

**MINICOURSE:  
Self-Consistent Field Theories of Inhomogeneous (Co)polymer blends**

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The course gives an introduction into basic concepts of the theory of polymer/copolymer blends, with a particular emphasis on the so-called 'self-consistent field theory' (SCF theory). It is aimed at an audience who is not familiar with this theory. The topics to be covered include (depending on time)

- General introduction in polymer models
- Flory Huggins theory and chi-parameter
- Detailed introduction into the SCF theory
- Limiting behavior at 'strong' and 'weak' segregation, in particular, connection to Ginzburg-Landau theories like the Ohta-Kawasaki functional
- Fluctuation effects
- Time-dependent density-functional theory and time-dependent Ginzburg-Landau theory
- Applications