Physics 135-3 Syllabus, Spring 2018

Prerequisites: Physics 135-1 & 135-2 or equivalent

Time & Space: Lecture = MWF 1 pm
Room = Tech L221

Lecturer: David E. Taylor
Dearborn 11 (office)
491-2053, d-taylor2@northwestern.edu
Office Hours: Wed 2:00 – 3:30 pm and by appointment. (It is very easy to make an appointment. Just send me an email.)

TA: Andrea Isgro (AndreaIsgro2015@u.northwestern.edu)

Textbook: *Fundamentals of Physics*, by Halliday, Resnick, & Walker
Extended 10th Edition, ISBN 978-1-118-23072-5
The 9th edition may also be used, but the problems may have different numbers.

Webpage: http://courses.physics.northwestern.edu/Phyx135-3/
I do not use Canvas. All the information for this class is on the above web page.

Date / Day		Notes	Lecture Topic	Reading
Apr 3	Tue		Description Of A Wave	Chp 16.1
Apr 4	Wed		Waves On A String	Chp 16.2 – 16.5
Apr 5	Thu	No Quiz		
Apr 6	Fri		Sound Waves	Chp 16.7 – 17.4
Apr 9	Mon		Musical Sounds	Chp 17.5 – 17.6
Apr 11	Wed		The Doppler Effect	Chp 17.7 – 17.8
Apr 12	Thu	Quiz 1, 4/3 – 4/9		
Apr 13	Fri		E & M Waves, Light	Chp 33.1 – 33.3
Apr 16	Mon		Wave Aspects Of Light	Chp 33.4 – 33.7
Apr 18	Wed		Geometric Optics	Chp 34.1 – 34.4
Apr 19	Thu	Quiz 2, 4/11 – 4/16		
Apr 20	Fri		Optical Instruments	Chp 34.5
Apr 23	Mon		Two-Source Interference	Chp 35.1 – 35.3
Apr 25	Wed		Thin Films, Interferometers	Chp 35.4 – 35.5
Apr 26	Thu	Midterm 1, 4/3 – 4/23		
Apr 27	Fri		Diffraction	Chp 36.1 – 36.7
Apr 30	Mon		Special Relativity I	Chp 37.1 – 37.2
May 2	Wed		Special Relativity II	Chp 37.3
May 3	Thu	Quiz 3, 4/25 – 4/30		
May 4	Fri		Special Relativity III	Chp 37.4 – 37.5
May 7	Mon		Special Relativity IV	Chp 37.6
May 9	Wed		Photons	Chp 38.1 – 38.3
May 10	Thu	Quiz 4, 5/2 – 5/7		
May 11	Fri	Drop deadline	Probability Waves	Chp 38.4 – 38.9

May 14	Mon		Quantum Mechanics	Chp 39.1 – 39.4
May 16	Wed		Line Spectra	Chp 39.5
May 17	Thu	Midterm 2, 4/25 – 5/14		
May 18	Fri		Real Hydrogen Atoms	Chp 40.1 – 40.3
May 21	Mon		Quantum Numbers	Chp 40.4
May 23	Wed		The Periodic Table	Chp 40.5 – 40.7
May 24	Thu	Quiz 5, 5/16 – 5/21		
May 25	Fri		Introduction to the Nucleus	Chp 42.1 – 42.2
May 28	Mon	Memorial Day		
May 30	Wed		Radioactivity	Chp 42.3 – 42.8
May 31	Thu	Quiz 6, 5/23 – 5/30		
June 1	Fri		Nuclear Fission	Chp 43.1 – 43.3
June 4	Mon		Nuclear Fusion	Chp 43.4 – 43.6
June 5, Tue to June 8, Fri			WCAS Reading Period	

June 15, Fri Final Exam, 9 – 11 am

All exams will take place only at the dates/times indicated. Only students with permission from the Dean of Undergraduate Studies can be given an alternate final. As a rule, if a student needs an alternate exam, I will give an oral exam.

Your Grade Will Be Based On:

Weekly Quizzes = 16% (best 5 out of 6)
Pop-Up Quizzes = 8% (best 5 out of 6)
Midterms = 18% each
Final Exam = 40%

The averages on my exams (no promises) tend to cluster between 65% and 75%. In my judgement, if you can absorb $^3/_4$ of the material flying past you this quarter, that's not too bad. It will probably (no promises) result in at least a B grade.

Please note that that all students registered for Phyx 135-3 must also register for Physics Lab, 136-3. This is a separate course with a separate grade and I am not affiliated with it. All questions about the physics labs should be addressed to Dr. Arthur Schmidt (aschmidt@northwestern.edu).

The weekly quizzes are scheduled every Thursday as shown above, except for midterm days. The pop-up quizzes will be given during the lecture, on random dates. However, I will send out an email on the night before the pop-up quizzes so that you will know when they are.