



**How to quantify the building blocks of life?
Can miniaturized sensors improve rapid testing?
Which tools are needed to understand a disease?
Are nanomaterials valuable probes for bioanalysis?**

Bioanalysis – an exciting field of science providing the methodologies to study fundamental questions of life and to cope with life's challenges in diagnostics, pharmacy and medical technology. Probing single cells or molecules, providing point-of-care diagnostics or screening for new drugs: state-of-the-art bioanalytical tools are the basis of it all. The Master of Chemistry with focus on Bioanalysis aims at training a next generation of bioanalytical chemists to have a broad foundation in chemistry and an in-depth understanding of this interdisciplinary field where the life sciences meet analytical chemistry.

We seek students with a background in chemistry, curiosity for the life sciences and enjoyment in problem solving. Successful candidates receive the degree "MSc Chemistry" with a specialization in Bioanalysis. Application requires a Bachelor of Science degree in Chemistry or equivalent.

Basic Level:

Bioanalysis 1:

- spectroscopic and microscopic analysis of biomolecules
- concentration, structure and interaction analysis in complex matrices.

Bioanalysis 2:

- biological sample preparation
- advanced separation techniques
- hyphenation of separation techniques with mass spectrometry

Advanced Level:

SAS:

- biosensors
- point-of-care diagnostics
- arrays and screening platforms for the omics

Advanced Bioanalysis:

- electrochemical bioanalysis
- omics approaches
- radiobioanalysis
- nanomaterials in bioanalysis

Research Level:

- research internships in bioanalytical labs
- courses on specialized bioanalytical techniques
- international research seminars
- Master Thesis: solving a research problem in bioanalysis

Curious now?
Apply now!



Tuition free!

Mentoring by the leadership team of the Institute of Analytical Chemistry, Chemo- and Biosensors!
Access to the Ph.D. program in Bioanalysis within the Graduate School ChemPharm!