Module title: Specific Cell- and Developmental Biology 2

Abbreviation: 07-5S2MZ1-132-m01

Module coordinator: holder of the Chair of Cell Biology and Developmental Biology

Module offered by: Faculty of Biology

ECTS: 10

Method of grading: numerical grade

Duration: 1 semester

Module level: undergraduate

Other prerequisites: --

Contents:
Advanced cell and developmental biology II: The cell cycle. This 4-week practical course will focus on dynamic cell cycle control and the part the cell cycle plays in the development of organisms. We will offer a variety of model organisms ranging from bacteria and yeasts to frogs and mammals. How is growth controlled? How are cell components redistributed during the cell cycle? What controls mitosis and replication? We will perform experiments to answer these and other fundamental questions. In addition to the practical part, the course will also include lectures, eLectures and, in particular, virtual experiments that will teach you how to independently design series of experiments. The methods you will use range from in vitro fertilisation as well as quantitative fluorescence and electron microscopy to methods in molecular biology such as Western blot and RNA interference.

Intended learning outcomes:
Students have acquired knowledge about general strategies and methods of molecular and cell biology. They are able to independently perform scientific laboratory work.

Courses:

(No information on weekly contact hours and language provided)

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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 varies 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.

Allocation of places:

Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor’s degree subject Biologie (Biology) with 180 ECTS credits. 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 (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor’s degree subject Biologie (Biology) 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 a standardised 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 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): allocation by lot. 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 (2013)