

Physics 6456: Quantum field theory II
Spring 2021
Tentative Syllabus

Jan 19-22:	The renormalization group
Jan 25-29:	Finite temperature field theory
Feb 1-19:	Spontaneous symmetry breaking
Feb 22-26:	Composite operators, OPE's
Mar 1-5:	A brief introduction to conformal field theory
Mar 8-12:	Effective field theory
Mar 15-19:	LSZ, S-matrix, and scattering
Mar 22-26:	Abelian gauge theory quantization
Mar 29 - Apr 16:	Nonabelian gauge theory quantization
Apr 19-23:	The Higgs phenomenon
Apr 26 - May 5:	Instantons and monopoles

All dates are approximate; time spent on any topic will be adjusted to the backgrounds of the enrolled students.