

Particle Physics Short Course Syllabus*

Week	Topics	Reading	Notes
1 (11-15 Jan.)	Atoms, Atomic Structure, and Quantum Mechanics	Chapts. 1-2 [28 pp]	
2 (14-22 Jan.)	Radioactivity, Forces of Nature, and Feynman Diagrams	Chapts. 3-4 [26 pp]	Monday is MLK day, so class TBS
3 (25-29 Jan.)	The Particle Zoo and the 8-Fold-Way Patterns	Chapt. 5 [14 pp]	
4 (1-5 Feb)	The Quark Model of Hadrons	Chapt. 6 [14 pp]	
5 (8-12 Feb.)	Strong Interaction Physics I: Quantum Chromodynamics	Chapt. 7 [14 pp]	
6 (15-19 Feb.)	Weak Interaction Physics I: Electro-Weak Theory	Chapt. 8 [15 pp]	
7 (22-26 Feb.)	Strong Interaction Physics II: Generations of Quarks	Chapt. 9 [16 pp]	
8 (29 Feb-4 Mar)	Weak Interaction Physics II: How Many Generations?	Chapt. 10-11 [21 pp]	
(7-11 Mar.)	Spring Break		
9 (14-18 Mar.)	Neutrino Film Night ... MPT at the APS March Meeting		
10 (21-25 Mar.)	Neutrinos and Neutrino Oscillations	Chapt. 12 [8 pp]	
11 (28 Mar-1 Apr)	Beyond the Standard Model: GUTS, SUSY, and Higgs	Chapt. 13 [16 pp]	
12 (4-8 Apr.)	Big Bang Cosmology and Particle Physics: Dark Matter, Dark Energy, and Matter/Antimatter Asymmetry	Chapt. 14 [15 pp]	

*Note: This schedule is subject to change through the term.