Week	Topic(s)	Reading	Homework	Remarks
Jan. 14	*2nd quantization* Intro 2nd quantization; free Fermi & Bose gases	PJH notes	HW1 solns	
Jan. 23 Jan. 28	*Electron-electron interactions* Failures of band theory Screening in electron gas Impurity in a metal	PJH notes	HW2 solns	1/21 MLK day PH gone 1/22-25 (Germany)
Feb. 4 Feb 11 Feb. 18	*Magnetism* Single ion magnetism Origin of magnetic exchange Magnetic ordering Magnons Magnetic neutron scattering Itinerant magnetism/ Hubbard model Magnetic impurities/ Kondo problem Magnetic impurities in semiconductors	PJH notes	HW3 solns	PH gone 2/6-8 (UCLA, Stanford) JClub begins wk of Feb. 18
Feb. 25	*Electron-phonon interaction* Coulomb screening of ionic Plasmon Resistivity of metals Effective electron-electron interaction	PJH notes	HW4 solns	Midterm 2/25 (in class) solns
Mar. 2-9	----------Spring break ----------			
Mar. 11 Mar. 25	*Superconductivity* Cooper Problem BCS Theory	PJH notes	HW5 solns	PH gone 3/12 (Princeton)
Mar. 18-22	---------- APS Meeting ----------			Class cancelled 3/18-22
Apr. 1	Ginzburg-Landau Theory Magnetic Properties Josephson Effect			
Apr. 8 Apr. 15	*Topological States in Condensed Matter* Topological Insulators Edge states Experiments Topological Superconductors	PJH notes		
Apr. 22-24	Take-home final			Final