Master of Science Lecture: Soft Matter Physics, Summer Term 2013

Monday		Friday	
08.04. Lecture 1	***Info*** ***Introduction (CM)*** ***Repetition: Statistical Mechanics (JK)***	***12.04.*** lecture 2 **JK**	***Repetition:*** ***Statistical Mechanics***
15.04.	***Lab Course 1***	***19.04.***	***Lab Course 1***
22.04. lecture 3 **CM**	***Repetition:*** ***Statistical Mechanics*** ***Elasticity Theory***	***26.04.*** lecture 4 **CM**	***Repetition:*** ***Elasticity Theory***
29.04. lecture 5 **CM**	***Interaction of molecules*** ***Israelachvili, Chap. 8***	***03.05.*** lecture 6 **JK**	***Electrostatic forces*** ***Israelachvili, Chap. 12.3, 12.5, 12.6, 12.15***
06.05. lecture 7 **JK**	***Solvation, Structural and hydration forces*** ***Israelachvili, Chap. 13***	***10.05.***	***no lecture due to Himmelfahrt***
13.05. lecture 8 **JK**	***Steric and fluctuation forces*** ***Israelachvili, Chap. 14***	***17.05.*** lecture 9 **CM**	***Static properties of polymers*** ***Doi, Chap. 2***
20.05.	***bank holidays***	***24.05.*** lecture 10 **(CM) JK**	***Finishing Chap. 2, Doi*** ***Microscopic basis for viscoelasticity, Doi, Chap. 3.7***
27.05. lecture 11 **JK**	***Dynamics of flexible polymers in dilute solution*** ***Doi, Chap. 4.1, 4.2, 4.7***	***31.05.*** lecture 12 **JK**	***Many chain systems*** ***Doi, Chap. 5.1, 5.4***
03.06.	***Lab Course 2***	***07.06.***	***Lab Course 2***
10.06. lecture 13 **JK**	***Many chain systems*** ***Doi, Chap. 5.5, 5.7***	***14.06.*** lecture 14 **JK**	***Dynamics of a polymer in a fixed network*** ***Doi, Chap. 6.1-6.3***
17.06. lecture 15 **JK**	***Dynamics of a polymer in a fixed network*** ***Doi, finishing Chap. 6.1-6.3***	***21.06.*** lecture 16 **CM**	***Linear viscoelasticity of polymer liquids, rodlike polymers*** ***Doi, Chap. 7.3, 8.1***
24.06.	***Lab Course 3***	***28.06.***	***Lab Course 3***
01.07. lecture 17 **CM**	***Liquid Crystals*** ***deGennes, Chap. 1.1-1.3***	***05.07.*** lecture 18 **CM**	***Liquid Crystals*** ***deGennes, Chap. 1.4-1.7***
08.07. lecture 19 **JK**	***Long and short range order in nematics*** ***deGennes, Chap. 2***	***12.07.*** lecture 20 **JK**	***Long and short range order in nematics*** ***deGennes, finishing Chap. 2***
15.07. lecture 21 **CM**	***Application:*** ***Soft Matter in Biophysics***	***19.07.*** lecture 22 **CM**	***Application:*** ***Soft Matter in Biophysics***