

Sahyun Physics 344 Modern Physics Tentative Sched Spring 2019 Updated 1/1/2019

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

Week	Class	Date	Topic/Lab	Book Sections	Assigned Reading Pages	Assignment
1						
1	Wed	23-Jan	Course Introduction; MatLAB, LabArchives and LaTeX			
	Fri	25-Jan	Lab 1: Speed of Light			
2	2 Mon	28-Jan	1. Classical Physics I	1.1 1.4	1-20	
3	Wed	30-Jan	2. Relativity I	2.1 - 2.5	25-44	Q1.7 P1.1, 1.6, 1.13
	Fri	1-Feb	Lab 2: Relativity			
3	4 Mon	4-Feb	2. Relativity II	2.6-2.9	44-63	Q2.1 P2.3, 2.7, 2.17
5	Wed	6-Feb	3. EM Waves	3.1 - 3.4	69-87	Q2.6 P2.25, 2.43
	Fri	8-Feb	Lab 3: Photoelectric Effect			
4	6 Mon	11-Feb	3. Compton effect	3.4 - 3.6	87-97	Q3.2 P3.3, 3.9, 3.17
7	Wed	13-Feb	MATLAB Project 1: Blackbody curve			
	Fri	15-Feb	Lab 4: Blackbody			
5	8 Mon	18-Feb	4. Wave Properties	4.1-4.3	101-113	Q3.15 P3.25, 3.31
9	Wed	20-Feb	4. Heisenburg	4.4-4.7	113-128	Q4.3 P4.3, 4.8, 4.13
	Fri	22-Feb	Lab 5: Compton Scattering			
6	10 Mon	25-Feb	5. Schrodinger Equation	5.1-5.3	133-143	Q4.13 P4.20, 4.29
11	Wed	27-Feb	Exam 1 (1-4)			
	Fri	1-Mar	Lab 5: SEM			
7	12 Mon	4-Mar	5. Schrodinger Applications	5.4-5.6	144-165	Q5.5 P5.5, 5.9, 5.15
13	Wed	6-Mar	6. Atoms	6.1-6.4	169-183	Q5.12 P5.21, 5.27
	Fri	8-Mar	Lab 6: Atomic Spectra			
8	14 Mon	11-Mar	6. Frank-Hertz	6.5-6.8	183-193	Q6.3 P6.1, 6.5, 6.15
15	Wed	13-Mar	7. H Atom	7.1-7.4	197-210	Q6.15 P6.23,6.31
	Fri	15-Mar	Lab 7: Frank Hertz			
9	16 Mon	18-Mar	7. H Atom II	7.5-7.9	211-221	Q7.9 P7.3, 7.7, 7.15
17	Wed	20-Mar	8. Pauli Exclusion	8.1-8.4	225-240	Q7.16 P7.25, 7.27
	Fri	22-Mar	No Lab			
			Spring Break			
10	18 Mon	1-Apr	8. Elements	8.4-8.7	240-252	Q8.3 P8.1, 8.7, 8.9
19	Wed	3-Apr	MATLAB Project 2: Atom Shell Models			
	Fri	5-Apr	Lab 8: Zeeman			
11	20 Mon	8-Apr	12. Nucler Structure	12.1-12.5	369-382	Q8.13 P8.13, 8.15
21	Wed	10-Apr	12 Radioactive Decay	12.6-12.10	382-402	Q12.1 P12.3, 12.5, 12.15
	Fri	12-Apr	Lab 9: Mag moment / ESR			
12	22 Mon	15-Apr	Exam 2 (4-8)			
23	Wed	17-Apr	13 Nuclear Reactions	13.1 - 13.4	407-422	Q12.21 P12.30, 12.35
	Fri	19-Apr	Lab 9: EFNMR/NMR			
13	24 Mon	22-Apr	13 Fusion	13.5-13.7	422-436	Q13.9 P13.3,13.11,13.19
25	Wed	24-Apr	14 Elementary Particles	14.1-14.4	441-458	Q13.20 P13.22, 13.31
	Fri	26-Apr	Lab 10: Radioactivity			
14	26 Mon	29-Apr	14 Standard Model	14.5-14.8	458-473	Q14.1 P14.1, 14.7, 14.19
27	Wed	1-May	15 Cosmology	15.1 - 15.5	477-493	Q14.21 P14.23, 14.27
	Fri	3-May	Lab Assessment			
15	28 Mon	6-May	15 General Relativity	15.6-15.10	493-514	Q15.4 P15.1, 15.3, 15.5
29	Wed	8-May	MATLAB Project 3: General Relativity			
	Fri	10-May	No Lab			
30	Mon	13-May	Final 12:15 pm - 2:15 pm (check this time)			