

**Modulbezeichnung:** Research Module Quantum Chemistry (QC-R-Lab) 15 ECTS  
(Research Module Quantum Chemistry)

Modulverantwortliche/r: Andreas Görling  
Lehrende: Dirk Zahn, Andreas Görling, Dozenten

Startsemester: WS 2021/2022      Dauer: 1 Semester      Turnus: halbjährlich (WS+SS)  
Präsenzzeit: 345 Std.      Eigenstudium: 105 Std.      Sprache: Englisch

### Lehrveranstaltungen:

Research lab course (23 SWS) in one of the work groups of Quantum Chemistry

- Attendance at lab course is compulsory!
  - Attendance at safety instructions 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](http://www.laborversicherung.de)
- Research Module QC (WS 2021/2022, Praktikum, 23 SWS, Anwesenheitspflicht, Andreas Görling et al.)

### Inhalt:

- Practical introduction to current and state-of-the-art research topics in the field of quantum and computer chemistry
- Integration into a research group
- Guided work on a current research project using the methods of quantum and computer chemistry
- Attempts to solve independently a scientific problem

### Lernziele und Kompetenzen:

Students

- apply and transfer knowledge acquired during their studies to handle and solve open questions in research projects in quantum and computer chemistry
- put their own research results in relation to current literature and research papers in the field, and record their results in appropriate scientific writing and documentation style
- present their own results and acquired knowledge in an appropriate scientific style in English language

### Verwendbarkeit des Moduls / Einpassung in den Musterstudienplan:

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

[1] **Chemistry (Master of Science): 3. Semester**

(Po-Vers. 2020w | NatFak | Chemistry (Master of Science) | Forschungsmodul | Forschungsmodul Quantum Chemistry)

### Studien-/Prüfungsleistungen:

Forschungsmodul Quantum Chemistry (Prüfungsnummer: 65541)

Prüfungsleistung, Praktikumsleistung

Anteil an der Berechnung der Modulnote: 100%

weitere Erläuterungen:

LAB (PL): graded lab protocol of approx. 20 pages plus raw data documentation

Prüfungssprache: Englisch

Erstablesung: WS 2021/2022, 1. Wdh.: SS 2022

1. Prüfer: QC-R-Lab (N70014)

### Organisatorisches:

- Students have to register for the module (check registration periods)!
- Lab course is held as an in-class-course
- Lab course can be chosen in winter or summer term
- Time and place by appointment (in one of the involved working groups of Quantum chemistry), please contact the supervisor directly

**Bemerkungen:**

Please note:

- Research lab project (ca. 8 weeks: 21SWS LAB/2SWS Seminar) full time in a work group of the student's choice in Quantum Chemistry