

## 1<sup>st</sup> Semester “Frontiers of Biosciences”

<b>Module 1 (Week 1-9)</b>	<b>15 CPs</b>
<b>Lectures and Tutorials:</b> “Frontiers in Molecular Biology, Biochemistry and Cell Biology” <ul style="list-style-type: none"> <li>• The Genome</li> <li>• Control of Gene Expression</li> <li>• Proteins</li> <li>• Intracellular Transport</li> <li>• Macromolecular Machines and Organelles</li> </ul>	
<b>Practical course:</b> “Pathogenic Microorganisms” by Prof. C. Clayton, Prof. A. Dalpke and Prof. M. Lanzer	
<b>Seminar:</b> “Pathogenic Microorganisms” by Prof. C. Clayton, Prof. A. Dalpke and Prof. M. Lanzer	
<b>Module 2 (Week 10-18)</b>	<b>15 CPs</b>
<b>Lectures and Tutorials:</b> “Frontiers in Molecular Biology, Biochemistry and Cell Biology” <ul style="list-style-type: none"> <li>• Cell-Cell communication: The Nervous System</li> <li>• Cell-Cell communication: Development</li> <li>• Host-Pathogen Interactions</li> <li>• Biological Networks</li> <li>• Evolution and Diversity</li> </ul>	
<b>Practical Course:</b> “Molecular Virology” by Prof. R. Bartenschlager and Prof. H.-G. Kräusslich	
<b>Seminar:</b> “Pathogenesis of viral infections” by Prof. R. Bartenschlager and Prof. H.-G. Kräusslich	

- **Lectures and Tutorials** will be given in week 1 - 5 in each module. You will have 3 lectures and 2 tutorials per week. At the end of each module you will have to pass one written exam comprising the lectures and tutorials. The grade is based on the “100-Punkteregel” (100 points = highest achievable grade, < 50 points = failed; see Appendix II).
- Major-specific **practical courses** (duration: 3 weeks) are given in each module once. They will make up 65 % of your grade combining practical course + seminar. You have to write a report and submit it to the course supervisor **4 weeks after termination of the course** at the latest!  
Major-specific **seminars** are given in each module once. In these seminars each student prepares a 30 min presentation based on a relevant research paper of a chosen topic. The seminars will make up 35 % of your grading (made up of 23% for the presentation, 8% for your participation in discussions and 4% for your hand-out) combining practical course + seminar!  
The grade is based on the “100-Punkteregel” (100 points = highest achievable grade, < 50 points = failed; see Appendix II).

## 2<sup>nd</sup> Semester “Focus Biosciences”

<b>Module 1 (Week 1-9)</b>	<b>15 CPs</b>
<b>Lecture and Tutorials:</b> “Molecular Virology” by Prof. R. Bartenschlager, Prof. H.-G. Kräusslich and Prof. S. Urban	
<b>Practical course:</b> Laboratory rotations (4 weeks) in laboratories of your choice at the Department of Infectious Diseases and in associated research groups	
<b>Seminar:</b> “Molecular Virology” by Prof. R. Bartenschlager and Prof. H.-G. Kräusslich	
<b>Module 2 (Week 10-18)</b>	<b>15 CPs</b>
<b>Lecture and Tutorials:</b> “Pathogenic Microorganisms” by Prof. C. Clayton, Prof. A. Dalpke and Prof. M. Lanzer	
<b>Practical course:</b> Laboratory rotations (4 weeks) in laboratories of your choice at the Department of Infectious Diseases and in associated research groups	
<b>Seminar:</b> “Pathogenic Microorganisms” by Prof. C. Clayton, Prof. A. Dalpke and Prof. M. Lanzer	

### Grading:

- Lectures and Tutorials** will be given in week 1 - 6 in each module. You will have about 3 lectures and 2 tutorials per week. At the end of each module you will have to pass one written exam comprising of the lectures and tutorials. The grade is based on the “100-Punkteregel” (100 points = highest achievable grade, < 50 points = failed; see Appendix II).
- During the 2<sup>nd</sup> semester (or earlier) you should do **2 laboratory rotations** (each 4 weeks) in a laboratory of your choice at our institute. They will make up **65 %** of your grading (practical course + seminar = 100%).  
The grade for these practical courses is based to 40% on your practical performance in the lab, 40% on your written report and 20% on your final presentation of your work in a research seminar. You have to submit your report to the supervisor **4 weeks after termination of the rotation** at the latest!  
Major-specific **seminars** are given in each module once. In these seminars each student prepares a 30 min presentation based on a relevant research paper of a chosen topic. The seminars will make up 35% of your grading (made up of 23% for the presentation, 8% for your participation in discussions and 4% for your hand-out).  
The grade is based on the “100-Punkteregel” (100 points = highest achievable grade, < 50 points = failed; see Appendix II).

### 3<sup>rd</sup> Semester “Biolab and working in bioscience”

<b>Module 1 (Week 1-9)</b> (can be combined with Module 1, 1 <sup>st</sup> Semester)	<b>15 CPs</b>
Practical course: 6-8 weeks in a laboratory of your choice at the Department of Infectious Diseases, in associated research groups or in an external laboratory abroad	
<b>Module 2 (Week 10 – 18)</b> (can be combined with Module 2, 2 <sup>nd</sup> Semester)	<b>15 CPs</b>
Practical course: 6-8 weeks in a laboratory of your choice at the Department of Infectious Diseases, in associated research groups or in an external laboratory abroad	

- During the 3<sup>rd</sup> semester (or earlier) you should perform **2 laboratory rotations** (each 6-8 weeks) in a laboratory of your choice at our institute or in an external laboratory. They will make up **100 %** of your grade, based to 40% on your practical performance in the lab (external laboratory: as evaluated by the external supervisor according to the 100 point grading key), 40 % on your written report and 20 % on your final presentation of your work in a research seminar. You have to submit your report to the supervisor 8 weeks after termination of the rotation at the latest!  
Rotations in external laboratories: see Appendix I: External lab rotations

### 4<sup>th</sup> Semester “Master thesis”

You have to start your Master’s thesis within 6 weeks of receiving the mark for your last internship.

Master thesis in a laboratory of your choice within the Major Infectious Diseases.
<b>30 CPs</b> (can be done in 3 <sup>rd</sup> Semester)

## Appendix:

### I. External Lab rotations

Lab rotations outside Heidelberg

New guidelines, updated September 2009

The lab rotation has to fit in thematically with the Major “Infectious Diseases”. This has to be agreed on with the Major coordinator Ralf Bartenschlager. Supervision of the student by the hosting institute has to be guaranteed. To register for the lab rotation abroad and to ensure that it will be accepted for credit points within the Major, the student has to present documentation by the host lab detailing:

- Duration and dates of the lab rotation
- Subject and title
- Guarantees for supervision
- Acknowledgement of the lab rotation guidelines

This documentation has to be with the major coordinator **at least 4 weeks** before the planned start of the external rotation.

In order to get the credit points from outside labs approved by the coordinator, the student has to submit two documents:

First, the student has to write a protocol according to the guidelines for the Master’s degree. This protocol has to be read and marked by the supervisor in the hosting institute. Students have to submit their report to their host supervisor **at the latest 4 weeks after termination** of the lab rotation.

Second, the supervisor at the hosting institute has to write a short evaluation based on the student’s performance in the lab, the written protocol and the oral presentation of the student’s work. The supervisor at the host institute has to evaluate student’s performance two weeks after obtaining the student’s report (**6 weeks after lab rotation ended** for the student).

The student’s total evaluation by the supervisor in the host institute is based on lab performance (40%), written report (40%) and oral presentation (20%) with a maximum total of 100 points (see Appendix II).

Both, the short evaluation and the lab rotation report have to be presented to the coordinator of the Major, but will not be marked again. The students will not have to present their work in Heidelberg.

The responsibility for obtaining and presenting both documents to the coordinator lies with the student. Approving the lab rotation for the Major is not possible without timely presentation of both documents. We expect both to be submitted **8 weeks after termination of the lab rotation** at the latest.

If you perform both laboratory rotations outside the Hygiene institute (including the associated research groups), the two rotations have to be located in different institutions.

**II. Grading Key for evaluation****Grading key for the evaluation  
100 point grading scale**

Points	Mark
<50	Failed
≥ 50 – 55	4,0
> 55 – 60	3,7
> 60 – 65	3,3
> 65 – 70	3,0
> 70 – 75	2,7
> 75 – 80	2,3
> 80 – 85	2,0
> 85 – 90	1,7
> 90 – 95	1,3
> 95 – 100	1,0