The course will cover rigorous results in classical and quantum statistical mechanics. *Winter quarter:* basic lattice and continuum models, existence of the thermodynamic limit, phase transitions at positive temperature, Hohenberg-Mermin-Wagner and Goldstone theorems. *Spring quarter:* locality in quantum systems (Lieb-Robinson bound), topological invariants of gapped quantum systems at zero temperature, Symmetry Protected Topological Phases. Textbooks: D. Ruelle, "Statistical mechanics: Rigorous results", S. Friedli and Y. Velenik, "Statistical Mechanics of Lattice Systems".