57 Ch 31 – 14,17,21,25,27
22-24	Induction (II), Ch 31 Inductors, Ch 32	Ch 30, 31 (March 10)	Ch 31 – 29,32,34,35 Ch 32 – 22,36,55,66
25-27	Alternating Currents, Ch 33		
28-30	Maxwell's Equations, Ch 34 Electromagnetic Waves	No Quiz	

FINAL EXAM (see pg.2)