Module title			Abbreviation
Structure and Function of Biological Membranes and Membrane Proteins			08-BC-SFBM-212-m01

Module coordinator	Module offered by
chairperson of examination committee Bachelor Biochemie (Biochemistry)	Chair of Biochemistry

ECTS	Method of grading	Only after succ. compl. of module(s)
10	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

Membranes and membrane proteins are involved in important functions in the cell. Membrane proteins enable the controlled transport of substances across the membrane, allow the exchange of information via receptors, and convert energy in the respiratory chain or photosynthesis. In this course, different classes of membrane proteins are introduced, typical membrane-bound vectorial processes are discussed, and methods are introduced to study these processes.

Intended learning outcomes

Students can explain the specific properties of membrane proteins and membranes. They can characterize and classify different types of membrane proteins based on functional and structural features. Students can discuss membrane-bound energy transition processes comparatively. They master practical methods for purification and characterization of biological membranes and membrane proteins. Students can independently compile current literature on membrane-bound processes and can give class presentations on these topics.

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

V (2) + S (1) + P (5)

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. 45 to 90 minutes) or
b) term paper (8 to 12 pages) or
c) oral examination of one candidate each (20 to 30 minutes) or
d) presentation (20 to 30 minutes)
Language of assessment: German and/or English
Assessment offered: Once a year, winter term

Allocation of places

Biochemie (Biochemistry), Bachelor's: 12 places.
Selection process Biochemie (Biochemistry), Bachelor's (180 ECTS credits):
Should the number of applications exceed the number of available places, places will be allocated according to the following quotas:
Quota 1 (two thirds of places): current average grade of successfully completed modules; among applicants with the same average grade, places will be allocated by lot.
Quota 2 (one third of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot.
A waiting list will be maintained and places re-allocated as they become available.

Additional information

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Workload

300 h

Teaching cycle

Teaching cycle: every year, winter semester

Referred to in LPO I (examination regulations for teaching-degree programmes)
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Module appears in
Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Biochemistry (2022)