Module Name
Advanced Physical Chemistry

Type of Module	**Module Code**
Advanced Module	AM-C-PC

Identification Number	**Workload**	**Credit Points**	**Term**	**Offered Every**	**Start**	**Duration**
MN-C-A-PC	180 Hours	6 CP	1. – 3. Semester	SuSe/WiSe	both	1 Semester

1	**Course Types**	**Contact Time**	**Private Study**	**Planned Group Size**
	a) Lecture b) Seminars	60 h	120 h	20-30 Students

2 Module Objectives and Skills to be Acquired

Students who successfully completed this module…

- have acquired detailed knowledge on current aspects of modern physical chemistry and its overlap with other important fields of research
- are able to refer about challenging and advanced topics from different areas of modern physical chemistry,
- are able to perform an in-depth analysis of a specific publication to identify its relevant contents and to bring into context with other studies in this area, and to present the results to in form of a brief presentation and discuss them with other students and docents.

3 Module Content

Concise and comprehensive lectures on major areas of physical chemistry, with a choice of the following areas: spectroscopy (rotational and vibrational transitions, electronic transitions, lasers, magnetic resonance), statistical thermodynamics (basic concepts and applications), electric and magnetic properties of molecules, macromolecules, surfaces and interfaces.

4 Teaching Methods

Lectures, seminars with student talks

5 Prerequisites (for the Module)

Formal: none
With regard to contents: none

6 Type of Examination

Written exam (after successful completion of the seminar)

7 Credits Awarded

Passed written exam

8 Compatibility with other Curricula

None

9	**Proportion of Final Grade** 6/114
10	**Module Coordinator** Prof. Dr. A. Schmidt, Prof. Dr. K. Meerholz, Prof. Dr. U. Deiters, Prof. Dr. K. Lindfors
11	**Further Information** Literature as well as seminar topics will be provided via **ILIAS**.