

Module title		Abbreviation
General and Inorganic Chemistry for Food Chemistry Students		o8-LMC-AC1-152-mo1
Module coordinator		Module offered by
holder of the Chair of Food Chemistry		Institute of Pharmacy and Food Chemistry
ECTS	Method of grading	Only after succ. compl. of module(s)
14	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	--
Contents		
<p>Essential concepts and basic laws; nomenclature, atoms and the periodic table of elements; types of chemical bonds, intramolecular forces, solutions and heterogeneous systems; fundamental principles of thermodynamics and chemical kinetics; chemical equilibrium; the law of mass action; acid-base systems and redox systems; chemical equations and stoichiometry, chemical behaviour of reactants (elements and categories of substances) as well as their qualitative inorganic analysis with a special focus on elements commonly found in foods that may pose environmental or toxicological risks.</p>		
Intended learning outcomes		
<p>Students have developed an understanding of the principles of inorganic chemistry including stoichiometry and the most important elements. They are able to independently set up chemical equations and predict the behaviour of groups of inorganic substances. They are able to apply their theoretical knowledge in the lab and use reactions to detect inorganic ions as well as to detect the presence of inorganic ions in mixtures and matrices. Students have developed essential lab skills and can work safely and competently in a lab. They are able to independently perform qualitative analyses of drinking water to detect inorganic compounds, identify them and validate their results.</p>		
Courses (type, number of weekly contact hours, language — if other than German)		
V (2) + S (2) + P (8)		
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 (60 to 120 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups of 2 candidates (approx. 30 minutes total)] and [a] Vortestate and Nachtestate (pre and post-experiment exams, approx. 15 minutes), documentation and assessment of practical assignments (approx. 2 to 4 pages per analysis, no more than 60 pages total) or b) completion and written documentation (approx. 1 to 2 pages) of a theoretical assignment (approx. 30 minutes), Vortestate and Nachtestate (pre and post-experiment exams, approx. 15 minutes), documentation and assessment of practical assignments in lab notebook (approx. 2 to 4 pages per analysis, no more than 60 pages total).]</p>		
Allocation of places		
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Additional information		
<p>Pursuant to Section 2 Subsection 2 Sentence 2 Verordnung über die Ausbildung und Prüfung der Staatlich geprüften Lebensmittelchemikerinnen und Lebensmittelchemiker (Regulation on the training and examination of state-certified food chemists, APOLmCh) in conjunction with No. I 2. Letter a) and No. I 1. Letter a) of Annex 1 of APOLmCh and No. 1 of Annex 2 of APOLmCh.</p>		
Workload		
420 h		
Teaching cycle		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module appears in

Bachelor's degree (1 major) Food Chemistry (2015)

Bachelor's degree (1 major) Food Chemistry (2016)

Bachelor's degree (1 major) Food Chemistry (2019)