

Module title		Abbreviation
Physical Chemistry 2 for Biochemistry Majors: Thermodynamics, Kinetics, Electrochemistry		o8-PC2-BC-092-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)
15	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	By way of exception, additional prerequisites are listed in the section on assessments.
Contents		
German contents available but not translated yet.		
<p>Das Modul führt in die Grundlagen der Thermodynamik ein. Schwerpunkt des Moduls sind die Hauptsätze der Thermodynamik, chemische Gleichgewichte, ideale und reale Gase/Lösungen/Mischphasen und Elektrochemie. Neben thermodynamischen Prozessen werden elementare Kenntnisse der Kinetik vermittelt. Das Modul bietet die Möglichkeit, das Wissen der Grundvorlesung(en) praktisch anzuwenden. Die Studierenden experimentieren nach einer Sicherheitseinweisung selbstständig im Labor. Neben der Durchführung der Versuche wird das Wissen der Studierenden in Kolloquien und Protokollen geprüft.</p>		
Intended learning outcomes		
German intended learning outcomes available but not translated yet.		
<p>Die Studierenden sind in der Lage, die Hauptsätze der Thermodynamik zu erklären. Er/Sie kann thermodynamische Aspekte von Lösungen, Gasen, Mischphasen sowie elektrochemischen Reaktionen darstellen. Die Studierenden können chemische Reaktionen auf kinetischer Ebene interpretieren. Die Studierenden sind in der Lage, theoretische Konzepte der Thermodynamik, Kinetik, Elektrochemie und Spektroskopie mit praktischen Versuchen im Labor zu vernetzen. Er/Sie kann erhaltene Messwerte inhaltlich, graphisch mit geeigneten Computerprogrammen sowie rechnerisch analysieren.</p>		
Courses (type, number of weekly contact hours, language – if other than German)		
This module comprises 2 module components. Information on courses will be listed separately for each module component.		
<ul style="list-style-type: none"> o8-PC2-BC-2-092: P (no information on SWS (weekly contact hours) and course language available) o8-PC2-1-092: V + Ü (no information on SWS (weekly contact hours) and course language available) 		
Method of assessment (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)		
Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.		
<p>Assessment in module component o8-PC2-BC-2-092: Physical Chemistry 2 for Biochemistry Majors: Thermodynamics, Kinetics, Electrochemistry</p> <ul style="list-style-type: none"> 6 ECTS, Method of grading: (not) successfully completed Vortestate (pre-experiment exams, approx. 15 minutes each), assessment of practical performance (log approx. 5 to 10 pages), Nachtestate (post-experiment exams, approx. 15 minutes each) Assessment offered: once a year, winter semester 		
<p>Assessment in module component o8-PC2-1-092: Thermodynamics, Kinetics, Electrochemistry Thermodynamics, Kinetics, Electrochemistry</p> <ul style="list-style-type: none"> 9 ECTS, Method of grading: numerical grade a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: 60 or 90 minutes each; 3 written examinations: 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) 		

- Other prerequisites: Admission prerequisite to assessment: successful completion of exercises in the respective classes as specified at the beginning of the course (usually 70% of exercises to be successfully completed) as well as regular attendance of exercises (usually a maximum of 2 incidents of unexcused absence).

Allocation of places

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Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

§ 62 (1) 1. Chemie "Allgemeine und Anorganische Chemie"; "Physikalische und Analytische Chemie"

Module appears in

Bachelor' degree (1 major) Biochemistry (2011)

Bachelor' degree (1 major) Biochemistry (2009)