



## General Information

**Module Title** *Nanostructural and micromechanical characterization of biological materials*

**Tutor Name(s)** *M. Inderchand, P. Fratzl*

**Location where module takes place** *Max Planck Institute for Colloids and Interfaces  
Wissenschaftspark Golm, Am Mühlenberg 1, 14476 Potsdam-Golm  
Dept. of Biomaterials, please go to reception of the institute  
31 August to 4 September, 13:30 to 16:30*

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<b>Suitable for the tracks</b>	<input checked="" type="checkbox"/>	<i>Biology/Biochemistry Track</i>		
	<input checked="" type="checkbox"/>	<i>Chemistry/Physics/Engineering Track</i>		
	<input checked="" type="checkbox"/>	<i>Clinical Scientist</i>		
<b>Type</b>	<i>Practical</i>	<b>Level</b>	<i>advanced</i>	
<b>Days</b>	<i>5</i>	<b>Max. Participants</b>	<i>6</i>	

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## Objectives this module

*Introduction into the structure-function relationships of biological materials with a strong focus on modern methodological approaches to investigate tissue properties at the micro- and nanoscale: Hierarchical organisation of biological materials, Sample preparation (Microlaser dissection), Micromechanical tests, Raman- and FT-IR microscopy, X-ray scattering, Nanoindentation, Scanning acoustic microscopy, Environmental scanning electron microscopy.*

*The module will be held from 31 August to 04 September from 1:30 pm to 4:30 pm. Students may additionally join the module "Material sciences and mechanics for biology/medicine students" held in the mornings of the same days at the Institute.*

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

*Microlaser dissection, Micromechanical tests, Raman- and FT-IR microscopy, X-ray scattering, Nanoindentation, Scanning acoustic microscopy, Environmental scanning electron microscopy*

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## What are the prerequisites for taking this subject?

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