

Course Schedule for "Fundamentals of Spectroscopy" (Fall 2007)

Week	Monday	Wednesday	Friday
1	August 27, 2006 Introduction 1. Concepts of Spectroscopy 2. Why to study spectroscopy ? 3. Course structure, schedule, and grading policy 4. Lab visit	August 29, 2006 Part I. Fundamentals of Quantum Mechanics Chapter 1. Concepts of Quantum (1) 1. Blackbody radiation 2. Photoelectric effect 3. Compton scattering (HWK #1)	August 31, 2006 Chapter 1. Concepts of Quantum (2) 4. Hydrogen spectra 5. Bohr's theory
2	September 3, 2006 Labor Day No Classes	September 5, 2006 Chapter 2. Wave-Particle Duality 1. Wave behavior of light 2. Single photon experiment 3. Wave-particle duality of light 4. Wave-particle duality of all particles/radiation 5. de Broglie relationship	September 7, 2006 Chapter 3. Quantum Mechanics Concepts, Principles, and Mathematic Formalism
3	September 10, 2006 Chapter 3	September 12, 2006 Chapter 3	(HWK #1 due) (HWK #2) September 14, 2006 Part II. Fundamentals of Atomic Structure and Atomic Spectroscopy Chapter 4. Overview
4	September 17, 2006 Chapter 5. Atomic Structure	September 19, 2006 Take-Home Exam 1 Due	(HWK #2 Due) Take-Home Exam 1 (Quantum Mechanics) (HWK #3)
5	September 24, 2006	September 26, 2006	September 28, 2006 (HWK #3 Due) (HWK #4)
6	October 1, 2006	October 3, 2006	October 5, 2006 (HWK #4 Due) (HWK #5)
7	October 8, 2006	October 10, 2006	October 12, 2006 (HWK #5 Due) (HWK #6)
8	October 15, 2006	October 17, 2006	October 19, 2006 (HWK #6 Due)(HWK #7)
9	October 22, 2006	October 24, 2006	October 26, 2006 Take-Home Exam 2 (Atomic Spectroscopy) (HWK #7 Due)
10	October 29, 2006	October 31, 2006	November 2, 2006 Take-Home Exam 2 Due (HWK #8)
11	November 5, 2006	November 7, 2006	November 9, 2006

(HWK #8 Due) (HWK #9)

12	November 12, 2006	November 14, 2006	November 16, 2006
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(HWK #9 Due) (HWK #10)

13	November 19, 2006 Fall Break No Classes	November 21, 2006 Fall Break No Classes	November 23, 2006 Thanksgiving No Classes
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14	November 26, 2006	November 28, 2006	November 30, 2006
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(HWK #10 Due) (HWK #11)

15	December 3, 2006	December 5, 2006	December 7, 2006
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Summary (1)

Summary (2)

Take-Home Exam 3
(Molecular & Laser Spectroscopy)

In-class or online FCQ

(HWK #11 Due)

16	December 10, 2006 Fall AGU 2007	December 12, 2006 Fall AGU 2007	December 14, 2006 Fall AGU 2007
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17	December 17, 2006	December 19, 2006	
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Take-Home Exam 3 Due