• Introduction. Why susy? Unique extension of Poincare group. A powerful tool to get new insights into (strongly coupled) QFTs. A leading candidate for BSM physics. The 2nd point is the hep-th side of susy. The 3rd is the hep-ph side. This class will largely focus on the hep-ph aspects.

• Coleman Mandula theorem.

• The loophole: spinor charges = susy. Algebra: $\{Q_s, Q_{s'}\} = 2\Gamma^\mu_{ss'} P_\mu$.

• Quantum mechanics detour. Introduce fermions in QM.