

TENTATIVE SCHEDULE FOR PHYSICS 401, Spring 2021						
Date	Mtg.#	Reading Assignment	Topic	HW Due	QUIZ	Exams
Week 1		Griffiths 3rd Edition				
1/25	1		Review of Early QM (Phys 371)			
1/27	2	1.1	Wave/Particle duality, Derivation of Schrodinger Equation			
1/29	3	1.2 - 1.4	The Born Interpretation, Statistical Ensemble	#0		
Week 2						
2/1	4	1.5, 1.6	Momentum Operator and the Uncertainty Principle		0	
2/3	5	2.1	Stationary States, Hamiltonian Operator			
2/5	6	2.2	Infinite Square Well	#1		
Week 3						
2/8	7	2.3	Harmonic Oscillator, Ladder Operators		1	
2/10	8	2.3	Harmonic Oscillator, More about Ladder Operators			
2/12	9	2.3, 6.4	Harmonic Oscillator Energies and Wavefunctions	#2		
Week 4						
2/15	10	2.4	The Free Particle		2	
2/17	11	2.5	Delta Function Potential			
2/19	12	2.5	The Scattering Matrix	#3		
Week 5						
2/22	13	2.6	The Finite Square Well		3	
2/24	14	9.2	Tunneling			
2/26	15	3.1	Linear Algebra and Hilbert Space			
Week 6						
3/1	16		Chapters 1, 2 (roughly)			EXAM #1
3/3	17	3.2	Hermitian Operators			
3/5	18	3.2	Observables	#4		
Week 7						
3/8	19	3.3	Eigenfunctions of Hermitian Operators		4	
3/10	20	3.4	Generalized Statistical Interpretation			
3/12	21	3.5	The Uncertainty Principle	#5		
SPRING BREAK 15-19 MARCH						
Week 8						
3/22	22	3.5	Minimum Uncertainty and the Ehrenfest Theorem		5	
3/24	23	3.5	Conjugate Variables and Classical Mechanics			
3/26	24	3.6	Bases in Hilbert Space	#6		
Week 9						
3/29	25	3.6	Dirac Notation		6	
3/31	26	4.1	3D Schrodinger Equation and the Angular Equation			
4/2	27	4.1	Spherical Harmonics	#7		
Week 10						
4/5	28	4.1	The Radial Equation		7	
4/7	29	4.2	Hydrogen Atom Potential and the Radial Equation			
4/9	30	4.2	Hydrogen Atom Energies and Wavefunctions	#8		
Week 11						
4/12	31	4.2	Hydrogen Atom Spectrum		8	
4/14	32	4.3	Angular Momentum Operator			
4/16	33	4.3	Ladder Operator for Angular Momentum			
Week 12						
4/19	34		Chapters 3, 4 (roughly)			EXAM #2
4/21	35	4.3	Angular Momentum Operator Eigenfunctions			
4/23	36	4.4	Spin-1/2	#9		
Week 13						
4/26	37	4.4	Pauli Spin Matrices		9	
4/28	38	4.4	Electron in a Magnetic Field			
4/30	39	4.4	Addition of Angular Momenta	#10		
Week 14						
5/3	40	4.4	Clebsch-Gordan Coefficients		10	
5/5	41	4.4	Singlet and Triplet States of Spin-1/2			
5/7	42	4.5	Aharonov-Bohm Effect	#11		
Week 15						
5/10	43		Review		11	
5/15	44	Comprehensive	FINAL EXAM [8 AM to 10 AM]			FINAL EXAM