Physics 514, Winter 2020, University of Washington				
Graduate Classical Electrodynamics: Quarter 2 of 3				
	Text: John David Jackson, "Classical Electrodynamics," 3th ed.			
	(syllabus ver. 08jan2020 08:00)			
week	**date**	**lecture topic**	**readings***	
1	8-Jan	Magnetostatics review 1.	5.1-3	
	10-Jan	Vector potential, Magnetostatics review 2.	5.4-8	
2	15-Jan	Boundary value problems in magnetostatics 1.	5.9-10	
	17-Jan	Boundary value problems in magnetostatics 2.	5.11-12	
3	22-Jan	Induction, energy & magnetic media, inductance.	5.15-17	
	24-Jan	Maxwell eq.n's, vector & scalar potentials, gauge transformations.	6.1-3	
4	29-Jan	Green's function for thw wave equations. Retarded solutions.	6.4-5	
	31-Jan	Return to macroscopic E&M. The Poynting formalism 1.	6.6-7	
5	5-Feb	Impedance & admittance (field view). Transformation properties.	6.9-10	
	7-Feb	On the question of magnetic monopoles, Dirac derivation.	6.11-12	
6	12-Feb	Plane waves in non-conductors. Polarization.	7.1-2	
	14-Feb	**Midterm Exam.**		
7	19-Feb	Reflection & refraction.	7.3	
	21-Feb	Polarization effects. Total internal reflection.	7.4-5	
8	26-Feb	Wave propagation in the ionisphere. Group (and other) velocity.	7.6, 8	
	28-Feb	A connection between **D** and **E**. Dispersive media. Dispersion relations.	7.10-11	
9	4-Mar	Fields near and in conductors. Cylindrical guided waves.	8.1-3	
	6-Mar	Rectangular guided waves. Energy flow.	8.4-5	
10	11-Mar	Radiation from a localized source, antennas 1. Dipole radiation.	9.1-4	
	13-Mar	Spherical waves. The scalar wave equation.	9.6	
11	18-Mar	**FINAL EXAM (check schedule for room and time).**		
		* The pace of the class, and therefore the readings, will likely vary from this syllabus.		
		Also, there will be special topics discussed in lecture.		