

1	Sept	L1 - Introduction – Course overview + Introduction to the solids state. LÖ
3		“Course Chat” in smaller groups (separate schedule) LÖ
4		L2 - Close packings, review of common structure types. LÖ
4		Q & A – Basic structures. LÖ
9		L3 - Some complex structures types, selected cases. LÖ
10		L4 – Structure databases. LÖ
10		Q & A – Advanced Structures and Databases. LÖ
15		L5 - Symmetry operations including use of International tables for crystallography, CG
15		D1 - Model building and computer exercises, CG
16		L6 - Diffraction 1: Indexing: different symmetries, Braggs law, intensity, structure factors, CG
17		L7 - Bonding in crystals 1, MK
22		L8 - Bonding in crystals 2 (with exercise) MK
23		L9 - Defects and ionic conductivity, MK
25		L10 - Characterization 1: Vibrational spectroscopy, focus on IR and Raman, MK
29		L11 - Introduction to magnetism LÖ
30		L12 – Synthesis LÖ
1	Oct	D2 Model building and computer exercises (including oral presentation of projects by students) CG
2		Q & A – Synthesis. LÖ
6		L13 - Characterization 2: Introduction to electron microscopy, UV-VIS, MK
7		Q & A – Bonding and Characterization. MK
13		L14 /D3 - Diffraction 2: The Rietveld method and combining techniques CG
16		Q & A – Diffraction. CG
20		L15 Summary LÖ, MK, CG
23		L16 Solid state in practice: Astra, ESAB, Volvo, Akzo (time to be determined)
30		Exam