

QM2 Phy 522 topics

Scattering. ^{in 1D & 3D} potential scat., barrier penetration, scat. amps, phase shifts, partial waves, differential & total cross sections.

Transitions. ^{Schröd, Heis, Int.} time dep. Schröd. eqn. time evolution, pictures. pert. thy. Golden rule. e.g. radiative transitions.

Symmetries. group thy. & QM. Irreducible reps, Schur's lemma. ^{Discrete & continuous}

Many bodies. Quantum stat. mechanics. Dist. vs. identical particles. Bose, Fermi distributions. Density matrices. _P

Advanced topics. Path \int s. Dirac equations.

Advanced angular momentum in QM.

Project.

a qm project, your choice.

e.g. ^{qm} paper, neat program, historical essay etc.

new web site

web.utk.edu/~tbarnes/website/qmclass/qm2.html

office hrs M 10:30-12. (212 Serf)

or contact me by email tbarnes@utk.edu

grading basically as QM1.