

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 309

Time	Topic	Notes
8:00	Introduction	
8:15	Classical Mechanics	
8:30	Newton's Laws	
8:45	Work and Energy	
9:00	Momentum	
9:15	Angular Momentum	
9:30	Special Relativity	
9:45	Electromagnetism	
10:00	Maxwell's Equations	
10:15	Electric Fields	
10:30	Magnetic Fields	
10:45	Electromagnetic Waves	
11:00	Quantum Mechanics	
11:15	Schrodinger Equation	
11:30	Wave Functions	
11:45	Uncertainty Principle	
12:00	Atomic Structure	
12:15	Bohr Model	
12:30	Hydrogen Atom	
12:45	Spin	
1:00	Particle Physics	
1:15	Special Relativity	
1:30	Mass and Energy	
1:45	Relativistic Dynamics	
2:00	General Relativity	
2:15	Spacetime Curvature	
2:30	Black Holes	
2:45	Gravitational Waves	
3:00	Cosmology	
3:15	Expansion of the Universe	
3:30	Dark Matter	
3:45	Dark Energy	
4:00	Future of the Universe	

LECTURE NOTES

PHYSICS 309

LECTURE 1