

PS 303 - Schedule - Fall 2012 - modified

Lecture	day	date	Reynolds Reading	Problem sets due date	Segre Chap	lecture topics
1	M	27-Aug	Preface, How to Study, App A			intro, syllabus, epistemology (Popper), math (binomial)
2	W	29-Aug	1		1	energy, momentum, quantum
3	F	31-Aug	2.1			elementary particles
4	W	5-Sep	2.2	1-11	6	charge, interactions, exchange particles, Heisenberg inequalities
5	F	7-Sep	App B			Rutherford scattering
6	M	10-Sep	2.3	12-18,20,21,23		spin, pe model
7	W	12-Sep	2.4		9	magnetic moment, Pauli exclusion
8	F	14-Sep	2.5, 2.6			color force, strong force, weak force
9	M	17-Sep	3.1-3.4	24-30,32,34,36		nuclear mass, charge, color, size
10	W	19-Sep	3.5, 3.6		4	spin, magnetic moment
11	F	21-Sep	App C			Stern-Gerlach
12	M	24-Sep		38-49		Test #1
13	W	26-Sep	App D		2	Blackbody radiation
14	F	28-Sep	3.7, 3.8			radioactivity, alpha decay
15	M	1-Oct	3.9			beta decay
16	W	3-Oct	App E	D1-3,51-54,57,58	5	Photoelectric effect
17	F	5-Oct	4.1			atomic properties, dimensional analysis
18	M	8-Oct	4.2, App F	E1, 59-61,65-68		Bohr model, reduced mass
19	W	10-Oct	4.3		7	periodic table
20	F	12-Oct	4.4			Moseley's law
21	M	15-Oct	5.1, App G	69,73,75,76,78-82,84		introduction, time dilation, cosmic rays
22	W	17-Oct	5.2		3	length contraction
23	W	24-Oct	5.3			Lorentz transformation
24	F	26-Oct	5.4	85-93		twin paradox, etc.
25	M	29-Oct	5.5, 5.6		10	more paradoxes, dynamics
26	W	31-Oct	5.6			more dynamics
27	F	2-Nov		98-102,104-106		Test #2

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Lecture	day	date	Reynolds Reading	Problem sets due date	Segre Chap	lecture topics
28	M	5-Nov	App H			Compton effect
29	W	7-Nov	6.1, 6.2		8	wave particle duality, dispersion
30	F	9-Nov	6.3, 6.4			Heisenberg relations, Bohr's Complementarity Principle
31	W	14-Nov	7.1	H3,107-114,116	11	Schrodinger equation
32	F	16-Nov	7.2			how to solve the Schrodinger equation
33	M	19-Nov	7.2			special potentials
34	M	26-Nov	7.3	117,119,121-128		symmetry and the Pauli principle
35	W	28-Nov	7.4		12	free particles
36	F	30-Nov	7.5			quantum postulates
37	M	3-Dec	7.6	129-132,136-138	13	Schrodinger equation in 3D, review
38	W	5-Dec				Test #3