

Module title		Abbreviation
Thermodynamics, Kinetics, Electrochemistry		o8-PC-TKE-152-m01
Module coordinator		Module offered by
lecturer of lecture "Thermodynamik, Kinetik, Elektrochemie"		Institute of Physical and Theoretical Chemistry
ECTS	Method of grading	Only after succ. compl. of module(s)
9	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	--
Contents		
<p>This module introduces students to the principles of thermodynamics. It focuses on the laws of thermodynamics, chemical equilibria, ideal and real gasses/solutions/mixed phases and electrochemistry. In addition to thermodynamic processes, it discusses the fundamental principles of kinetics.</p>		
Intended learning outcomes		
<p>Students are able to explain the laws of thermodynamics. They are able to describe thermodynamic aspects of solutions, gases, mixed phases and electrochemical reactions. Students are able to interpret the kinetic aspects of chemical reactions.</p>		
Courses (type, number of weekly contact hours, language – if other than German)		
V (4) + Ü (2)		
Method of assessment (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)		
<p>a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus</p>		
Allocation of places		
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Additional information		
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Workload		
270 h		
Teaching cycle		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
§ 62 I Nr. 1		
Module appears in		
<p>Bachelor' degree (1 major) Biochemistry (2015) Bachelor' degree (1 major) Chemistry (2015) Bachelor' degree (1 major) Mathematics (2015) Bachelor' degree (1 major) Computational Mathematics (2015) Bachelor' degree (1 major) Functional Materials (2015) First state examination for the teaching degree Gymnasium Chemistry (2015) Bachelor' degree (1 major) Biochemistry (2017) Bachelor' degree (1 major) Chemistry (2017) Bachelor' degree (1 major) Functional Materials (2021)</p>		



Bachelor' degree (1 major) Biochemistry (2022)
Bachelor' degree (1 major) Mathematics (2023)