Module title			Abbreviation
Organic Chemistry 2 and analytical methods in organic chemistry			08-OC2-152-m01
Module coordinator		**Module offered by**	
holder of the Chair of Physically Organic Chemistry		Institute of Organic Chemistry	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
9	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	undergraduate	--	

Contents

This module introduces students to the rules of aromaticity and discusses specific reactions of aromatics. Using the example of carbonyl compounds, it extends the students' knowledge of substitution, elimination and addition reactions to complex reaction mechanisms. The course also focuses on oxidation and reduction reactions as well as rearrangement. In addition, it introduces students to the spectroscopic methods of infrared spectroscopy, mass spectrometry and NMR spectroscopy.

Intended learning outcomes

Students have become familiar with the criteria for aromaticity. They can analyse the varying reactivity of carbonyl compounds. They are able to describe specific reactions of carbonyls and aromatics. For that purpose, they can plan and formulate multi-stage syntheses with complex reaction mechanisms and can transfer them to unknown reactions. Students are able to describe important spectroscopic methods, to evaluate a spectrum and to draw conclusions regarding the molecular structure.

Courses (type, number of weekly contact hours, language — if other than German)

V (3) + Ü (1) + V (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)

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

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)

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Module appears in

Bachelor's degree (1 major) Biochemistry (2015)
Bachelor's degree (1 major) Chemistry (2015)
Bachelor's degree (1 major) Mathematics (2015)
Bachelor's degree (1 major) Computational Mathematics (2015)
Bachelor's degree (1 major) Biochemistry (2017)
Bachelor's degree (1 major) Chemistry (2017)

Bachelor's degree (1 major) Functional Materials (2021)
Bachelor's degree (1 major) Biochemistry (2022)
Bachelor's degree (1 major) Mathematics (2023)
Bachelor's degree (1 major) Functional Materials (2025)