Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

Annex SFB

Studienfachbeschreibung (subject description, SFB) for the subject Biochemistry as a Bachelor's with 1 major

with the degree "Bachelor of Science" (180 ECTS credits)

Responsible: Faculty of Chemistry and Pharmacy

Examination regulations version: 2009

Abbreviations used:

Course types: **E** = field trip, **K** = colloquium, **O** = conversatorium, **P** = placement/lab course, **R** = project, **S** = seminar, **T** = tutorial, **Ü** = exercise, **V** = lecture

Term: **SS** = summer semester, **WS** = winter semester

Methods of grading: **NUM** = numerical grade, **B/NB** = (not) successfully completed

Regulations: **(L)ASPO** = general academic and examination regulations (for teaching-degree programmes), **FSB** = subject-specific provisions, **SFB** = list of modules

Other: **A** = thesis, **LV** = course(s), **PL** = assessment(s), **TN** = participants, **VL** = prerequisite(s)

Conventions for the modules in this SFB:

Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not creditable for bonus.

Information on assessment procedures:

Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the method of assessment to be used in the current semester by two weeks after the start of the course at the latest and will communicate this in the customary manner.

Should a module comprise more than one graded assessment, all assessments will be equally weighted, unless otherwise stated below.

Should the assessment comprise several individual assessments, successful completion of the module will require successful completion of all individual assessments.

In accordance with the general regulations governing the degree subject described in this module catalogue:

ASPO2009

associated official publications (FSB (subject-specific provisions)/SFB (list of modules)):

03-Aug-2010 (2010-41)

This module handbook seeks to render, as accurately as possible, the data that is of statutory relevance according to the examination regulations of the degree subject. However, only the FSB (subject-specific provisions) and SFB (list of modules) in their officially published versions shall be legally binding. In the case of doubt, the provisions on, in particular, module assessments specified in the FSB/SFB shall prevail.

Every module will be described using the following form:

Abbreviation	**Module title**							
	ECTS		Duration	(in semesters)	Method of grading		Module level	
	Courses	To be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y						
	Method of assessment							
	Only after successful completion of	if applicable						
	Other prerequisites	if applicable						
	Participants and allocation of places	if applicable						
	Additional information	if applicable						
	Referred to in LPO I	if applicable (examination regulations for teaching-degree programmes)						

<table>
<tr><th colspan="9">Compulsory Courses (118 ECTS credits)</th></tr>
<tr><td rowspan="4">03-5S2ST-092-m01</td><td colspan="8">Structural Biology 1</td></tr>
<tr><td>ECTS</td><td>10</td><td>Duration</td><td>1 semester</td><td>Method of grading</td><td>numerical grade</td><td>Modul level</td><td>undergraduate</td></tr>
<tr><td colspan="3">Courses</td><td colspan="6">V + Ü (no information on SWS (weekly contact hours) and course language available)</td></tr>
<tr><td colspan="3">Method of assessment</td><td colspan="6">a) written examination (approx. 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 (groups of up to 3 candidates, approx. 60 minutes) or e) presentation (approx. 20 to 30 minutes)</td></tr>
<tr><td rowspan="4">08-AC1-BC-092-m01</td><td colspan="8">Inorganic Chemistry 1</td></tr>
<tr><td>ECTS</td><td>16</td><td>Duration</td><td>1 semester</td><td>Method of grading</td><td>numerical grade</td><td>Modul level</td><td>undergraduate</td></tr>
<tr><td colspan="3">Courses</td><td colspan="6">This module comprises 3 module components. Information on courses will be listed separately for each module component.
• 08-AC1-BC-2-092: P (no information on SWS (weekly contact hours) and course language available)
• 08-AC1-BC-3-092: V (no information on SWS (weekly contact hours) and course language available)
• 08-AC1-1-072: V + V + Ü (no information on SWS (weekly contact hours) and course language available)</td></tr>
<tr><td colspan="3">Method of assessment</td><td colspan="6">Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.

Assessment in module component 08-AC1-BC-2-092: Practical course of Inorganic Chemistry 1 for Biochemistry Majors
• 4 ECTS, Method of grading: (not) successfully completed
• Vortestate (pre-experiment exams, approx. 15 minutes each), assessment of practical performance (log approx. 5 to 10 pages), Nachtestate (post-experiment exams, approx. 15 minutes each)
• Assessment offered: once a year, winter semester
Assessment in module component 08-AC1-BC-3-092: Accompanying lecture to the practical course of Inorganic Chemistry 1 for Biochemistry Majors
• 2 ECTS, Method of grading: numerical grade
• 2 written examinations (approx. 45 minutes each), weighted 1:1
Assessment in module component 08-AC1-1-072: Principles of Inorganic Chemistry Principles of Inorganic Chemistry Principles of Inorganic Chemistry
• 10 ECTS, Method of grading: numerical grade
• a) 1 to 3 written examinations (1 written examination: 90 minutes; 2 written examinations: 60 or 90 minutes each; 3 written examinations: 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes)</td></tr>
<tr><td rowspan="4">08-OC3P-092-m01</td><td colspan="8">Organic Chemistry - laboratory course for students of biochemistry</td></tr>
<tr><td>ECTS</td><td>7</td><td>Duration</td><td>1 semester</td><td>Method of grading</td><td>(not) successfully completed</td><td>Modul level</td><td>undergraduate</td></tr>
<tr><td colspan="3">Courses</td><td colspan="6">P (no information on SWS (weekly contact hours) and course language available)</td></tr>
<tr><td colspan="3">Method of assessment</td><td colspan="6">Vortestate (pre-experiment exams, approx. 15 minutes each), assessment of practical performance (log approx. 5 to 10 pages), Nachtestate (post-experiment exams, approx. 15 minutes each)</td></tr>
</table>

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<tr><td rowspan="6">08-PC2-BC-092-m01</td><td colspan="8">Physical Chemistry 2 for Biochemistry Majors: Thermodynamics, Kinetics, Electrochemistry</td></tr>
<tr><td>ECTS</td><td>15</td><td>Duration</td><td>1 semester</td><td>Method of grading</td><td>numerical grade</td><td>Modul level</td><td>undergraduate</td></tr>
<tr><td colspan="2">Courses</td><td colspan="6">This module comprises 2 module components. Information on courses will be listed separately for each module component.
• 08-PC2-BC-2-092: P (no information on SWS (weekly contact hours) and course language available)
• 08-PC2-1-092: V + Ü (no information on SWS (weekly contact hours) and course language available)</td></tr>
<tr><td colspan="2">Method of assessment</td><td colspan="6">Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.

Assessment in module component 08-PC2-BC-2-092: Physical Chemistry 2 for Biochemistry Majors: Thermodynamics, Kinetics, Electrochemistry
• 6 ECTS, Method of grading: (not) successfully completed
• Vortestate (pre-experiment exams, approx. 15 minutes each), assessment of practical performance (log approx. 5 to 10 pages), Nachtestate (post-experiment exams, approx. 15 minutes each)
• Assessment offered: once a year, winter semester
Assessment in module component 08-PC2-1-092: Thermodynamics, Kinetics, Electrochemistry Thermodynamics, Kinetics, Electrochemistry
• 9 ECTS, Method of grading: numerical grade
• a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: 60 or 90 minutes each; 3 written examinations: 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes)
• Other prerequisites: Admission prerequisite to assessment: successful completion of exercises in the respective classes as specified at the beginning of the course (usually 70% of exercises to be successfully completed) as well as regular attendance of exercises (usually a maximum of 2 incidents of unexcused absence).</td></tr>
<tr><td colspan="2">other prerequisites</td><td colspan="6">By way of exception, additional prerequisites are listed in the section on assessments.</td></tr>
<tr><td colspan="2">Referred to in LPO I</td><td colspan="6">§ 62 (1) 1. Chemie "Allgemeine und Anorganische Chemie"; "Physikalische und Analytische Chemie"</td></tr>
<tr><td rowspan="5">11-EFNF-072-m01</td><td colspan="8">Introduction to Physics for Students of Non-physics-related Minor Subjects</td></tr>
<tr><td>ECTS</td><td>7</td><td>Duration</td><td>2 semester</td><td>Method of grading</td><td>numerical grade</td><td>Modul level</td><td>undergraduate</td></tr>
<tr><td colspan="2">Courses</td><td colspan="6">V + V (no information on SWS (weekly contact hours) and course language available)</td></tr>
<tr><td colspan="2">Method of assessment</td><td colspan="6">written examination (approx. 120 minutes)</td></tr>
<tr><td colspan="2">Participants and allocation of places</td><td colspan="6">Only as part of pool of general key skills (ASQ): 10 places. Places will be allocated by lot.</td></tr>
<tr><td rowspan="5">11-PFNF-072-m01</td><td colspan="8">Practical Course Physics for Students of Non-physics-related Minor Subjects</td></tr>
<tr><td>ECTS</td><td>3</td><td>Duration</td><td>1 semester</td><td>Method of grading</td><td>(not) successfully completed</td><td>Modul level</td><td>undergraduate</td></tr>
<tr><td colspan="2">Courses</td><td colspan="6">P (no information on SWS (weekly contact hours) and course language available)</td></tr>
<tr><td colspan="2">Method of assessment</td><td colspan="6">a) oral test (approx. 15 minutes) during experiment and b) ungraded written examination (approx. 90 minutes)</td></tr>
<tr><td colspan="2">Participants and allocation of places</td><td colspan="6">Only as part of pool of general key skills (ASQ): 10 places. Places will be allocated by lot.</td></tr>
</table>

08-OC2-092-m01	**Organic Chemistry 2**							
	ECTS	9	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V + Ü + V (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		a) 1 to 3 written examinations (1 written examination: 90 minutes; 2 written examinations: 60 or 90 minutes each; 3 written examinations: 60 minutes each) or b) oral examination in groups (groups of 2, approx. 30 minutes)					
08-PC1-092-m01	**Physical Chemistry 1**							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V + Ü + V + Ü (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: 60 or 90 minutes each; 3 written examinations: 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes)					
	other prerequisites		Admission prerequisite to assessment: successful completion of exercises in the respective classes as specified at the beginning of the course (usually 70% of exercises to be successfully completed) as well as regular attendance of exercises (usually a maximum of 2 incidents of unexcused absence).					
07-1A1ZO-BC-092-m01	**General Biology for students of biochemistry**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V + V + V + V (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		4 written examinations (3 examinations: 60 minutes each; 1 examination: 30 minutes; including multiple choice questions), weighted 3:3:3:1					
08-BAN-092-m01	**Bioanalytics**							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		This module comprises 2 module components. Information on courses will be listed separately for each module component. • 08-BAN-1-092: V + Ü (no information on SWS (weekly contact hours) and course language available) • 08-BAN-2-092: Ü (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. **Assessment in module component 08-BAN-1-092:** Principles of Bioanalytics Principles of Bioanalytics • 3 ECTS, Method of grading: numerical grade • a) written examination (approx. 60 to 90 minutes) or b) log (approx. 20 pages) or c) oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) presentation (approx. 30 minutes). Students will be informed about the method and length of the assessment prior to the course. • Language of assessment: German or English **Assessment in module component 08-BAN-2-092:** Bioanalytics (practical course) • 5 ECTS, Method of grading: (not) successfully completed • a) log (approx. 20 pages) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) presentation (approx. 30 minutes) 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					

08-BCBC-092-m01	**Biochemistry for Biology Majors**							
	ECTS	11	Duration	2 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		This module comprises 2 module components. Information on courses will be listed separately for each module component. • 08-BC-1-092: V + Ü + V + Ü (no information on SWS (weekly contact hours) and course language available) • 08-BCBCP-1-092: Ü (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. **Assessment in module component 08-BC-1-092:** Principles of Biochemistry Principles of Biochemistry Principles of Biochemistry Principles of Biochemistry • 6 ECTS, Method of grading: numerical grade • a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) • Other prerequisites: Admission prerequisite to assessment: successful completion of exercises in the respective classes as specified at the beginning of the course (usually 70% of exercises to be successfully completed) as well as regular attendance of exercises (usually a maximum of 2 incidents of unexcused absence). **Assessment in module component 08-BCBCP-1-092:** Biochemistry for Biology Majors (Exercises) • 5 ECTS, Method of grading: (not) successfully completed • a) log (approx. 20 pages) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) presentation (approx. 30 minutes) Students will be informed about the method and length of the assessment prior to the course. • Assessment offered: once a year, summer semester					
	other prerequisites		By way of exception, additional prerequisites are listed in the section on assessments.					

<table>
<tr><td>08-BC-MOL-092-m01</td><td colspan="8">Molecular Biology</td></tr>
<tr><td></td><td>ECTS</td><td>6</td><td>Duration</td><td>1 semester</td><td>Method of grading</td><td>numerical grade</td><td>Modul level</td><td>undergraduate</td></tr>
<tr><td></td><td colspan="3">Courses</td><td colspan="5">This module comprises 2 module components. Information on courses will be listed separately for each module component.
• 08-BC-MOL-1-092: V + Ü (no information on SWS (weekly contact hours) and course language available)
• 03-GTBS-1-092: V (no information on SWS (weekly contact hours) and course language available)</td></tr>
<tr><td></td><td colspan="3">Method of assessment</td><td colspan="5">Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.

Assessment in module component 08-BC-MOL-1-092: Molecular Biology Lab Molecular Biology Lab
• 5 ECTS, Method of grading: numerical grade
• a) written examination (approx. 60 to 90 minutes) or b) log (approx. 20 pages) or c) oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) presentation (approx. 30 minutes). Students will be informed about the method and length of the assessment prior to the course.
• Language of assessment: German or English
Assessment in module component 03-GTBS-1-092: Genetic Engineering and Biosafety
• 1 ECTS, Method of grading: (not) successfully completed
• written examination (approx. 30 minutes)</td></tr>
<tr><td></td><td colspan="3">Modules successfully completed</td><td colspan="5">08-BC (module component 08-BC-1 only)</td></tr>
<tr><td>08-KOLL-BC-092-m01</td><td colspan="8">Bachelor's Thesis Colloquium</td></tr>
<tr><td></td><td>ECTS</td><td>3</td><td>Duration</td><td>1 semester</td><td>Method of grading</td><td>numerical grade</td><td>Modul level</td><td>undergraduate</td></tr>
<tr><td></td><td colspan="3">Courses</td><td colspan="5">K (no information on SWS (weekly contact hours) and course language available)</td></tr>
<tr><td></td><td colspan="3">Method of assessment</td><td colspan="5">final colloquium (approx. 30 minutes)
Language of assessment: German or English</td></tr>
<tr><td>10-M-MCB-101-m01</td><td colspan="8">Mathematics for students in Chemistry and Biology</td></tr>
<tr><td></td><td>ECTS</td><td>5</td><td>Duration</td><td>1 semester</td><td>Method of grading</td><td>numerical grade</td><td>Modul level</td><td>undergraduate</td></tr>
<tr><td></td><td colspan="3">Courses</td><td colspan="5">V + Ü (no information on SWS (weekly contact hours) and course language available)</td></tr>
<tr><td></td><td colspan="3">Method of assessment</td><td colspan="5">written examination (approx. 90 to 120 minutes)</td></tr>
<tr><td></td><td colspan="3">other prerequisites</td><td colspan="5">Registration for the exercise must be made via SB@home at the beginning of the course or as announced by the lecturer in accordance with the specified registration deadlines. Certain prerequisites must be met to qualify for admission to assessment (e. g. successful completion of a certain percentage of exercises). The lecturer will inform students about the respective details at the beginning of the course. Registration for the exercise will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew and have to register anew, too.</td></tr>
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08-OC1-092-m01	**Organic Chemistry 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V + Ü (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: 60 or 90 minutes each; 3 written examinations: 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes)					
	other prerequisites		Admission prerequisite to assessment: successful completion of exercises in the respective classes as specified at the beginning of the course (usually 70% of exercises to be successfully completed) as well as regular attendance of exercises (usually a maximum of 2 incidents of unexcused absence).					
	Referred to in LPO I		§ 62 (1) 2. Chemie "Organische und Bioorganische Chemie"					
Compulsory Electives (30 ECTS credits)								
03-PBC-092-m01	**Pathobiochemistry**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		This module comprises 2 module components. Information on courses will be listed separately for each module component. • 03-PBC-1-092: V + Ü (no information on SWS (weekly contact hours) and course language available) • 03-PBC-2-092: P (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. **Assessment in module component 03-PBC-1-092:** Basics in Pathobiochemistry Basics in Pathobiochemistry • 2 ECTS, Method of grading: numerical grade • written examination (approx. 90 minutes) • Language of assessment: German or English **Assessment in module component 03-PBC-2-092:** Pathobiochemistry Practical Course • 3 ECTS, Method of grading: (not) successfully completed • assessment of practical performance, Nachtestate (post-experiment exams: examination talks, approx. 15 minutes each), logs (approx. 20 pages) • Assessment offered: once a year, winter semester • Language of assessment: German or English					
	Participants and allocation of places		Information on the allocation of places will be listed separately for each module component. • 03-PBC-1-092: -- • 03-PBC-2-092: Biochemie (Biochemistry) Bachelor's: 6 places. Selection process Biochemie (Biochemistry) Bachelor's: 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.					

08-AVP5-BC-092-m01	**Advanced lab**							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		Ü (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		a) log (approx. 20 pages) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) presentation (approx. 30 minutes) Students will be informed about the method and length of the assessment prior to the course. Language of assessment: German or English					
08-AVP10-BC-092-m01	**Advanced lab**							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		Ü (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		a) log (approx. 20 pages) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) presentation (approx. 30 minutes) Students will be informed about the method and length of the assessment prior to the course. Language of assessment: German or English					
03-ZBP-092-m01	**Cell biology**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		P + S (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		written examination (approx. 60 minutes) Language of assessment: German or English					
	Participants and allocation of places		Biochemie (Biochemistry) Bachelor's: 12 places. Selection process Biochemie (Biochemistry) Bachelor's: 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.					
03-MTUB-092-m01	**Molecular Tumor Biology**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		Ü (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		a) written examination (approx. 60 to 90 minutes) or b) log (approx. 20 pages) or c) oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) presentation (approx. 30 minutes). Students will be informed about the method and length of the assessment prior to the course. Assessment offered: once a year, winter semester Language of assessment: German, English					
	Participants and allocation of places		Number of places: 12. Selection process Biochemie (Biochemistry) Bachelor's: 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. Selection process Biochemie (Biochemistry) Master's: allocation by lot.					

03-4S1IM-101-m01	**Immunology 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	This module comprises 2 module components. Information on courses will be listed separately for each module component. • 03-4S1IM-1IM-101: V + Ü (no information on SWS (weekly contact hours) and course language available) • 03-4S1IM-2IM-101: P (no information on SWS (weekly contact hours) and course language available)						
	Method of assessment	Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. **Assessment in module component 03-4S1IM-1IM-101:** Introduction to Immunology Introduction to Immunology • 2 ECTS, Method of grading: numerical grade • written examination (approx. 30 minutes) • Language of assessment: German or English • Other prerequisites: Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course. **Assessment in module component 03-4S1IM-2IM-101:** Practical Course Immunology • 3 ECTS, Method of grading: (not) successfully completed • presentation (approx. 20 to 30 minutes) • Assessment offered: once a year, summer semester • Language of assessment: German or English • Other prerequisites: Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.						
	other prerequisites	By way of exception, additional prerequisites are listed in the section on assessments.						
	Participants and allocation of places	Biologie (Biology) Bachelor's: 16 places. Biochemie (Biochemistry) Bachelor's: 18 places. Selection process Biochemie (Biochemistry) Bachelor's: 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. Selection process Biologie (Biology) Bachelor's: 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 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,						

		ly, 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						

03-4S1VL-101-m01	**Virology 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	This module comprises 3 module components. Information on courses will be listed separately for each module component. • 03-4S1VL-1-101: V (no information on SWS (weekly contact hours) and course language available) • 03-4S1VL-2-101: S (no information on SWS (weekly contact hours) and course language available) • 03-4S1VL-3-101: P (no information on SWS (weekly contact hours) and course language available)						
	Method of assessment	Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. **Assessment in module component 03-4S1VL-1-101:** General Virology • 1 ECTS, Method of grading: numerical grade • written examination (approx. 20 minutes) • Language of assessment: German or English **Assessment in module component 03-4S1VL-2-101:** General Virology - Seminar • 1 ECTS, Method of grading: (not) successfully completed • presentation (approx. 20 to 30 minutes) • Language of assessment: German or English **Assessment in module component 03-4S1VL-3-101:** Practical Course Virology • 3 ECTS, Method of grading: numerical grade • written examination (approx. 20 minutes) or oral examination (approx. 20 minutes) • Language of assessment: German or English • Only after successful completion of module components: Successful completion of module components 03-4S1VL-1 and 03-4S1VL-2 is a prerequisite for participation in module component 03-4S1VL-3. • Other prerequisites: Admission prerequisite to assessment: regular attendance of lab course as specified at the beginning of the course.						
	other prerequisites	By way of exception, additional prerequisites are listed in the section on assessments.						
	Participants and allocation of places	Biologie (Biology) Bachelor's: 18 places. Biochemie (Biochemistry) Bachelor's: 12 places. Selection process Biochemie (Biochemistry) Bachelor's: 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. Selection process Biologie (Biology) Bachelor's: 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 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%):						

		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, second-

03-4S1HG-BC-092-mo1	**Human genetics for students of biochemistry**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	This module comprises 2 module components. Information on courses will be listed separately for each module component. • 03-4S1HG-BC-1HZ-092: V + Ü (no information on SWS (weekly contact hours) and course language available) • 03-4S1HG-BC-2HZ-092: S (no information on SWS (weekly contact hours) and course language available)						
	Method of assessment	Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. **Assessment in module component 03-4S1HG-BC-1HZ-092:** Human cytogenetics for students of biochemistry Human cytogenetics for students of biochemistry • 3 ECTS, Method of grading: numerical grade • 2 written examinations (multiple choice): mid-semester examination (approx. 15 minutes), end-of-semester examination (approx. 20 minutes), weighted 1:1 **Assessment in module component 03-4S1HG-BC-2HZ-092:** Human cytogenetics for students of biochemistry (Seminar) • 2 ECTS, Method of grading: (not) successfully completed • presentation (approx. 20 to 30 minutes)						
	Participants and allocation of places	Biochemie (Biochemistry) Bachelor's: 4 places. Selection process Biochemie (Biochemistry) Bachelor's: 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.						
08-BC-MOLP-092-mo1	**Molecular Biology Lab**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	Ü (no information on SWS (weekly contact hours) and course language available)						
	Method of assessment	a) written examination (approx. 60 to 90 minutes) or b) log (approx. 20 pages) or c) oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) presentation (approx. 30 minutes). Students will be informed about the method and length of the assessment prior to the course. Assessment offered: once a year, winter semester Language of assessment: German or English						
	Modules successfully completed	08-BC (module component 08-BC-1 only)						
	Participants and allocation of places	Biochemie (Biochemistry) Bachelor's: 12 places. Selection process Biochemie (Biochemistry) Bachelor's: 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.						

07-4BFMZ4-BC-092-m01	**Bioinformatics for advanced Students in Biochemistry**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V + Ü (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		log (approx. 10 to 20 pages) Assessment offered: once a year, summer semester Language of assessment: German or English					
	other prerequisites		Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.					
	Participants and allocation of places		Biochemie (Biochemistry) Bachelor's: 4 places. Selection process Biochemie (Biochemistry) Bachelor's: 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.					
07-5S2M-Z2-BC-092-m01	**Specific Microbiology 2 for Students in Biochemistry**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		This module comprises 2 module components. Information on courses will be listed separately for each module component. • 07-5S2MZ2-1MI-BC-092: V + Ü (no information on SWS (weekly contact hours) and course language available) • 07-5S2MZ2-2MI-BC-092: S (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. **Assessment in module component 07-5S2MZ2-1MI-BC-092:** Molecular Microbiology for Students in Biochemistry Molecular Microbiology for Students in Biochemistry • 4 ECTS, Method of grading: numerical grade • a) written examination (approx. 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. 60 minutes) or e) presentation (approx. 20 to 30 minutes) • Language of assessment: German or English • Other prerequisites: Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course. **Assessment in module component 07-5S2MZ2-2MI-BC-092:** Seminar Molecular Microbiology for Students in Biochemistry • 1 ECTS, Method of grading: (not) successfully completed • presentation (approx. 20 to 30 minutes) • Assessment offered: once a year, winter semester					
	other prerequisites		By way of exception, additional prerequisites are listed in the section on assessments.					
	Participants and allocation of places		Biochemie (Biochemistry) Bachelor's: 12 places. Selection process Biochemie (Biochemistry) Bachelor's: 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.					

08-OC4-101-m01	**Organic Chemistry 4**							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		This module comprises 2 module components. Information on courses will be listed separately for each module component. • 08-OC4-2-101: P (no information on SWS (weekly contact hours) and course language available) • 08-OC4-1-092: V + Ü (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. **Assessment in module component 08-OC4-2-101:** Organic Chemistry 4 (Lab Course) • 5 ECTS, Method of grading: (not) successfully completed • Vortestate (pre-experiment exams, approx. 15 minutes each), assessment of practical performance (log approx. 5 to 10 pages), Nachtestate (post-experiment exams, approx. 15 minutes each) **Assessment in module component 08-OC4-1-092:** Organic Chemistry 4 Organic Chemistry 4 • 5 ECTS, Method of grading: numerical grade • a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) • Other prerequisites: Admission prerequisite to assessment: successful completion of exercises in the respective classes as specified at the beginning of the course (usually 70% of exercises to be successfully completed) as well as regular attendance of exercises (usually a maximum of 2 incidents of unexcused absence).					
	Modules successfully completed		08-AC1 (module component 08-AC1-2 only) or 08-AC1-BC (module component 08-AC1-BC-2 only) or 08-AN1 (module component 08-AN1-2 only)					
	other prerequisites		By way of exception, additional prerequisites are listed in the section on assessments.					
Thesis (12 ECTS credits)								
08-BA-BC-092-m01	**Bachelor Thesis in Biochemistry**							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		no courses assigned					
	Method of assessment		written thesis Language of assessment: German or English					
	Additional Information		Additional information on module duration: 10 weeks.					
Subject-specific Key Skills								
06-B-P2T-F2-072-m01	**Philosophy 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		written examination (approx. 120 minutes)					

07-2BM-072-m01	**Mathematical Biology and Biostatistics**							
	ECTS	4	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V + Ü (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		written examination (approx. 45 minutes) including multiple choice questions					
	other prerequisites		Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.					
	Participants and allocation of places		Only as part of "spezielles Studienangebot": 30 places.					
07-3A3BI-072-m01	**Bioinformatics**							
	ECTS	2	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		This module comprises 2 module components. Information on courses will be listed separately for each module component. • 07-3A3BI-1B-072: V (no information on SWS (weekly contact hours) and course language available) • 07-3A3BI-2B-072: S (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. **Assessment in module component 07-3A3BI-1B-072:** Bioinformatics (Lecture) • 1 ECTS, Method of grading: numerical grade • written examination (approx. 20 minutes) **Assessment in module component 07-3A3BI-2B-072:** Bioinformatics (Seminar) • 1 ECTS, Method of grading: (not) successfully completed • term paper (approx. 5 to 10 pages)					
	Participants and allocation of places		Only as part of Biochemistry Master's: 5 places. Places will be allocated by lot.					
03-FOR-BC-092-m01	**Contemporary Research in Biochemistry**							
	ECTS	2	Duration	2 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V + S (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		attendance of 80% of talks					
03-Phys-092-m01	**Physiology**							
	ECTS	3	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		written examination (30 multiple choice questions)					
03-VTK-092-m01	**Laboratory animal sciences**							
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V + P (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		written examination (approx. 60 minutes)					
	other prerequisites		Admission prerequisite to assessment: regular attendance of lab course as specified at the beginning of the course.					

08-EP-092-m01	**Practical Course - external**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		a) written examination (approx. 60 to 90 minutes) or b) log (approx. 20 pages) or c) oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) presentation (approx. 30 minutes). Students will be informed about the method and length of the assessment prior to the course. Language of assessment: German or English					
03-AP-092-m01	**Practical Course as Exchange Student**							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		P (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		a) written examination (approx. 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 (groups of up to 3 candidates, approx. 60 minutes) or e) presentation (approx. 20 to 30 minutes)					
03-TR-072-m01	**Toxicology and legal studies**							
	ECTS	3	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V + V (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		written examination (approx. 90 minutes)					
03-98-PGN-092-m01	**Introductory Neurobiology for students of biomedicine**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V + S + Ü (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		methods of assessment: a) written examination (45 to 60 minutes) or b) log (10 to 20 pages) or c) oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or e) presentation (20 to 30 minutes)					
	other prerequisites		Admission prerequisite to assessment: regular attendance of courses (lectures excluded) as specified at the beginning of the course.					
41-IK-NW1-101-m01	**Information Literacy for Students of the Natural Sciences (Basic Level)**							
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		Ü (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		a) written examination (approx. 60 minutes) or b) preparing and delivering a presentation with slides (approx. 10 minutes or approx. 5 minutes and approx. 1 page) or c) completing exercises (approx. 10 exercises) or d) presentation without slides (approx. 20 to 30 minutes) or e) preparing and delivering a presentation with slides (approx. 5 minutes) and completing exercises (approx. 5 exercises) or f) presentation without slides (approx. 10 to 15 minutes) and completing exercises (approx. 5 exercises)					
	Participants and allocation of places		Number of places: 5-50. There is a restricted number of places. If necessary, places will be allocated as follows: Students of the degree programmes of the respective subject-specific focuses will be given preferential consideration. The remaining places, if and when any become available, will be allocated to students of the other natural sciences degree programmes. In each of the above-mentioned groups, 30% of places will be allocated according to the number of subject semesters. Among applicants with the same number of subject semesters, places will be allocated by lot. The remaining 70% of places will each be allocated by lot.					

41-IK-NW2-101-mo1	**Information Literacy for Students of the Natural Sciences (Advanced Level)**							
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		Ü (no information on SWS (weekly contact hours) and course language available)					
	Method of assessment		a) written examination (approx. 60 minutes) or b) preparing and delivering a presentation with slides (approx. 10 minutes or approx. 5 minutes and approx. 1 page) or c) completing exercises (approx. 10 exercises) or d) presentation without slides (approx. 20 to 30 minutes) or e) preparing and delivering a presentation with slides (approx. 5 minutes) and completing exercises (approx. 5 exercises) or f) presentation without slides (approx. 10 to 15 minutes) and completing exercises (approx. 5 exercises)					
	other prerequisites		Knowledge and skills equivalent to those achieved in the basic module desirable.					
	Participants and allocation of places		Number of places: 10 to 50. There is a restricted number of places. If necessary, places will be allocated as follows: Students of the degree programmes of the respective subject-specific focuses will be given preferential consideration. The remaining places, if and when any become available, will be allocated to students of the other natural sciences degree programmes. In each of the above-mentioned groups, 30% of places will be allocated according to the number of subject semesters. Among applicants with the same number of subject semesters, places will be allocated by lot. The remaining 70% of places will each be allocated by lot.					