Modulbezeichnung:	**Physical Chemistry - Lab (CM-PC-Lab)** (Physical Chemistry - Lab)	**10 ECTS**
Modulverantwortliche/r:	Dirk M. Guldi	
Lehrende:	Assistenten, Guido Sauer	

Startsemester: SS 2022	Dauer: 1 Semester	Turnus: halbjährlich (WS+SS)
Präsenzzeit: 120 Std.	Eigenstudium: 180 Std.	Sprache: Englisch

Lehrveranstaltungen:

- Attendance at lab-course is compulsory!
- Attendance at safety instruction is compulsory!
- Attendance in winter or summer term possible!
- A valid laboratory insurance is mandatory for participation in the lab course - see: **www.laborversicherung.de**

Physical Chemistry - Lab (SS 2022, Praktikum, 15 SWS, Guido Sauer et al.)

Inhalt:

- Practical introduction to current and state-of-the-art research topics in the field of physical chemistry
- Advanced spectroscopic and image analysis
- Guided work on current research projects using methods of physical chemistry
- Documentation of experimental results

The practical part comprises 8 days in the physicochemical advanced practical course lab and, in addition, two 3-day practical projects in two different working groups of physical chemistry. The 3-day internships may be extended after consultation with the internship coordinator and the working group (in return the number of experiments in the practical lab course can be reduced).

Lernziele und Kompetenzen:

Students ...

- apply fundamental knowledge of physical chemistry to particular topics in research
- develop model-like descriptions for complex systems and model experimental data
- discover various modern experimental techniques and apply them systematically in practice
- apply and transfer knowledge acquired during their studies to handle and solve open questions in research projects in physical chemistry
- perform experiments/measurements, record and evaluate their results in appropriate scientific form and interpret results independently
- present their own results and acquired knowledge in an appropriate scientific style in English language in oral and written form
- evaluate the basic safety matters in handling hazardous materials and complex apparatus

Literatur:

- P. Atkins, J. De Paula, Atkins' Physical Chemistry, 10th edition, Oxford University Press, Oxford, 2014
- Literature references provided in the guidelines of each experiment

Verwendbarkeit des Moduls / Einpassung in den Musterstudienplan:

Das Modul ist im Kontext der folgenden Studienfächer/Vertiefungsrichtungen verwendbar:

[1] **Chemistry (Master of Science)**
(Po-Vers. 2020w | NatFak | Chemistry (Master of Science) | Fachliche Wahlpflichtmodule | Physical Chemistry | Physical Chemistry laboratory)

[2] **Chemistry (Master of Science)**
(Po-Vers. 2020w | NatFak | Chemistry (Master of Science) | Ergänzende Wahlpflichtmodule | Physical Chemistry | Physical Chemistry laboratory)

Studien-/Prüfungsleistungen:

Physical Chemistry Laboratory (Prüfungsnummer: 65061)
Prüfungsleistung, Praktikumsleistung
Anteil an der Berechnung der Modulnote: 100%
weitere Erläuterungen:
SeL: Poster presentation, 20 - 30 min
Prüfungssprache: Englisch

Erstablegung: SS 2022, 1. Wdh.: WS 2022/2023
1. Prüfer: Guido Sauer

Organisatorisches:

Please note:

- Students have to register for the module (check registration periods)
- Lab course is held as an in-class-course
- Lab course can be choosen in winter or summer term
- Time and place by appointment
- Registration/further information available on studon https://www.studon.fau.de/crs397438_join.html

Bemerkungen:

Module compatibility:

- Lab module within the **Core module „Physical Chemistry“** in M. Sc. Chemistry
- Lab module within the **Compulsory Elective Module** in M.Sc. Chemistry (if not chosen as Core module) or M. Sc. Molecular Science