Module title | Virology 1
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Abbreviation | 03:4S1VIR-132-m01

<table>
<thead>
<tr>
<th>Module coordinator</th>
<th>holder of the Chair of Virology</th>
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<tbody>
<tr>
<td>Module offered by</td>
<td>Faculty of Medicine</td>
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<tr>
<td>ECTS</td>
<td>5</td>
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<tr>
<td>Method of grading</td>
<td>numerical grade</td>
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<tr>
<td>Only after succ. compl. of module(s)</td>
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<tr>
<td>Duration</td>
<td>1 semester</td>
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<td>Module level</td>
<td>undergraduate</td>
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<td>Other prerequisites</td>
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### Contents

Introduction to virology; the infectious cycle; virus structure and assembly; adsorption and entry; genomes and genetics; RNA-viruses: mRNA-synthesis and RNA-genome replication; retroviruses: reverse transcription and integration; DNA-viruses: transcription and genome replication. Foundations of cell biology. Introduction to the scientific method and scientific approach; principles of antiviral therapy and vaccination; introduction to clinical virology; HIV and AIDS. Safe work in a BSL-2 laboratory; cell culture; virus production, titre test; virus sequencing, phylogenetic analysis of viral quasispecies.

### Intended learning outcomes

Fundamental knowledge of molecular virology, the structure and replication of viruses and virus-host interactions; principles of antiviral vaccines and chemotherapeutics; principal techniques in cell and molecular biology for virological research.

### Courses

(V + S + P (no information on SWS (weekly contact hours) and course language available)

### 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.

Assessment offered: once a year, summer semester

Language of assessment: German or English

### Allocation of places

Biologie (Biology) Bachelor’s: 18 places. 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 (Biology) (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 standardized 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 fol-
ows: First, applicants will be ranked, firstly, according to their average grade weighted according to the num-
ber 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 ran-
kings, and places will be allocated according to this third ranking. Among applicants with the same ranking, pla-
ces will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Pla-
ces will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits al-
ready achieved in modules/module components of the Faculty of Biology; among applicants with the same num-
ber of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject sem-
esters; 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 (Biolo-
gy) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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

Module appears in
Bachelor’ degree (1 major) Biology (2013)