



The Chinese University of Hong Kong
Department of Physics
Lecture Series

A mini-course in Particle Physics

by

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Date: May 17, 19, 24, 26, 2010

Time: 3:30 p.m. – 5:15 p.m.

Venue: L5, Science Centre, CUHK, Shatin, N.T.

Contents:

- ☞ *Dirac Equation*
- ☞ *QED process*
- ☞ *Phase Space*
- ☞ *Decay Processes of muon and pion*
- ☞ *Semileptonic Decays, CVC, PCAC ...*
- ☞ *Deep Inelastic ep and ν-p scattering*
- ☞ *Quark Structure Function F₂*
- ☞ *Naive Parton Model and Drell-Yan Process*
- ☞ *Gauge Interaction*
- ☞ *Gauge couplings in Standard Model*
- ☞ *Quarkonium*
- ☞ *W and Z Masses in Standard Model*
- ☞ *Feynman Rules*
- ☞ *W and Z decay widths*
- ☞ *Zero amplitude as a test of tri-gauge coupling*
- ☞ *The role of neutrinos in particle physics*