Massachusetts Institute of Technology
Department of Physics

8.276 Nuclear and Particle Physics Spring 2007

Syllabus and Schedule

2/6, 2/8	Introduction to particles and nuclei; terminology; scattering (ch 1, 2, 4)
2/13, 2/15	Size and shape of nuclei; electron scattering (ch 5)
2/20	[no class: Presidents' Day]
2/22	Electron-nucleon scattering; deep inelastic scattering (ch 6)
2/27, 3/1	The parton model (ch 7)
3/6, 3/8	Quarks and gluons; the strong interaction (ch 8, 9)
3/13, 3/15	The weak interaction (ch 10)
3/20	**Exam 1**
3/22	The electroweak interaction (ch 11)
3/27, 3/29	[no classes: Spring Vacation]
4/3, 4/5	The Standard Model; Mesons (ch 12, 13, 14)
4/10, 4/12	Baryons (ch 15)
4/17	[no class: Patriots' Day]
4/19	The nucleon-nucleon interactions (ch 16)
4/24, 4/26	Nuclear models (ch 17)
5/1, 5/3	Nuclear structure and reactions (ch 17)
5/8	**Exam 2**
5/10	Nuclear thermodynamics; heavy ion physics (ch 19)
5/15, 5/17	Grand unified theories; particle physics and cosmology