



General Information

Module Title	<i>Molecular modelling of biomaterials</i>
Tutor Name(s)	<i>D. Hofmann, M. Heuchel</i>
Location where module takes place	<i>GKSS -Forschungszentrum Geesthacht GmbH Institut für Polymerforschung Kantstraße 55 14513 Teltow lecture hall, house D 22 to 25 September, 09:30 to 15:00</i>

Suitable for the tracks	<input type="checkbox"/> <i>Biology/Biochemistry Track</i>		
	<input checked="" type="checkbox"/> <i>Chemistry/Physics/Engineering Track</i>		
	<input type="checkbox"/> <i>Clinical Scientist</i>		
Type	<i>Practical; Lecture</i>	Level	<i>beginner</i>
Days	<i>4</i>	Max. Participants	<i>10</i>

Objectives this module

Basics of molecular modelling (force fields, structure optimisation, molecular dynamics, analysis of simulation data, mesoscale simulations), Applications to transport-, mechanical- and biodegradation properties of artificial and biomimetic polymers, Simulation of interactions of peptides with biomaterials;

Which course materials, software, or instruments do students use in this module?

*Accelrys Materials Studio
Script about basics of atomistic molecular modelling (pdf). pdf-copies of other powerpoint presentations*

What are the prerequisites for taking this subject?

Basic knowledge in organic and polymer chemistry, basic knowledge in classical mechanics