

# Physics 20400 DD-DD4

## Spring 2011

<b>Instructor:</b>	Prof. Hernan A. Makse, Steinman Hall ST1M-12, hmakse@lev.ccny.cuny.edu 212-650-6847
<b>Web-site:</b>	<a href="http://lev.ccny.cuny.edu/~hmakse/TEACHING/teaching.html">http://lev.ccny.cuny.edu/~hmakse/TEACHING/teaching.html</a>
<b>Class schedule:</b>	Lectures: M W 12:30-1:45 PM in MR3 Recitation: F 12:30-1:20 PM in MR 3
<b>Office hours:</b>	M W 2-3 PM in Levich Institute, Steinman Hall ST1M-12
<b>Textbook:</b>	<i>Physics, 8<sup>th</sup> Edition</i> by Cutnell and Johnson. Vol 1 and 2
<b>TA office hours:</b>	TBA
<b>Drop-in tutoring:</b>	Marshack MR308. Schedule posted in course web-site.

<u>Date:</u>	<u>Reading assignment</u>	<u>Homework (solutions in web-site)</u> (parenthesis for 7 <sup>th</sup> edition)
Jan. 28(F)	CH 16 Waves and sound	CH 16: 14,26,29,28 (14,24,26,27)
Jan 31(M)	CH 16 Waves	
Feb 2(W)	CH 17 Superposition	CH 17:8,7,29,33,41 (6,7,23,29,35)
7(M)	CH 18 Electric force	CH 18:21,72,35,37,71,25 (17,18,29,31,63,67)
9(W)	CH 18	
<b>11(F)</b>	<b>College close. Lincoln's Birthday</b>	
14(M)	CH 19 Electric potential	CH 19:19,21,27,39 (16,18,23,32)
16(W)	CH 19 Electric potential	
<b>21 (M)</b>	<b>College Close</b>	
<b>23(W)</b>	<b>1<sup>st</sup> Exam CH: 16-19 Monday schedule</b>	
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25(F)	CH 20 Electric circuits	CH 20:6,43,55,64,66,65,71 (7,43,53,58,60,61,65)
28(M)	CH 21 Magnetic force	CH 21:1,7,15,23,78,39,47 (5,6,11,21,30,34,41)
March 2(W)	CH 21 Magnetic field	
7(M)	CH 22	CH 22: 5,16,72,77,36,35,25

	9(W)	Electromagnetic induction CH 23 AC currents	(5,16,18,23,30,31,69) CH 23: 2, 14, 21 (4,12,19)
	14(M)	CH 24 Electromagnetic waves	CH 24: 7,15 (8,15)
	16(W)	CH 25 Mirrors	CH 25: 38,5,23,37,40,38 (4,5,16,17,18,22)
	21(M)	CH 25. Mirrors	
	23(W)	<b>2<sup>nd</sup> Exam CH: 20-25</b>	
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	28(M)	CH 26 Refraction	CH 26: 12,20,107,33 (11,18,27,28)
	30(W)	CH 26 Refraction	
April	4(M)	CH 27 Interference	CH 27: 55,9,25,27,32 (2,7,19,22,27)
	6(W)	CH 27 Interference	
	11(M)	CH 28 Special Relativity	CH 28: 2,43,15,14,27,29,40 (2,9,12,14,24,27)
	13(W)	CH 28 Special Relativity	
	18(M) – 26(TU)	<b>SPRING BREAK</b>	
	27(W)	<b>3<sup>rd</sup> Exam CH 26-28</b>	
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May	2(M)	CH 29 Particles and waves	CH 29: 47,11,48,49,40 (7,8,24,28)
	4(W)	CH 29 Particle and waves	
May	9(M)	CH 30 Atoms	CH 30: 10,13,15,18,23,27,29 (10,12,14,16,21,23,26)
	11(W)	CH 30 Atoms	
	13(F)	CH 31 Nuclear Physics	CH 31: 2,14,19 (2,14,18)
	16(M)	CH 31 Nuclear Physics	
	18(W)	<b>Final review. Last day</b>	
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	20-27	<b>Final Exam includes all the material covered in the lectures.</b>	
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**Course description:** For majors in the life sciences (biology, medicine, dentistry, psychology, physical therapy) and for liberal arts students. Fundamental ideas and laws of physics including: waves and sound, electricity and magnetism, optics, relativity, quantum mechanics and nuclear physics. Emphasis is on the basic principles and general laws. Use of math is restricted to algebra, geometry and trigonometry.

**Reading assignment:** This is the text material that will be covered in class each day. You should read the indicated material in the textbook before coming to class.

**Homework:** The homework is optional and it will not be collected in class. However, it is strongly recommended to do all the homework material.

**Lab:** All lab experiments must be done to pass the course. Labs take place in MR 407 N. They start the week of Feb. 7, 2011.

**Exams:** There will be three midterm exams and one final exam (140 min). The final exam will include all the material covered in the semester.

**No make-ups will be given for the midterm exams under any circumstances.**

Two of the lowest grades of the midterms will be dropped and only the best midterm grade will be considered towards the final grade. Make ups will be given for the final examination only in case of fully documented illness. You will need to bring a document with a telephone number in order to verify the veracity of the information presented in the document. You are allow to bring a sheet of paper with equations to the exams (midterms and final).

**Grades:** Student performance will be based on the following components:

Best Midterm	40%
Final exam	60%

**Extra help:** Students can obtain extra help in this course by meeting with me either during my office hours or at other mutually agreeable times. A tutoring lab will be available in MR308. Please see schedule in the course web-site. Homework problems can be also discussed with the Teaching Assistant during his/her office hours.

