

<u>Lecture</u>	<u>Date</u>	<u>Reading assignment given out</u>	<u>Optional reading</u>	<u>Lecture topic</u>
1	11-Jan-07 thurs	1.1-1.2		intro to nlo
2	16-Jan-07 tues	1.3-1.4		classical model of NL response
3	18-Jan-07	1.5, 1.6		symmetries to simplify chi tensor time-dep response
4	23-Jan-07 HW1 due	13.4-13.6		numerical modeling, nonpert response pond pot'l, HHG
5	25-Jan-07	2.1-2.4		wave equation coupled wave equations solutions: SFG
6	30-Jan-07	2.5-2.7		DFG, OPA SHG and phase matching
7	1-Feb-07	2.9-2.10		QPM gaussian beams and nlo
8	6-Feb-07	2.11		nlo at interfaces: appl to microscopy
9	8-Feb-07	3.1-3.2	review quantum	Schrodinger, pert theory
10	13-Feb-07			
11	15-Feb-07	3.3-3.4		density matrix formalism
12	20-Feb-07	3.5-3.7		DM calc of suscept
13	22-Feb-07	4.1-4.3		nonlinear refractive index polarization gating
14	27-Feb-07	4.4-4.6		NLO in semiconductors?
15	1-Mar-07	13.7		13.7 NLO in plasma, relativistic nlo
16	6-Mar-07	6.1-6.3		Two-level atoms
17	8-Mar-07	6.4-6.5		optical bloch eqns

	13-Mar-07	spring break		
	15-Mar-07	spring break		
18	20-Mar-07	7.1		Processes involving nonlinear index self-focusing
19	22-Mar-07	7.2		phase conjugation
20	27-Mar-07	7.4		two beam coupling, transient grating
21	29-Mar-07	7.5		spm, solitons
22	3-Apr-07	13.1-13.3		ultrafast NLS
23	5-Apr-07	8.1-8.3		spontaneous scattering
24	10-Apr-07	8.4		acoustooptics
25	12-Apr-07	9.1-9.5		SBS
26	17-Apr-07	10.1-10.3	10.4	SRS
27	19-Apr-07	11.1-11.3		electro-optic effect pockels, Kerr cells
28	24-Apr-07	12		damage avalanche ionization, heating
29	26-Apr-07			tunneling and mpi
30	1-May-07			student talks
31	3-May-07			student talks