

M/12/1/2009:	Introduction to the course. Crystals structures	2h
W/14/1/2009:	Reciprocal lattice	1h
M/19/1/2009:	Crystals and x-ray diffraction	2h
W/21/1/2009:	Crystals and x-ray diffraction	1h
M/26/1/2009:	Crystal binding	2h
W/28/1/2009:	Introduction and analysis of elastic strains	1h
M/2/2/2009:	Point defects, case study – vacancies	2h
W/4/2/2009:	Diffusion – phenomenology and mechanisms	1h
M/9/2/2009:	Diffusion (continuation); dislocations	2h
11/2/2009:	no lectures	
16/2/2009:	no lectures	
18/2/2009:	no lectures	
M/23/2/2009:	Crystal vibrations and phonons	2h
W/25/2/2009:	Planck distribution	1h
M/2/3/2009:	Density of states, Debye and Einstein models	2h
W/4/3/2009:	General result for density of states, thermal conductivity	1h
M/9/3/2009:	Free electron Fermi gas in 1D and 3D – ground state	2h
W/11/3/2009:	Density of states, effect of temperature – FD distribution	1h
M/16/3/2009:	Heat capacity of FEFG	2h
W/19/3/2009:	Electrical and thermal conductivity in metals	1h
M/23/3/2009:	Repetition	2h
W/25/3/2009:	Repetition	1h
30/3/2009:	Mid-term exam	

W/15/4/2009:	Bragg reflection of electron waves at the boundary of BZ	1h
M/20/4/2009:	Energy bands, Kronig - Penny model	2h
W/22/4/2009:	Empty lattice approximation; number of orbitals in a band	1h
M/27/4/2009:	Semiconductors, effective mass method, intrinsic carriers	2h
W/29/4/2009:	Impurity states in semiconductors and carrier statistics	1h
M/4/5/2009:	p-n junctions and heterojunctions	2h
W/6/5/2009:	surface structure, surface states, Schottky contacts	1h
M/11/5/2009:	Fermi surfaces and metals	2h
W/13/5/2009:	no lectures	
M/18/5/2009:	Fermi surfaces and metals	2h
W/20/5/2009:	Repetition	1h
M25/5/2009	Repetition	2h
28-29/5/2009: Final Exam		