

<b>Module:</b> Relativistic Quantum Chemistry			
<b>University/department/institute:</b> Freie Universität Berlin/Department of Biology, Chemistry and Pharmacy/Institute of Chemistry and Biochemistry			
<b>Responsible for the module:</b> module lecturers			
<b>Admission requirements:</b> none			
<b>Qualification aims:</b> The students have knowledge of the theory of relativity and its effects on the electronic structure of molecules. They can carry out simple relativistic quantum chemistry calculations and know a range of methods of approaching relativistic quantum chemistry.			
<b>Content:</b> Special relativity theory; quantization and spin; Dirac equation for one-electron and multi-electron systems; methods of relativistic quantum chemistry; relativistic pseudopotentials			
<b>Teaching and learning units</b>	<b>Attendance</b> (Semester hours per week = SH)	<b>Forms of active participation</b>	<b>Study time</b> (hours)
Lecture	2	-	Attendance L 30 Preparation and follow-up L 30
Seminar on the computer using special software	2	Working on problem sets and computer simulations	Attendance SPC 30 Preparation and follow-up SPC 30 Examination preparation, examination 30
<b>Language of instruction</b>		German or English	
<b>Compulsory regular attendance</b>		Lecture: attendance recommended; seminar: yes	
<b>Study time, total hours</b>		150 hours	5 CP
<b>Duration of module</b>		One semester	
<b>Module offered</b>		Not regularly	
<b>Application</b>		Master's program in Chemistry	