PHY 3323 Schedule				
Week	**Material**	**Reading Assignment**	**Homework Assignment**	**Special**
Jan. 7	Course Introduction Syllabus, Policies Math Prerequisites	Chapter 1	Problem Set 1	
Jan. 14	Math Prerequisites (cont'd) **Ch. 2:** Superposition, Coulomb's Law Electric fields, continuous charge distributions, field lines	Chapter 2.1, 2.2		
Jan. 21	Gauss's Law $\nabla \times \mathbf{E} = 0 \rightarrow \mathbf{E} = -\nabla V$ Poisson's, Laplace's equations Potential of charge distributions	Chapter 2.3	Problem Set 2	No class Jan. 21; MLK Day
Jan. 28	Boundary conditions Work done in moving charges Electrostatic energy Ideal conductors	Chapter 2.4, 2.5		
Feb. 4	Surface charges Capacitance and capacitors **Ch. 3:** Laplace's equation Boundary conditions and Uniqueness Theorem	Chapter 3.1, 3.2	Problem Set 3	
Feb. 11	Method of Images Separation of variables in Cartesian, spherical, and cylindrical coordinates	Chapter 3.3, 3.4		**Exam 1, Monday, February 11 Ch. 1,2**
Feb. 18	Green's Functions Multipole Expansions Electric Dipoles and Quadropoles	Chapter 4.1, 4,2	Problem Set 4	
Feb. 25	**Ch. 4:** Dielectrics Polarization Bound charges	Chapter 4.3, 4.4		
Mar. 4	**SPRING BREAK**			
Mar. 11	Internal electric fields in dielectrics Electric displacement **D** Theory of linear dielectrics	Chapters 5.1, 5.2	Problem Set 5	
Mar. 18	**Ch. 5:** Magnetic fields and forces Cyclotron Motion Biot-Savart Law	Chapter 5,3,5.4		**Exam 2 Wednesday, Mar. 20 Ch. 3,4**

Mar. 25	**∇ • B, ∇** x **B** Ampere's Law Charges vs. monopoles Vector potential	Chapter 6.1,6.2	Problem Set 6	
Apr. 1	Magnetic multipoles **Ch. 6:** Diamagnets and paramagnets Magnetic dipoles	Chapter 6.3		
Apr. 8	Magnetization Bound currents Magnetic displacement, **H**	Chapter 6.4	Problem Set 7	
Apr. 15	Magnetic susceptibility Ferromagnets			
Apr. 22	Review/Catch-Up			
April 29	**FINAL EXAM**			