Sahyun **Physics 344 Modern Physics Tentative Schec Spring 2025** Updated 1/17/2025

Texts: Krane, Modern Physics, 4th ed., OpenStax University Physics Vol. 3

Week	Class		Date	Topic/Lab	Book Sections	Assigned Reading Pages	Assignment	Laboratory (8:00 am - 10:50 am)
1	1	Mon	27-Jan	Course Introduction; MATLAB, Python, LabArchives and LaTeX				No lab 1/27!
	2	Wed	29-Jan	1. Classical Physics I	1.1 - 1.4	1 - 20		
		Fri	31-Jan					
2	3	Mon	3-Feb	2. Relativity I	2.1 - 2.5	25 - 45	H01: Q1.7 P1.1, 1.6, 1.13	**Lab 1: Speed of Light**
	4	Wed	5-Feb	2. Relativity II	2.6 - 2.9	46 - 65	H02: Q2.1 P2.3, 2.7, 2.17	
		Fri	7-Feb					
3	5	Mon	10-Feb	3. EM Waves	3.1 - 3.4	72 - 92	H03: Q2.6 P2.25, 2.43	**Lab 2: Relativity**
	6	Wed	12-Feb	3. Compton effect	3.4 - 3.6	93 - 99	H04: Q3.2 P3.3, 3.9, 3.17	
		Fri	14-Feb					
4	7	Mon	17-Feb	MATLAB/Python Project 1: Blackbody curve				**Lab 3: Photoelectric Effect**
	8	Wed	19-Feb	4. Wave Properties	4.1 - 4.3	106 - 117	H05: Q3.15 P3.25, 3.31	
		Fri	21-Feb					
5	9	Mon	24-Feb	4. Heisenburg	4.4 - 4.7	118 - 133	H06: Q4.3 P4.3, 4.8, 4.13	**Lab 4: Blackbody**
	10	Wed	26-Feb	5. Schrodinger Equation	5.1 - 5.3	140 - 149	H07: Q4.13 P4.20, 4.29	
		Fri	28-Feb					
6	11	Mon	3-Mar	**Exam 1 (1-4)**				Exam 1 review time
	12	Wed	5-Mar	5. Schrodinger Applications	5.4 - 5.6	150 - 173	H08: Q5.5 P5.5, 5.9, 5.15	
		Fri	7-Mar					
7	13	Mon	10-Mar	6. Atoms	6.1 - 6.4	178 - 190	H09: Q5.12 P5.21, 5.27	**Lab 5: Compton Scattering**
	14	Wed	12-Mar	6. Frank-Hertz	6.5 - 6.8	191 - 203	H10: Q6.3 P6.1, 6.5, 6.15	
		Fri	14-Mar					
8	15	Mon	17-Mar	7. H Atom	7.1 - 7.4	208 - 219	H11: Q6.15 P6.23,6.31	**Lab 6: e/m and SEM**
	16	Wed	19-Mar	7. H Atom II	7.5 - 7.9	220 - 232	H12: Q7.9 P7.3, 7.7, 7.15	
		Fri	21-Mar					
9				Spring Break (3/22 - 3/30)				
10	17	Mon	31-Mar	8. Pauli Exclusion	8.1 - 8.4	238 - 247	H13: Q7.16 P7.25, 7.27	**Lab 7: Atomic Spectra**
	18	Wed	2-Apr	8. Elements	8.4 - 8.7	248 - 265	H14: Q8.3 P8.1, 8.7, 8.9	
		Fri	4-Apr					
11	19	Mon	7-Apr	MATLAB/Python Project 2: Atom Shell Models				**Lab 8: Franck Hertz**
	20	Wed	9-Apr	12. Nuclar Structure	12.1 - 12.5	390 - 402	H15: Q8.13 P8.13, 8.15	
		Fri	11-Apr					
12	21	Mon	14-Apr	**Exam 2 (chapter 4-8)**				Exam 2 review time
	22	Wed	16-Apr	12 Radioactive Decay	12.6 - 12.10	403 - 421	H16: Q12.1 P12.3, 12.5, 12.15	
		Fri	18-Apr					
13	23	Mon	21-Apr	13 Nuclear Reactions	13.1 - 13.4	428 - 442	H17: Q12.21 P12.30, 12.35	**Lab 9: Zeeman**
	24	Wed	23-Apr	13 Fusion	13.5 - 13.7	443 - 459	H18: Q13.9 P13.3,13.11,13.19	
		Fri	25-Apr					
14	25	Mon	28-Apr	14 Elementary Particles	14.1 - 14.4	464 - 480	H19: Q13.20 P13.22, 13.31	**Lab 10: EFNMR/NMR**
	26	Wed	30-Apr	14 Standard Model	14.5 - 14.8	481 - 499	H20: Q14.1 P14.1, 14.7, 14.19	
		Fri	2-May	**Lab Assessment Activity**				
15	27	Mon	5-May	15 Cosmology	15.1 - 15.5	504 - 522	H21: Q14.21 P14.23, 14.27	**Lab 11: Radioactivity**
	28	Wed	7-May	15 General Relativity	15.6 - 15.10	423 - 541	H22: Q15.4 P15.1, 15.3, 15.5	
		Fri	9-May				MATLAB/Python Project 3: General Relativity (due)	
16	29	Wed	14-May	**Final 10:00 am - 12:00 noon**				