Electromagnetic Theory Syllabus

	1/14 Electric field: point charges Read 2.1	1/16 Electric field: continuous charge distribution, divergence and Curl of E Read 2.2
1/19 *Martin Luther King Jr. Holiday*	1/21 Divergence and Curl of E; Gauss's law Read 2.2	1/23 Electric potential Read 2.3
1/26 Electric Potential Read 2.3	1/28 Work and Energy Read 2.4	1/30 Conductors Read 2.5
2/2 Multipole expansion Read 3.4	2/4 Multipole expansion	2/6 Method of images Read 3.2
2/9 Method of images	2/11 **Review**	2/13 **EXAM 1**
2.16 Laplace's Equation in Cartesian Coordinates Read: 3.3.1	2/18 Laplace's Equation in Spherical Coordinates Read 3.3.2	2/20 Laplace's Equation in Spherical Coordinates
2/23 Dipoles Read 4.1.1-3	2/25 Dipoles	2/27 Polarization, bound charges Read 4.1.4, 4.2.1
3/2 *Spring break*	3/4 *Spring break*	3/6 *Spring Break*
3/9 Bound charge; Electric Displacement Read 4.2.2-3, 4.3.1-3	3/11 Linear dielectrics Read 4.4.1	3/13 More linear dielectrics Read 4.4.2

Electromagnetic Theory Syllabus, continued

3/16 **Review**	3/18 **EXAM 2**	3.20 Lorentz Law Read 5.1.1-2
3/23 Currents Read 5.1.3	3/25 Biot-Savart Law Read 5.2	3/27 Div and Curl of ***B*** Read 5.3.1,2
3/30 Applications of Ampere's law, magnetic vector potential, boundary conditions Read 5.3.3,4 and 5.4.1	4/1 Magnetization and bound currents and the ***H*** field Read 6.1.4 and 6.2	4/3 More about the ***H*** field Read 6.3
4/6 Linear and non-linear media Read 6.4	4/8 **Review**	4/10 *Easter Break*
4/13 *Easter Break*	4/15 **EXAM 3**	4/17 Electromotive Force Read 7.1.1,2
4/20 Motional emf and Electromagnetic Induction Read 7.1.3, 7.2.1	4/22 Induced Electric Field Read 7.2.2	4/24 Maxwell's Equations Read 7.3.1,3
4/27 Maxwell's Equations in matter. Relativity and E&M Read 7.3.5		