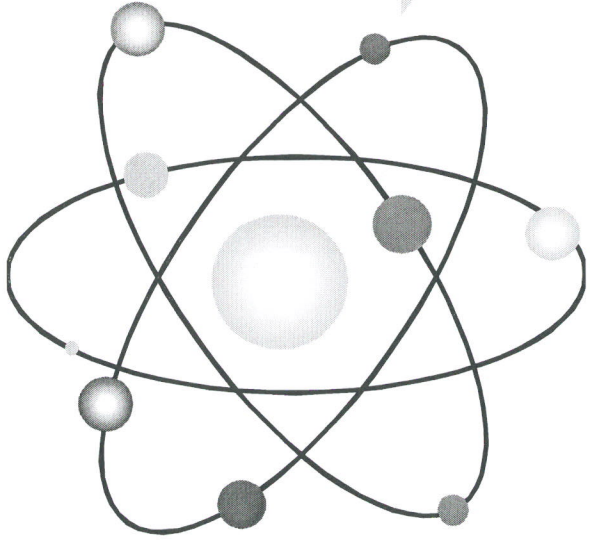




## Particle Physics Course Overview

- The Standard Model
- The Quark Structure of Mesons and Baryons
- Introduction to Relativistic Quantum Mechanics
- Dynamic Quarks-Deep Inelastic Scattering
- Oscillation Phenomena- $K\bar{K}$ ,  $B\bar{B}$ , Neutrino
- Charged and Neutral Current Weak Interactions
- Electroweak Theory-W, Z and Higgs Bosons
- Why the Standard Model is not the Last Word



# Quark Soup

U C T  
d s b

Elementary Particles?? (circa 1960)

$\pi^\pm$  (pions),  $\lambda$ ,  $\rho$ ,  $\omega$ ,  $\psi$ ,  $\eta$

$K^\pm$ ,  $\phi$ , etc

proton neutron

$\Delta^0$   $\Sigma^+$   $\Xi^0$   $\Lambda$ ,  $\Lambda_c$ ,  $\Lambda_b$ ,

Etc

