# Module description

## Module title

**Structural and Functional Analysis of Biosensors 3**

## Abbreviation

07-6S3PS2-152-m01

### Module coordinator

holder of the Chair of Plant Physiology and Biophysics

### Module offered by

Faculty of Biology

### ECTS

15

### Method of grading

Numerical grade

### Only after succ. compl. of module(s)

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### Duration

1 semester

### Module level

Undergraduate

### Other prerequisites

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## Contents

Using the examples of topics in contemporary research, students will be introduced to the concepts of good scientific practice, including planning research strategies, performing complex experiments as well as documenting and communicating research findings in the form of a presentation, a publication or a term paper. Students will be involved in ongoing research and will learn to independently apply advanced methods in biophysics and protein chemistry. In addition, they will acquire an advanced knowledge of the mechanisms and structure-function relationships of chemoreceptors and photoreceptors in particular.

## Intended learning outcomes

Students are able to independently use advanced methods in the protein chemistry of biosensors. They are able to independently address and document questions in the field of plant biology, adhering to the principles of good scientific practice.

## Courses

**Ü (9) + S (1)**

Module taught in: German and/or English

## Method of assessment

a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours).

Students will be informed about the method and length of the assessment prior to the course.

Language of assessment: German and/or English

Creditable for bonus

## Allocation of places

5 places. Should the number of applications exceed the number of available places, places will be allocated as follows:

Students of the Bachelor’s degree subject Biologie (Biologie) with 180 ECTS credits will be given preferential consideration. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor’s degree subject Biologie (Biologie) with 180 ECTS credits and 5% of places (a minimum of one place in total) will be allocated to students of the Bachelor’s degree subject Biologie (Biologie) with 60 ECTS credits and to students of the Bachelor’s degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biologie (as well as potentially to students of other ‘importing’ subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in the same procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration.

A waiting list will be maintained and places re-allocated as they become available.

Selection process group 1 (95%): Places will primarily be allocated according to the applicants’ previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they ha-
have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot.

Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): lottery.

Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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

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Module appears in

- Bachelor' degree (1 major) Biology (2015)
- Bachelor' degree (1 major) Biology (2017)
- Bachelor' degree (1 major) Biology (2021)