

Experimental Particle Physics (171.625) 3–4:15pm, Mon/Wed/(Fri), Bloomberg 178 (361 on Fri)

	Mon	Wed	Fri
1	Jan.30, 2012 intro, overview relativistic mechanics	Feb.1 QM, spin, quarks and leptons baryons and mesons	
2	Feb.6 unstable particles, interactions Feynman diagrams, QED	Feb.8 QCD, weak inter., conservation laws, Higgs, New Physics	
3	Feb.13 experiments, cosmic rays, isotopes history of discoveries, accelerator	Feb.15 accelerators cross-sections	Feb.17 interaction with matter Coulomb scattering
4	Feb.20 photon interactions, showers position detectors	Feb.22 silicon detectors calorimeters, particle ID	Feb.24 modern detectors fundamental symmetries
5	Feb.27 (moved to Feb.17) – paper reading period –	Feb.29 (moved to Feb.24) – paper reading period –	
6	Mar.5 Parity and Charge conjugation Flavor symmetry, SU(2), SU(3)	Mar.7 isospin in strong decays CP-violation	
7	Mar.12 quarks in hadrons quarkonium potential	Mar.14 other meson states baryons	
8	Mar.19 no class	Mar.21 – spring break – no class	
9	Mar.26 magnetic moments proton structure, partons	Mar.28 PDFs in LHC production	
10	Apr.2 partons, QCD potential anomalous magnetic moment	Apr.4 coupling constants weak interactions	Apr.6 PRESENTATIONS
11	Apr.9 Weak and Higgs physics at LHC	Apr.11 parity violation Fermi theory, CKM	Apr.13 PRESENTATIONS
12	– reading period –	– reading period –	
13	Apr.23 CKM and constraints neutrinos	Apr.25 neutrino physics and experiments	
14	Apr.30 EW Lagrangian Higgs	May.2 Higgs mechanism New Physics, conclusion	
15	May 7–11 – reading period –		
16	May 14 – reading period –	May 17 (THURSDAY) FINAL (optional) 9-12 Noon	