PHYS6313 - Elementary Particles

PHYS 6313 Elementary Particles (3 semester credit hours) Elementary particles and their interaction; classification of elementary particles; fermions and bosons; particles and antiparticles; leptons and hadrons; mesons and baryons; stable particles and resonances; hadrons as composites of quarks and anti-quarks; fundamental interactions and fields; electromagnetic, gravitational, weak and strong interactions; conservation laws in fundamental interactions; parity, isospin, strangeness, G-parity; helicity and chirality; charge conjugation and time reversal; strong reflection and CPT theorem; gauge invariance; quarks and gluons; discovery of c, b and t quarks and the W+ and Zo particles; recent discoveries. (Normally follows PHYS 6300 or 6301.) (3-0) T