

2015

Physics 143 Modern Physics Fall 2015

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PARKLAND: Physics 143 (6:30pm) - FA2015

Instructor: Jeremy Jang jjang@parkland.edu

Office Hours: M-124: 5:30pm - 6:30pm, Wednesdays

Phone: (847) 708-0897 (emergency only)

Course Website: <http://cobra.parkland.edu>

Text: *Fundamentals of Physics*, Extended, 10th ed. by Halliday & Resnick

Note: a calculator capable of performing trig and stat functions will also be required

Course Aims: Introduce several core concepts of modern physics.

Provide a methodology which applies these concepts towards solving problems.

Grading:

Quizzes	110	pts (10 pts each)
Labs:	240	pts (20 pts each)
Exams:	390	pts (130 pts each)
Final Exam:	260	pts (worth 2x a regular exam)
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TOTAL:	1000	pts

Grade	need at least:
"A"	895 pts
"B"	795 pts
"C"	695 pts
"D"	595 pts

Homework: Homework problem sets will be posted on the course website. There is one set per lecture topic. Although it doesn't count for your grade, it will be useful to do...

Quizzes: There will be an in-class quiz covering each homework assignment. In general, the quiz will be given sometime during the week after the homework was assigned. No makeups (unless you have a legitimate excuse; in that case, contact me).

Labs: A lab handout with instructions will be provided at the start of each lab. In addition to answering all questions and collecting the appropriate data, you will need to submit an informal lab writeup before the end of the lab period. Also, it is important to note that since labs are done in groups, you will not be able to do any makeups for missed labs (unless you have a legitimate excuse; in that case, contact me).

Exams: Closed book, closed notes. Calculators allowed. An equation sheet will be provided. Time limit: 2 hr 45 min. Format: 13 questions based loosely on the homework problems and lecture concepts. You must show work or explain your answers to receive any credit! No makeup exams will be given, so make sure you are ready to take the exams on the days listed below (unless you have a legitimate excuse; in that case, contact me ASAP!).

Final Exam: The same format as a regular exam, except cumulative and worth 2x the points.

Calendar: A calendar with topics, textbook chapters, labs, and exams is provided below.
 (Note: this assumes no unforeseen events like inclement weather, etc).

Week	Monday	Wednesday
Aug 24	Lec01: Intro/Oscillations >> Ch 15	Lab01: Simple Harmonic Motion -
Aug 31	Lab02: Jupiter's Moons -	Lec02: Waves >> Ch 16, 17
Sep 07		Lab03: Standing Waves -
Sep 14	Lab04: Resonance in Air Columns -	Lec03: Electromagnetic Waves >> Ch 33
Sep 21	Lab05: Resonance of Light Waves -	Lec04: Images >> Ch 34
Sep 28	Review -	<i>Exam!!!</i> -
Oct 05	Lab06: Basic Optics -	Lab07: Refracting Telescope -
Oct 12	Lab08: Virtual Objects -	Lec05: Interference >> Ch 35
Oct 19	Lab09: Interference in Sound Waves -	Lec06: Diffraction >> Ch 36
Oct 26	Lab10: Diffraction -	Lec07: Relativity >> Ch 37
Nov 02	Review -	<i>Exam!!!</i> -
Nov 09	Lec08: Photons and Matter Waves >> Ch 38	Lec09: Modeling the Atom >> Ch 39, 40
Nov 16	Lab11: Spectra -	Lec10: Nuclear Physics >> Ch 42, 43
Nov 23	Lab12: Radioactivity -	
Nov 30	Review -	<i>Exam!!!</i> -
Dec 07	Lec11: Semiconductors/Elementary Particles >> Ch 41, 44	Review -
Dec 14	<i>Final Exam!!!</i> Mon, Dec 14 @6:30pm	

Makeups: Although there are (generally) no makeups, I will replace your lowest exam score with your Final exam score if (and only if!) it helps your grade. This will be done automatically, and does not require any action on your part.

Attendance: Although attendance itself is not part of your final grade, late penalties and missed assignments will have an effect. It is your responsibility to keep up, and keep track of your grade (on the course website).

Disabilities: If you believe you have a disability for which you may need an academic accommodation (e.g. an alternate testing environment, use of assistive technology or other classroom assistance), please contact:
Cathy Robinson, Room X148, 217-353-2082, crobinson@parkland.edu