

<b>Class Schedule:</b>	<b>Lecture</b>	<b>Reading</b>
Wed, Sep. 3	#1	Overview of Lasers – SB
Fri. Sep. 5	#2	Paraxial Ray Theory – JP
Mon. Sep. 8	#3	Cavity Stability – JP
Wed. Sep. 10	#4	Paraxial Wave Theory – JP
Fri. Sep. 12	#5	Gaussian Beams – JP
Mon. Sep. 15	#6	ABCD Law – JP
Wed. Sep. 17	#7	Cavities – SB
Fri. Sep. 19	#8	Astigmatic Compensation – SB
Mon. Sep. 22	#9	Cavity Exercise – SB
Wed. Sep. 24	#10	Blackbody Radiation – JP
Fri. Sep. 26	#11	Einstein A&B Coefficients – JP
Mon, Sep. 29	#12	3 and 4 Level Schemes – JP
Wed, Oct. 1	#13	Gain Saturation – JP
Fri, Oct. 3	#14	Threshold Gain – SB
Mon, Oct. 6	#15	Optimal Output Coupling – SB
Wed, Oct. 8	#16	Laser Gain Exercise – JP
Fri, Oct. 10	#17	Inhomogeneously Broadened Gain Media – SB
Mon. Oct. 13	No Class	<b>Midterm Exam</b>
Wed. Oct. 15	#18	Q-switching – JP
Fri. Oct. 17	#19	Mode Locking – SB
Mon. Oct. 20	#20	Optical Frequency Comb – SB
Wed. Oct. 22	#21	Fluence and Amplification of Short Pulses – JP
Fri. Oct. 24	#22	Ti:Sapphire Laser System – JP
Mon. Oct. 27	#23	Chirp Pulse Amplification – JP
Wed. Oct. 29	#24	Short Pulse Temporal Measurements – JP
Fri. Nov. 31	#25	Frequency Resolved Optical Gating – JP
Mon. Nov. 3	#26	Locking Lasers to Cavities – SB
Wed. Nov. 5	#27	Polarization and Frequency Control of Laser Beams – SB
Fri. Nov. 7	#28	Hydrogen Atom – SB
Mon. Nov. 10	#29	Perturbation Theory Light-Matter Interactions; Selection Rules – SB
Wed. Nov. 12	#30	Spin-Orbit Coupling Notation – SB
Fri. Nov. 14	#31	Zeeman Effect – SB
Mon. Nov. 17	#32	Two-Level Atom – JP
Wed. Nov. 19	#33	Classical Lorentz Model of Atoms – JP
Fri. Nov. 21	#34	Nonlinear Effects – JP
Mon. Nov. 24	#35	Phase Matching in Crystals – SB
Tues. Nov. 25	#36	Locking Lasers to Atoms – SB
Mon. Dec. 1	#37	Laser Cooling – SB
Wed. Dec. 3	#38	Strong Field Ionization – JP
Fri. Dec. 5	#39	High-Order Harmonic Generation/Attosecond Pulses – JP
Mon. Dec. 8	#40	Dye Laser Exercise – SB
Wed. Dec. 10	#41	Diode/Telecom Lasers – SB
Thurs. Dec. 18		<b>Final Exam:</b> In Classroom 11:00AM-2:00PM