

Experimental Particle Physics (171.625) 3–4:15pm, Mon/Wed/(Fri), Bloomberg 361

	Mon	Wed	Fri
1	Jan.28, 2013 intro, overview relativistic mechanics	Jan.30 QM, spin, quarks and leptons baryons and mesons	
2	Feb.4 unstable particles, interactions Feynman diagrams, QED	Feb.6 QCD, weak inter., conservation laws, Higgs, New Physics	
3	Feb.11 experiments, cosmic rays, isotopes history of discoveries, accelerator	Feb.13 accelerators cross-sections	
4	Feb.18 (moved to Mar.1) – paper reading period –	Feb.20 (moved to Mar.8) – paper reading period –	
5	Feb.25 interaction with matter Coulomb scattering	Feb.27 photon interactions, showers position detectors	Mar.1 silicon detectors calorimeters, particle ID
6	Mar.4 modern detectors fundamental symmetries	Mar.6 Parity and Charge conjugation Flavor symmetry, SU(2), SU(3)	Mar.8 isospin in strong decays CP-violation
7	Mar.11 quarks in hadrons quarkonium potential	Mar.13 other meson states baryons	
8	Mar.18 no class	Mar.20 – spring break – no class	
9	Mar.25 magnetic moments proton structure, partons	Mar.27 PDFs in LHC production	
10	Apr.1 partons, QCD potential anomalous magnetic moment	Apr.3 coupling constants weak interactions	
12	– reading period –	– reading period –	
11	Apr.15 Weak and Higgs physics at LHC	Apr.17 parity violation Fermi theory, CKM	Apr.19 PRESENTATIONS
13	Apr.22 CKM and constraints neutrinos	Apr.24 neutrino physics and experiments	Apr.26 PRESENTATIONS
14	Apr.29 EW Lagrangian Higgs	May.1 Higgs mechanism New Physics, conclusion	
15	May 6–10 – reading period –		
16	May 13 – reading period –	May 16 (THURSDAY) FINAL (optional) 9-12 Noon	