

## **Annex SFB**

# Studienfachbeschreibung (subject description, SFB) for the subject Mathematics as a Bachelor's with 1 major with the degree "Bachelor of Science" (180 ECTS credits)

Responsible: Faculty of Mathematics and Computer Science

Responsible: Institute of Mathematics

Examination regulations version: 2023

Examination regulations version: 2023

Abbreviations used: Course types:  $\mathbf{E} = \text{field trip}$ ,  $\mathbf{K} = \text{colloquium}$ ,  $\mathbf{O} = \text{conversatorium}$ ,  $\mathbf{P} = \text{placement/lab course}$ ,  $\mathbf{R} = \text{project}$ ,  $\mathbf{S} = \text{seminar}$ ,  $\mathbf{T} = \text{tutorial}$ ,  $\mathbf{U} = \text{exercise}$ ,  $\mathbf{V} = \mathbf{V} = \mathbf$ 

= 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: ditable for bonus.

Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not cre-

Information on Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the meassessment procedures: thod 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:

### ASP02015

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

31-Jan-2023 (2022-81)

22-Nov-2023 (2023-102)

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                          |         | 1                 |   |                        |                      |              |  |  |  |  |  |
|--------------|---------------------------------------|---------|-------------------|---|------------------------|----------------------|--------------|--|--|--|--|--|
|              | ECTS                                  |         | Duration          | (in semesters)  | Method of grading      |                      | Module level |  |  |  |  |  |
|              | Courses                               |         | To be sp          | be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y |                        |                      |              |  |  |  |  |  |
|              | Method of as                          | ssessme | ent               | -   |                        |                      |              |  |  |  |  |  |
|              | Only after su completion o            |         | l if applica      | if applicable   |                        |                      |              |  |  |  |  |  |
|              | Other prereq                          | uisites | if applica        | if applicable   |                        |                      |              |  |  |  |  |  |
|              | Participants and allocation of places |         | ocati- if applica | if applicable   |                        |                      |              |  |  |  |  |  |
|              | Additional in                         | formati | on if applica     | if applicable   |                        |                      |              |  |  |  |  |  |
|              | Referred to in                        | n LPO I | if applica        | able (examination re  | egulations for teachin | g-degree programmes) |              |  |  |  |  |  |

| Compulsory Cours    | es (40 E0            | CTS cred            | lits)          |   |   |                      |                              |             |               |  |  |  |  |
|---------------------|----------------------|---------------------|----------------|---|---|----------------------|------------------------------|-------------|---------------|--|--|--|--|
| 10-M-ANA-Ü-152-     | Overvi               | ew Anal             | ysis           |   |   |                      |                              |             |               |  |  |  |  |
| mo1                 | ECTS                 | 14                  | Duratio        | n   | 1 semester  | Method of grading    | numerical grade              | Modul level | undergraduate |  |  |  |  |
|                     | Course               | :S                  | •              | V (4)   | (4) + Ü (2)   |                      |                              |             |               |  |  |  |  |
|                     | Metho                | d of ass            | essment        | Asses   | oral examination of one candidate each (20 to 40 minutes) assessment will have reference to the contents of modules 10-M-ANA1 and 10-M-ANA2. anguage of assessment: German and/or English |                      |                              |             |               |  |  |  |  |
| 10-M-LNA-Ü-152-     | Overvi               | ew Line             | ar Algebra     | a   |   |                      |                              |             |               |  |  |  |  |
| mo1                 | ECTS                 | 14                  | Duratio        | n   | 1 semester  | Method of grading    | numerical grade              | Modul level | undergraduate |  |  |  |  |
|                     | Course               | :S                  |                | V (4)   | )) + Ü (2)  |                      |                              |             |               |  |  |  |  |
|                     | Metho                | d of ass            | essment        | Asses   | ral examination of one candidate each (20 to 40 minutes) ssessment will have reference to the contents of modules 10-M-LNA1 and 10-M-LNA2. anguage of assessment: German and/or English   |                      |                              |             |               |  |  |  |  |
| 10-M-VAN-152-m01    | Advand               | ced Ana             | lysis          |   |   |                      |                              |             |               |  |  |  |  |
|                     | ECTS                 | 7                   | Duratio        | n   | 1 semester  | Method of grading    | numerical grade              | Modul level | undergraduate |  |  |  |  |
|                     | Course               | !S                  |                | V (4)   | + Ü (2)   |                      |                              |             |               |  |  |  |  |
|                     | Method of assessment |                     | nutes<br>Langi | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Language of assessment: German and/or English creditable for bonus |   |                      |                              |             |               |  |  |  |  |
| 10-M-SEM-152-       | Semina               | Seminar Mathematics |                |   |   |                      |                              |             |               |  |  |  |  |
| mo1                 | ECTS                 | 5                   | Duratio        | n   | 1 semester  | Method of grading    | numerical grade              | Modul level | undergraduate |  |  |  |  |
|                     | Course               | :S                  |                | S (2)   |   |                      |                              |             |               |  |  |  |  |
|                     | Metho                | d of ass            | essment        |   | 60 to 120 minutes)<br>uage of assessment  | : German and/or Engl | ish                          |             |               |  |  |  |  |
|                     | Referre              | d to in l           | PO I           | § 22  | II Nr. 3 f)   |                      |                              |             |               |  |  |  |  |
| Compulsory Elective | es Math              | nematic             | s (79 ECT:     | S credi   | ts)   |                      |                              |             |               |  |  |  |  |
| Subfield Basics of  | Analysis             | (8 ECT              | S credits)     |   |   |                      |                              |             |               |  |  |  |  |
| 10-M-ANA1-152-      | Analys               | is 1                |                |   |   |                      |                              |             |               |  |  |  |  |
| mo1                 | ECTS                 | 8                   | Duratio        | n   | 1 semester  | Method of grading    | (not) successfully completed | Modul level | undergraduate |  |  |  |  |
|                     | Course               | !S                  |                | V (4)   | + Ü (2)   | •                    | · '                          |             | -             |  |  |  |  |
|                     |                      |                     |                | written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises each) Language of assessment: German and/or English  |   |                      |                              |             |               |  |  |  |  |

| 10-M-ANA2-152-            | Analys                             | is 2     | '         |   |  | -  |                  |  |  |  |  |  |
|---------------------------|------------------------------------|----------|-----------|---|--|--|------------------|--|--|--|--|--|
| mo1                       | ECTS                               | 8        | Duratio   | n   | 1 semester   | Method of grading (not) successfully completed Modul lev   | el undergraduate |  |  |  |  |  |
|                           | Course                             | :S       | ,         | V (4)   | $(4) + \ddot{U}(2)$  |  |                  |  |  |  |  |  |
|                           | Method                             | d of ass | essment   | each)   | written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises each) Language of assessment: German and/or English   |  |                  |  |  |  |  |  |
| Subfield Basics of        | of Linear Algebra (8 ECTS credits) |          |           |   |  |  |                  |  |  |  |  |  |
| 10-M-LNA1-152-            | Linear Algebra 1                   |          |           |   |  |  |                  |  |  |  |  |  |
| mo1                       | ECTS                               | 8        | Duratio   | n   | 1 semester   | Method of grading (not) successfully completed   Modul lev | el undergraduate |  |  |  |  |  |
|                           | Course                             | S        |           | V (4)   | + Ü (2)  |  | ·                |  |  |  |  |  |
|                           | Method                             | d of ass | essment   | each)   | ten examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises of assessment: German and/or English  |  |                  |  |  |  |  |  |
| 10-M-LNA2-152-            | Linear                             | Algebra  | 3 2       |   | 1  |  |                  |  |  |  |  |  |
| mo1                       | ECTS 8 Duratio                     |          | n         | 1 semester  | Method of grading (not) successfully completed   Modul lev   | el undergraduate   |                  |  |  |  |  |  |
|                           | Courses                            |          |           | V (4)   | + Ü (2)  |  | ·                |  |  |  |  |  |
|                           | Method of assessment               |          |           | each)   | written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises each) Language of assessment: German and/or English   |  |                  |  |  |  |  |  |
| <b>Subfield Basics of</b> | Applied                            | Mather   | natics (9 | ECTS c  | redits)  |  |                  |  |  |  |  |  |
| 10-M-NUM1-152-            | Numer                              | ical Ma  | thematics | 1   |  |  |                  |  |  |  |  |  |
| mo1                       | ECTS                               | 9        | Duratio   | n   | 1 semester   | Method of grading (not) successfully completed   Modul lev | el undergraduate |  |  |  |  |  |
|                           | Course                             | :S       |           | V (4)   | + Ü (2)  |  |                  |  |  |  |  |  |
|                           | Method                             | d of ass | essment   | nutes<br>Langi  | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 m nutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus |  |                  |  |  |  |  |  |
| 10-M-NUM2-152-            | Numer                              | ical Ma  | thematics | 2   |  |  |                  |  |  |  |  |  |
| mo1                       | ECTS                               | 9        | Duratio   | n   | 1 semester   | Method of grading (not) successfully completed   Modul lev | el undergraduate |  |  |  |  |  |
|                           | Course                             | :S       |           |   | + Ü (2)  |  |                  |  |  |  |  |  |
|                           |                                    |          |           | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Language of assessment: German and/or English creditable for bonus |  |  |                  |  |  |  |  |  |

| 10-M-STO1-152-     | Stocha                                | stics 1                 |           |   |   |                   |                             | ,              |               |  |  |  |  |  |
|--------------------|---------------------------------------|-------------------------|-----------|---|---|-------------------|-----------------------------|----------------|---------------|--|--|--|--|--|
| mo1                | ECTS                                  | 9                       | Duration  | 1   | 1 semester  | Method of grading | (not) successfully complete | ed Modul level | undergraduate |  |  |  |  |  |
|                    | Course                                | ·S                      |           | V (4) -   | $V(4) + \ddot{U}(2)$  |                   |                             |                |               |  |  |  |  |  |
|                    | Method                                | d of asse               | essment   | nutes<br>Langu  | ) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 miutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) anguage of assessment: German and/or English reditable for bonus  |                   |                             |                |               |  |  |  |  |  |
| 10-M-STO2-152-     | Stochastics 2                         |                         |           |   |   |                   |                             |                |               |  |  |  |  |  |
| mo1                | ECTS 9 Duratio                        |                         |           | 1   | 1 semester  | Method of grading | (not) successfully complete | ed Modul level | undergraduate |  |  |  |  |  |
|                    | Course                                | ·S                      |           | V (4) -   | + Ü (2)   |                   |                             |                |               |  |  |  |  |  |
|                    | Method                                | d of asse               | essment   | nutes<br>Langu  | ) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 miutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) anguage of assessment: German and/or English reditable for bonus  |                   |                             |                |               |  |  |  |  |  |
| Subfield Pure Math | ematics                               | natics (9 ECTS credits) |           |   |   |                   |                             |                |               |  |  |  |  |  |
| 10-M-ALG-152-m01   | Introdu                               | ıction to               | Algebra   |   |   |                   |                             |                |               |  |  |  |  |  |
|                    | ECTS                                  | 9                       | Duration  | 1   | 1 semester  | Method of grading | (not) successfully complete | ed Modul level | undergraduate |  |  |  |  |  |
|                    | Course                                | :S                      |           | V (4) -   | + Ü (2)   |                   |                             |                |               |  |  |  |  |  |
|                    | Method of assessment                  |                         |           | nutes<br>Langu  | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 nutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)<br>Language of assessment: German and/or English<br>creditable for bonus  |                   |                             |                |               |  |  |  |  |  |
| 10-M-DGE-152-m01   | Introduction to Differential Geometry |                         |           |   |   |                   |                             |                |               |  |  |  |  |  |
|                    | ECTS                                  | 9                       | Duration  | n   | 1 semester  | Method of grading | (not) successfully complete | ed Modul level | undergraduate |  |  |  |  |  |
|                    | Course                                | ·S                      |           | V (4) -   | + Ü (2)   |                   |                             | ,              |               |  |  |  |  |  |
|                    | Method of assessment                  |                         |           | nutes<br>Asses<br>Langu   | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 nutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Assessment offered: In the semester in which the course is offered and in the subsequent semester  Language of assessment: German and/or English  creditable for bonus |                   |                             |                |               |  |  |  |  |  |
| 10-M-DGL-152-m01   | Ordina                                | ry Differ               | ential Eq | uation  | <br>S   |                   |                             |                |               |  |  |  |  |  |
|                    | ECTS                                  | 9                       | Duration  | 1   | 1 semester  | Method of grading | (not) successfully complete | ed Modul level | undergraduate |  |  |  |  |  |
|                    |                                       |                         |           | V (4) + Ü (2)   |   |                   |                             |                |               |  |  |  |  |  |
|                    |                                       |                         |           | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Language of assessment: German and/or English creditable for bonus |   |                   |                             |                |               |  |  |  |  |  |

| 10-M-FTH-152-m01    | Introdu              | ction to  | Complex         | Analy   | rsis  |   |                                      |               |             |               |  |  |  |  |
|---------------------|----------------------|-----------|-----------------|---|---|---|--------------------------------------|---------------|-------------|---------------|--|--|--|--|
|                     | ECTS                 | 9         | Duration        | 1   | 1 semester  | Method of grading   | (not) successfu                      | lly completed | Modul level | undergraduate |  |  |  |  |
|                     | Courses              | S         |                 | V (4)   | + Ü (2)   |   |                                      |               |             |               |  |  |  |  |
|                     | Method               | of asse   | essment         |   | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 mi-   |   |                                      |               |             |               |  |  |  |  |
|                     |                      |           |                 |   | nutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)<br>anguage of assessment: German and/or English   |   |                                      |               |             |               |  |  |  |  |
|                     |                      |           |                 |   | able for bonus  | definal and/of Ling   | 11511                                |               |             |               |  |  |  |  |
| 10-M-GAN-152-       | Geometric Analysis   |           |                 |   |   |   |                                      |               |             |               |  |  |  |  |
| mo1                 | ECTS                 | 9         | Duration        |   | 1 semester  | Method of grading   | (not) successfu                      | lly completed | Modul level | undergraduate |  |  |  |  |
|                     | Courses              | S         |                 | V (4)   | + Ü (2)   |   |                                      |               |             |               |  |  |  |  |
|                     | Method of assessment |           |                 | nutes<br>Langu  | n) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Language of assessment: German and/or English creditable for bonus |   |                                      |               |             |               |  |  |  |  |
|                     | Referre              |           |                 |   | l Nr. 3 f)  |   |                                      |               |             |               |  |  |  |  |
| 10-M-PGE-152-m01    |                      |           |                 |   | Geometry  |   |                                      |               |             |               |  |  |  |  |
|                     | ECTS                 | 9         | Duration        |   | 1 semester  | Method of grading   | (not) successfu                      | lly completed | Modul level | undergraduate |  |  |  |  |
|                     | Courses              |           |                 | V (4)   |   |   |                                      |               |             |               |  |  |  |  |
|                     | Method of assessment |           |                 | nutes<br>Asses<br>Langu   | nutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English creditable for bonus                            |   |                                      |               |             |               |  |  |  |  |
| 10-M-AALG-232-      | Applied              | Algebr    | a               |   |   |   |                                      |               |             |               |  |  |  |  |
| mo1                 | ECTS                 | 9         | Duration        | ı   | 1 semester  | Method of grading   | (not) successfu                      | lly completed | Modul level | undergraduate |  |  |  |  |
|                     | Courses              | s         |                 | V (4)   |   |   |                                      |               |             |               |  |  |  |  |
|                     | Method               | l of asse | essment         | b) ora<br>c) ora<br>Langu   | l examination of one<br>l examination in gro  | oprox. 90 to 180 min<br>e candidate each (15<br>ups (groups of 2, 10<br>German and/or Eng | to 30 minutes) o<br>to 15 minutes pe | r             |             |               |  |  |  |  |
| Subfield Basics Spe | ecializat            | ion of N  | <b>Nathemat</b> | ics (9  | ECTS credits)   |   |                                      |               |             |               |  |  |  |  |
| 10-M-NUM1-152-      | Numeri               | cal Mat   | hematics        | 1   |   |   |                                      |               |             |               |  |  |  |  |
| mo1                 | ECTS                 | 9         | Duration        | 1   | 1 semester  | Method of grading   | (not) successfu                      | lly completed | Modul level | undergraduate |  |  |  |  |
|                     | Courses              | 5         | <del>-</del>    | V (4)   | V (4) + Ü (2)   |   |                                      |               |             |               |  |  |  |  |
|                     |                      |           |                 | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Language of assessment: German and/or English creditable for bonus |   |   |                                      |               |             |               |  |  |  |  |

| 10-M-NUM2-152-   | Numerical N                       | Mathematics  | 2   |  |                      |                            | ,           |               |  |  |  |  |
|------------------|-----------------------------------|--------------|---|--|----------------------|----------------------------|-------------|---------------|--|--|--|--|
| mo1              | ECTS 9                            | Duratio      | n   | 1 semester   | Method of grading (n | ot) successfully completed | Modul level | undergraduate |  |  |  |  |
|                  | Courses                           | ·            | V (4) -   | + Ü (2)  |                      |                            |             |               |  |  |  |  |
|                  | Method of a                       | issessment   | nutes<br>Langu  | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Language of assessment: German and/or English creditable for bonus  |                      |                            |             |               |  |  |  |  |
| 10-M-STO1-152-   | Stochastics 1                     |              |   |  |                      |                            |             |               |  |  |  |  |
| mo1              | ECTS 9 Duratio                    |              | n   | 1 semester   | Method of grading (n | ot) successfully completed | Modul level | undergraduate |  |  |  |  |
|                  | Courses                           |              | V (4) -   | + Ü (2)  |                      |                            |             |               |  |  |  |  |
|                  | Method of a                       | ssessment    | nutes<br>Langu  | written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) anguage of assessment: German and/or English reditable for bonus  |                      |                            |             |               |  |  |  |  |
| 10-M-ST02-152-   | Stochastics                       | 2            |   |  |                      |                            |             |               |  |  |  |  |
| mo1              | ECTS 9                            | Duratio      | n   | 1 semester   | Method of grading (n | ot) successfully completed | Modul level | undergraduate |  |  |  |  |
|                  | Courses                           |              | V (4) -   | + Ü (2)  |                      |                            |             |               |  |  |  |  |
|                  | Method of a                       |              | nutes<br>Langu<br>credit  | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Language of assessment: German and/or English creditable for bonus  |                      |                            |             |               |  |  |  |  |
| 10-M-OML-232-    | Optimization for Machine Learning |              |   |  |                      |                            |             |               |  |  |  |  |
| mo1              | ECTS 9                            | Duratio      |   | 1 semester   | Method of grading (n | ot) successfully completed | Modul level | undergraduate |  |  |  |  |
|                  | Courses                           |              | V (4) + Ü (2)<br>Module taught in: German and/or English  |  |                      |                            |             |               |  |  |  |  |
|                  | Method of a                       | issessment   | b) ora<br>c) ora<br>Langu<br>Asses  | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English Assessment offered: Only when announced in the semester in which the courses are offered and in the subsequent seme creditable for bonus |                      |                            |             |               |  |  |  |  |
| 10-M-ALG-152-m01 | Introduction                      | n to Algebra |   |  |                      |                            | ,           |               |  |  |  |  |
|                  | ECTS 9                            | Duratio      |   | 1 semester   | Method of grading (n | ot) successfully completed | Modul level | undergraduate |  |  |  |  |
|                  | Courses                           |              | V (4) + Ü (2)   |  |                      |                            |             |               |  |  |  |  |
|                  | Method of a                       | ssessment    | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Language of assessment: German and/or English creditable for bonus |  |                      |                            |             |               |  |  |  |  |

| 10-M-DGE-152-m01 | Introdu                         | ction to        | Differen | tial Ge   | ometry  |                   |                         |       |             |               |  |  |  |  |
|------------------|---------------------------------|-----------------|----------|---|---|-------------------|-------------------------|-------|-------------|---------------|--|--|--|--|
|                  | ECTS                            | 9               | Duration | n   | 1 semester  | Method of grading | (not) successfully comp | leted | Modul level | undergraduate |  |  |  |  |
|                  | Courses                         | S               | -        | V (4)   | + Ü (2)   |                   |                         |       | -           |               |  |  |  |  |
|                  |                                 |                 |          | nutes<br>Asses<br>Langu   | ) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 mi-<br>utes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)<br>ssessment offered: In the semester in which the course is offered and in the subsequent semester<br>anguage of assessment: German and/or English<br>reditable for bonus |                   |                         |       |             |               |  |  |  |  |
| 10-M-DGL-152-m01 | Ordinary Differential Equations |                 |          |   |   |                   |                         |       |             |               |  |  |  |  |
|                  | ECTS                            | 9               | Duration | n   | 1 semester  | Method of grading | (not) successfully comp | leted | Modul level | undergraduate |  |  |  |  |
|                  | Courses                         |                 |          | V (4)   | + Ü (2)   |                   |                         |       | •           |               |  |  |  |  |
|                  | Method of assessment            |                 |          | nutes<br>Langu<br>credit  | written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 mites) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) nguage of assessment: German and/or English editable for bonus   |                   |                         |       |             |               |  |  |  |  |
| 10-M-FTH-152-m01 |                                 | ction to        | Complex  | x Analy   |   |                   |                         |       |             |               |  |  |  |  |
|                  |                                 | ECTS 9 Duration |          |   | 1 semester  | Method of grading | (not) successfully comp | leted | Modul level | undergraduate |  |  |  |  |
|                  | Courses                         | S               |          |   | + Ü (2)   |                   |                         |       |             |               |  |  |  |  |
|                  | Method of assessment            |                 |          | nutes<br>Langu  | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Language of assessment: German and/or English creditable for bonus   |                   |                         |       |             |               |  |  |  |  |
| 10-M-GAN-152-    | Geome                           | tric Ana        | lysis    |   |   |                   |                         |       |             |               |  |  |  |  |
| mo1              | ECTS                            | 9               | Duratio  | n   | 1 semester  | Method of grading | (not) successfully comp | leted | Modul level | undergraduate |  |  |  |  |
|                  | Courses                         |                 | -0-      |   | + Ü (2)   |                   |                         |       |             |               |  |  |  |  |
|                  | Method of assessment            |                 |          | nutes<br>Langu  | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 nutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus  |                   |                         |       |             |               |  |  |  |  |
|                  | Referre                         | d to in L       | PO I     | § 22 l  | Nr. 3 f)  |                   |                         |       |             |               |  |  |  |  |
| 10-M-DIM-152-m01 | Introdu                         | ction to        | Discrete | Math  | ematics   |                   |                         |       | ,           |               |  |  |  |  |
|                  | ECTS                            | 9               | Duration | n   | 1 semester  | Method of grading | (not) successfully comp | leted | Modul level | undergraduate |  |  |  |  |
|                  | Courses                         |                 |          | V (4)   | V (4) + Ü (2)   |                   |                         |       |             |               |  |  |  |  |
|                  | Method of assessment            |                 |          | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Language of assessment: German and/or English creditable for bonus |   |                   |                         |       |             |               |  |  |  |  |

| 10-M-FAN-152-m01 | Introdu  | iction to                           | Function   | al Ana                  | lysis  | ,   |                     |              |             |                                    |  |  |  |  |
|------------------|--|-------------------------------------|--|-------------------------|--|---|---------------------|--------------|-------------|------------------------------------|--|--|--|--|
|                  | ECTS   | 9                                   | Duration   | 1                       | 1 semester   | Method of grading   | (not) successful    | ly completed | Modul level | undergraduate                      |  |  |  |  |
|                  | Course   | S                                   |  | V (4)                   | + Ü (2)  |   |                     |              | -           |                                    |  |  |  |  |
|                  | Method of assessment                           |                                     |  | nutes<br>Langi          | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Language of assessment: German and/or English creditable for bonus  |   |                     |              |             |                                    |  |  |  |  |
|                  | Referred to in LPO I                           |                                     |  | § 22 II Nr. 3 f)        |  |   |                     |              |             |                                    |  |  |  |  |
| 10-M-PAR-152-m01 | Introduction to Partial Differential Equations |                                     |  |                         |  |   |                     |              |             |                                    |  |  |  |  |
|                  | ECTS   | 9                                   | Duration   | 1                       | 1 semester Method of grading (not) successfully completed Modul level undergraduate  |   |                     |              |             |                                    |  |  |  |  |
|                  | Course   | S                                   |  | V (4)                   | + Ü (2)  |   |                     |              | •           |                                    |  |  |  |  |
|                  | Method   | d of asse                           |  | nutes<br>Asses<br>Langu | tten examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) assment offered: In the semester in which the course is offered and in the subsequent semester usage of assessment: German and/or English table for bonus                        |   |                     |              |             |                                    |  |  |  |  |
| 10-M-PGE-152-m01 | Introdu  | Introduction to Projective Geometry |  |                         |  |   |                     |              |             |                                    |  |  |  |  |
|                  | ECTS 9 Duratio                                 |                                     |  | 1                       | 1 semester   | Method of grading   | (not) successful    | ly completed | Modul level | undergraduate                      |  |  |  |  |
|                  | Course   | S                                   |  | V (4)                   | + Ü (2)  |   |                     |              |             |                                    |  |  |  |  |
|                  | Method of assessment                           |                                     |  | nutes<br>Asses<br>Langu | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 nutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English creditable for bonus |   |                     |              |             |                                    |  |  |  |  |
| 10-M-ZTH-152-m01 | Introdu  | iction to                           | Number   | Theor                   | y  |   |                     |              |             |                                    |  |  |  |  |
|                  | ECTS   | 9                                   | Duration   | 1                       | 1 semester   | Method of grading   | (not) successful    | ly completed | Modul level | undergraduate                      |  |  |  |  |
|                  | Course   | S                                   |  | V (4)                   | + Ü (2)  |   |                     |              |             |                                    |  |  |  |  |
|                  | Method   | d of asse                           |  | nutes<br>Langu          | ) or c) oral examina   | approx. 90 to 180 min<br>ation in groups (group<br>t: German and/or Eng | s of 2, 10 to 15 mi |              |             | f one candidate each (15 to 30 mi- |  |  |  |  |
| 10-M-AALG-232-   | Applied  | d Algebr                            | ra   |                         |  |   |                     |              |             |                                    |  |  |  |  |
| mo1              | ECTS   | 9                                   | Duration   | 1                       | 1 semester   | Method of grading   | (not) successful    | ly completed | Modul level | undergraduate                      |  |  |  |  |
|                  | Course   | S                                   |  | V (4)                   | + Ü (2)  |   |                     |              |             |                                    |  |  |  |  |
|                  | Method of assessment                           |                                     | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus |                         |  |   |                     |              |             |                                    |  |  |  |  |

| 10-M-LOG-232-            | Introdu              | Introduction to Mathematical Logic |            |   |  |  |   |             |                                  |  |  |  |  |  |
|--------------------------|----------------------|------------------------------------|------------|---|--|--|---|-------------|----------------------------------|--|--|--|--|--|
| mo1                      | ECTS                 | 9                                  | Duration   | )   | 1 semester   | Method of grading                            | (not) successfully completed                                      | Modul level |                                  |  |  |  |  |  |
|                          | Course               | S                                  |            |   | V (4) + Ü (2)<br>Module taught in: German and/or English   |  |   |             |                                  |  |  |  |  |  |
|                          |                      |                                    |            | a) wrinutes<br>Lange<br>Credi   | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Language of assessment: German and/or English  Creditable for bonus  Assessment offered: In the semester in which the course is offered and in the following semester |  |   |             |                                  |  |  |  |  |  |
| Subfield Overview        | Applied              | Mathem                             | natics (12 | ECTS  | credits)   |  |   |             |                                  |  |  |  |  |  |
| 10-M-STO-Ü-152-          | Overvie              | w Stock                            | hastics 1  | and St  | ochastics 2  |  |   |             |                                  |  |  |  |  |  |
| mo1                      | ECTS                 | 12                                 | Duration   | 1   | 1 semester   | Method of grading                            | numerical grade   | Modul level | undergraduate                    |  |  |  |  |  |
|                          | Course               | S                                  |            | V (4)   | + Ü (2)  | •  |   |             |                                  |  |  |  |  |  |
|                          |                      |                                    |            | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English |  |  |   |             |                                  |  |  |  |  |  |
| 10-M-NUM-Ü-152-          | Overvie              | w Nume                             | erical Mat | hema  | tics 1 and Numerical   | Mathematics 2                                |   |             |                                  |  |  |  |  |  |
| mo1                      | ECTS                 | 12                                 | Duration   |   | 1 semester   | Method of grading                            | numerical grade   | Modul level | undergraduate                    |  |  |  |  |  |
|                          | Course               | S                                  |            | V (4)   | + Ü (2)  |  |   |             |                                  |  |  |  |  |  |
|                          | Method of assessment |                                    |            | Asses<br>be se  | oral examination of one candidate each (20 to 40 minutes)<br>Assessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only<br>be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).<br>Language of assessment: German and/or English   |  |   |             |                                  |  |  |  |  |  |
| 10-M-NUST-Ü-152-         | Overvie              | w Nume                             | erical Mat | hema  | tics 1 and Stochastic  | CS 1   |   |             |                                  |  |  |  |  |  |
| mo1                      | ECTS                 | 12                                 | Duration   | 1   | 1 semester   | Method of grading                            | numerical grade   | Modul level | undergraduate                    |  |  |  |  |  |
|                          | Course               | S                                  |            | V (4)   | + Ü (2)  | •  |   |             | *                                |  |  |  |  |  |
|                          | Method               | d of asse                          | essment    | Asses<br>be se  |  | erence to two topics<br>t of one examination | in applied mathematics as agre<br>n in the sub-fields Gesamtüberb |             | ne examiner. Each topic may only |  |  |  |  |  |
| <b>Subfield Overview</b> | Pure Ma              | themati                            | cs (12 EC  | ΓS cre  | dits)  |  |   |             |                                  |  |  |  |  |  |
| 10-M-ALGD-Ü-152-         | Overvie              | ew Algeb                           | bra and O  | rdinaı  | y Differential Equati  | ons  |   |             |                                  |  |  |  |  |  |
| mo1                      | ECTS                 | 12                                 | Duration   | )   | 1 semester   | Method of grading                            | numerical grade   | Modul level | undergraduate                    |  |  |  |  |  |
|                          | Course               | S                                  |            | V (4)   | V (4) + Ü (2)  |  |   |             |                                  |  |  |  |  |  |
|                          | Method of assessment |                                    |            | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).  Language of assessment: German and/or English   |  |  |   |             |                                  |  |  |  |  |  |

| 10-M-DGGD-Ü-152- | Overvie              | ew Diffe | erential G | eomet   | ry and Ordinary Dif  | ferential Equations   |                 | ,           |                                  |  |  |  |  |
|------------------|----------------------|----------|------------|---|--|-----------------------|-----------------|-------------|----------------------------------|--|--|--|--|
| mo1              | ECTS                 | 12       | Duratio    | n   | 1 semester   | Method of grading     | numerical grade | Modul level | undergraduate                    |  |  |  |  |
|                  | Course               | S        |            | V (4)   | + Ü (2)  | •                     |                 | `           |                                  |  |  |  |  |
|                  | Method               | of ass   | essment    |   |  | candidate each (20 to |                 |             |                                  |  |  |  |  |
|                  |                      |          |            |   | ssessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be elected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).   |                       |                 |             |                                  |  |  |  |  |
|                  |                      |          |            |   | anguage of assessment: German and/or English   |                       |                 |             |                                  |  |  |  |  |
| 10-M-ALFT-Ü-152- | Overvie              | ew Alge  | bra and C  |   | nplex Analysis   |                       |                 |             |                                  |  |  |  |  |
| mo1              |                      | 12       | Duration   | <u> </u>  | 1 semester   | Method of grading     | numerical grade | Modul level | undergraduate                    |  |  |  |  |
|                  | Course               | <br>S    |            | V (4)   | + Ü (2)  | , ,                   |                 | ļ           |                                  |  |  |  |  |
|                  | Method of assessment |          |            | Asse<br>seled<br>Lang   | l examination of one candidate each (20 to 40 minutes) sessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be ected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Inguage of assessment: German and/or English          |                       |                 |             |                                  |  |  |  |  |
| 10-M-FTDG-Ü-152- | Overvie              | ew Com   | plex Anal  | ysis a  | nd Differential Geo  | metry                 |                 |             |                                  |  |  |  |  |
| mo1              | ECTS 12 Duration     |          |            |   | 1 semester   | Method of grading     | numerical grade | Modul level | undergraduate                    |  |  |  |  |
|                  | Courses              |          |            | V (4)   | + Ü (2)  |                       |                 |             |                                  |  |  |  |  |
|                  | Method of assessment |          |            | Asse<br>selec   | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English |                       |                 |             |                                  |  |  |  |  |
| 10-M-FTGD-Ü-152- | Overvie              | ew Com   | plex Anal  | ysis a  | nd Ordinary Differe  | ntial Equations       |                 | ,           |                                  |  |  |  |  |
| mo1              | ECTS                 | 12       | Duratio    | n   | 1 semester   | Method of grading     | numerical grade | Modul level | undergraduate                    |  |  |  |  |
|                  | Course               | S        |            | V (4)   | + Ü (2)  |                       |                 | ,           |                                  |  |  |  |  |
|                  |                      |          |            | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English  |  |                       |                 |             |                                  |  |  |  |  |
| 10-M-GADG-Ü-152- | Overvie              | ew Geoi  | metric Ana | alysis  | and Differential Ge  | ometry                |                 |             |                                  |  |  |  |  |
| mo1              | ECTS                 | 12       | Duratio    | 1   | 1 semester   | Method of grading     | numerical grade | Modul level | undergraduate                    |  |  |  |  |
|                  | Course               | S        |            | V (4)   | + Ü (2)  |                       |                 | ,           | <del></del> -                    |  |  |  |  |
|                  |                      |          |            | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).  Language of assessment: German and/or English |  |                       |                 |             | examiner. Each topic may only be |  |  |  |  |

| 10-M-GAGD-Ü-152-  | 2- Overview Geometric Analysis and Ordinary Differential Equations |                                      |           |  |  |             |                                  |  |  |  |  |  |
|-------------------|--|--------------------------------------|-----------|--|--|-------------|----------------------------------|--|--|--|--|--|
| mo1               | ECTS   | 12                                   | Duration  | 1 semester   | Method of grading   numerical grade  | Modul level | undergraduate                    |  |  |  |  |  |
|                   | Courses  | 5                                    |           | V (4) + Ü (2)  | <u> </u>   | ·           | •                                |  |  |  |  |  |
|                   | Method   | of asses                             | ssment    | Assessment will have selected as the subject   | ral examination of one candidate each (20 to 40 minutes) ssessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be elected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). anguage of assessment: German and/or English |             |                                  |  |  |  |  |  |
| 10-M-GAFT-Ü-152-  | Overvie  | w Geom                               | etric Ana | alysis and Complex Ana   | ılysis   |             |                                  |  |  |  |  |  |
| mo1               | ECTS   | 12                                   | Duration  | 1 semester   | Method of grading   numerical grade  | Modul level | undergraduate                    |  |  |  |  |  |
|                   | Courses  | 5                                    |           | V (4) + Ü (2)  | · ·  | •           |                                  |  |  |  |  |  |
|                   |  |                                      |           | Assessment will have selected as the subjectanguage of assessments.  | ral examination of one candidate each (20 to 40 minutes) ssessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may onlelected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). In guage of assessment: German and/or English     |             |                                  |  |  |  |  |  |
| 10-M-ALPG-Ü-152-  | Overvie  | view Algebra and Projective Geometry |           |  |  |             |                                  |  |  |  |  |  |
| mo1               | ECTS   | 12                                   | Duration  | 1 semester   | Method of grading   numerical grade  | Modul level | undergraduate                    |  |  |  |  |  |
|                   | Courses  |                                      |           | V (4) + Ü (2)  |  |             |                                  |  |  |  |  |  |
|                   | Method of assessment   |                                      |           | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English |  |             |                                  |  |  |  |  |  |
| 10-M-ALAA-Ü-232-  | Overvie  | w Algeb                              | ra and A  | pplied Algebra   |  |             |                                  |  |  |  |  |  |
| mo1               | ECTS   | 12                                   | Duration  | 1 semester   | Method of grading   numerical grade  | Modul level | undergraduate                    |  |  |  |  |  |
|                   | Courses  | 5                                    |           | V (4) + Ü (2)  | ·  | •           |                                  |  |  |  |  |  |
|                   | Method   | of asses                             | ssment    | Assessment will have selected as the subject   | e candidate each (20 to 40 minutes)<br>reference to two topics in pure mathematics as<br>t of one examination in the sub-fields Gesamtü<br>ent: German and/or English  |             | examiner. Each topic may only be |  |  |  |  |  |
| Subfield Overview | Advanced   | d Mathe                              | matics (: | 12 ECTS credits)   |  |             |                                  |  |  |  |  |  |
| 10-M-ALGD-Ü-152-  | Overvie  | w Algeb                              | ra and O  | rdinary Differential Equ   | uations  |             |                                  |  |  |  |  |  |
| mo1               | ECTS   | 12                                   | Duration  | 1 semester   | Method of grading numerical grade  | Modul level | undergraduate                    |  |  |  |  |  |
|                   | Courses  |                                      |           | V (4) + Ü (2)  |  |             |                                  |  |  |  |  |  |
|                   |  |                                      |           | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English |  |             |                                  |  |  |  |  |  |

| 10-M-DGGD-Ü-152- | Overview D                            | Oifferential G  | eometr                  | ometry and Ordinary Differential Equations  |  |   |             |                                  |  |  |  |  |  |
|------------------|---------------------------------------|---|-------------------------|---|--|---|-------------|----------------------------------|--|--|--|--|--|
| mo1              | ECTS 12                               | Duratio   | n                       | 1 semester  | Method of grading  | numerical grade                                 | Modul level | undergraduate                    |  |  |  |  |  |
|                  | Courses                               |   | V (4)                   | + Ü (2)   |  |   |             |                                  |  |  |  |  |  |
|                  | Method of                             | assessment  |                         | oral examination of one candidate each (20 to 40 minutes)   |  |   |             |                                  |  |  |  |  |  |
|                  |                                       |   | Asses                   | ssessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be elected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).  |  |   |             |                                  |  |  |  |  |  |
|                  |                                       |   |                         | Language of assessment: German and/or English   |  |   |             |                                  |  |  |  |  |  |
| 10-M-ALFT-Ü-152- | Overview Algebra and Complex Analysis |   |                         |   |  |   |             |                                  |  |  |  |  |  |
| mo1              | ECTS 12                               | Duratio   | n                       | 1 semester  | Method of grading  | numerical grade                                 | Modul level | undergraduate                    |  |  |  |  |  |
|                  | Courses                               | ·   | V (4)                   | + Ü (2)   |  |   |             |                                  |  |  |  |  |  |
|                  |                                       | assessment  | Asses<br>selec<br>Langu | ted as the subject of<br>uage of assessment:  | rence to two topics i<br>one examination in<br>German and/or Eng | n pure mathematics as<br>the sub-fields Gesamti |             | examiner. Each topic may only be |  |  |  |  |  |
| 10-M-FTDG-Ü-152- |                                       |   |                         | nd Differential Geom  |  |   |             |                                  |  |  |  |  |  |
| mo1              | ECTS 12                               | Duratio   |                         | 1 semester  | Method of grading  | numerical grade                                 | Modul level | undergraduate                    |  |  |  |  |  |
|                  | Courses                               |   |                         | + Ü (2)   |  |   |             |                                  |  |  |  |  |  |
|                  | Method of                             | assessment  | Asses                   | oral examination of one candidate each (20 to 40 minutes)<br>Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be<br>selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).<br>Language of assessment: German and/or English |  |   |             |                                  |  |  |  |  |  |
| 10-M-FTGD-Ü-152- | Overview C                            | Overview Complex Analysis and Ordinary Differential Equations |                         |   |  |   |             |                                  |  |  |  |  |  |
| mo1              | ECTS 12                               | Duratio   | n                       | 1 semester  | Method of grading  | numerical grade                                 | Modul level | undergraduate                    |  |  |  |  |  |
|                  | Courses                               |   | V (4)                   | + Ü (2)   |  |   | ,           |                                  |  |  |  |  |  |
|                  | Method of                             | assessment  | Asses                   | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English          |  |   |             |                                  |  |  |  |  |  |
| 10-M-GADG-Ü-152- | Overview 6                            | Seometric An  | alysis                  | and Differential Geo  | metry  |   | '           |                                  |  |  |  |  |  |
| mo1              | ECTS 12                               | Duratio   | n                       | 1 semester  | Method of grading  | numerical grade                                 | Modul level | undergraduate                    |  |  |  |  |  |
|                  | Courses                               |   | V (4)                   | V (4) + Ü (2)   |  |   |             |                                  |  |  |  |  |  |
|                  | Method of                             | assessment  | Asses                   |   | rence to two topics i<br>one examination in                      | n pure mathematics as<br>the sub-fields Gesamti |             | examiner. Each topic may only be |  |  |  |  |  |

| 10-M-GAGD-Ü-152- | Overvie         | ew Geor  | metric Ana | alysis   | and Ordinary Diffe   | rential Equations     |   |                       |                                  |  |  |  |
|------------------|-----------------|----------|------------|--|--|-----------------------|---|-----------------------|----------------------------------|--|--|--|
| mo1              | ECTS            | 12       | Duratio    | n  | 1 semester   | Method of grading     | numerical grade                                 | Modul level           | undergraduate                    |  |  |  |
|                  | Course          | S        |            | V (4)  | + Ü (2)  |                       |   | ·                     | -                                |  |  |  |
|                  | Method          | d of ass | essment    |  |  | candidate each (20 to |   |                       |                                  |  |  |  |
|                  |                 |          |            |  |  |                       | n pure mathematics as<br>the sub-fields Gesamti |                       | examiner. Each topic may only be |  |  |  |
|                  |                 |          |            |  |  | t: German and/or Engl |   | aberblick (Overview). |                                  |  |  |  |
| 10-M-GAFT-Ü-152- | Overvie         | ew Geor  | metric Ana | alysis   | and Complex Analy  | /sis                  |   |                       |                                  |  |  |  |
| mo1              | ECTS            | 12       | Duratio    | 1  | 1 semester   | Method of grading     | numerical grade                                 | Modul level           | undergraduate                    |  |  |  |
|                  | Course          | S        | <u>'</u>   | V (4)  | + Ü (2)  |                       |   |                       |                                  |  |  |  |
|                  |                 |          |            | Asse<br>selec<br>Lang  | ssment will have re<br>ted as the subject of<br>uage of assessmen  |                       | n pure mathematics as<br>the sub-fields Gesamti |                       | examiner. Each topic may only be |  |  |  |
| 10-M-ALPG-Ü-152- | Overvie         | ew Alge  | bra and P  | roject   | ctive Geometry   |                       |   |                       |                                  |  |  |  |
| mo1              | ECTS 12 Duratio |          |            |  | 1 semester   | Method of grading     | numerical grade                                 | Modul level           | undergraduate                    |  |  |  |
|                  | Course          |          |            |  | + Ü (2)  |                       |   |                       |                                  |  |  |  |
|                  | Method          | d of ass | essment    | Asse:  | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English |                       |   |                       |                                  |  |  |  |
| 10-M-ALDI-Ü-152- | Overvie         | ew Alge  | bra and D  | iscret   | screte Mathematics   |                       |   |                       |                                  |  |  |  |
| mo1              | ECTS            | 12       | Duratio    | 1  | 1 semester   | Method of grading     | numerical grade                                 | Modul level           | undergraduate                    |  |  |  |
|                  | Course          | S        | ·          | V (4)  | + Ü (2)  | •                     |   | •                     |                                  |  |  |  |
|                  | Method          | d of ass | essment    | Asse:  | oral examination of one candidate each (20 to 40 minutes)  Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may or selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).  Language of assessment: German and/or English    |                       |   |                       |                                  |  |  |  |
| 10-M-DIPG-Ü-152- | Overvie         | ew Disc  | rete Math  | emati  | cs and Projective G  | eometry               |   |                       |                                  |  |  |  |
| mo1              | ECTS 12 Duratio |          |            | 1  | 1 semester   | Method of grading     | numerical grade                                 | Modul level           | undergraduate                    |  |  |  |
|                  | Course          | S        |            | V (4)  | + Ü (2)  |                       |   |                       |                                  |  |  |  |
|                  | Method          | d of ass | essment    | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English |  |                       |   |                       |                                  |  |  |  |

| 10-M-FADG-Ü-152- | Overview Functional Analysis and Differential Geometry |          |           |  |  |  |                        |                       |                                  |  |  |  |  |
|------------------|--|----------|-----------|--|--|--|------------------------|-----------------------|----------------------------------|--|--|--|--|
| mo1              | ECTS   | 12       | Duration  | 1  | 1 semester   | Method of grading                              | numerical grade        | Modul level           | undergraduate                    |  |  |  |  |
|                  | Course   | S        |           | V (4)  | + Ü (2)  |  |                        | •                     |                                  |  |  |  |  |
|                  | Method   | d of ass | essment   |  |  | candidate each (20 to                          |                        |                       |                                  |  |  |  |  |
|                  |  |          |           |  |  |  |                        |                       | examiner. Each topic may only be |  |  |  |  |
|                  |  |          |           |  |  | of one examination in<br>nt: German and/or Eng | the sub-fields Gesamti | iberblick (Overview). |                                  |  |  |  |  |
| 10-M-FAGD-Ü-152- | Overvi   | ew Func  | tional An | _  | and Ordinary Diffe   |  |                        |                       |                                  |  |  |  |  |
| mo1              | ECTS   | 12       | Duration  | <u> </u>   | 1 semester   | Method of grading                              | numerical grade        | Modul level           | undergraduate                    |  |  |  |  |
|                  | Course   | S        |           | V (4)  | (4) + Ü (2)  |  |                        |                       |                                  |  |  |  |  |
|                  |  |          |           | Asse<br>seled<br>Lang  | examination of one candidate each (20 to 40 minutes) essment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only bected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). guage of assessment: German and/or English               |  |                        |                       |                                  |  |  |  |  |
| 10-M-FAFT-Ü-152- | Overvi   | ew Func  | tional An | alysis   | and Complex Ana  | ysis   |                        |                       |                                  |  |  |  |  |
| mo1              | ECTS   | 12       | Duration  | 1  | 1 semester   | Method of grading                              | numerical grade        | Modul level           | undergraduate                    |  |  |  |  |
|                  | Course   | S        |           | V (4)  | + Ü (2)  |  |                        |                       |                                  |  |  |  |  |
|                  | Method   | d of ass | essment   | Asse<br>seled  | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).  Language of assessment: German and/or English |  |                        |                       |                                  |  |  |  |  |
| 10-M-FAGA-Ü-152- | Overvi   | ew Func  | tional An | alysis   | ysis and Geometric Analysis  |  |                        |                       |                                  |  |  |  |  |
| mo1              | ECTS   | 12       | Duration  | 1  | 1 semester   | Method of grading                              | numerical grade        | Modul level           | undergraduate                    |  |  |  |  |
|                  | Course   | S        | ·         | V (4)  | + Ü (2)  | •  |                        |                       | •                                |  |  |  |  |
|                  | Method   | d of ass | essment   | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English |  |  |                        |                       |                                  |  |  |  |  |
| 10-M-ALZT-Ü-152- | Overvi   | ew Alge  | bra and N | umbe   | r Theory   |  |                        |                       |                                  |  |  |  |  |
| mo1              | ECTS   | 12       | Duratio   | 1  | 1 semester   | Method of grading                              | numerical grade        | Modul level           | undergraduate                    |  |  |  |  |
|                  | Course   | S        |           | V (4)  | V (4) + Ü (2)  |  |                        |                       |                                  |  |  |  |  |
|                  | Method of assessment                                   |          |           | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English |  |  |                        |                       |                                  |  |  |  |  |

| 10-M-DGZT-Ü-152-        | Overvi               | ew Diffe | rential G  | eomet   | ry and Number The  | ory   |                        | ,                        |                                  |  |  |  |  |
|-------------------------|----------------------|----------|------------|---|--|---|------------------------|--------------------------|----------------------------------|--|--|--|--|
| mo1                     | ECTS                 | 12       | Duratio    | 1   | 1 semester   | Method of grading                             | numerical grade        | Modul level              | undergraduate                    |  |  |  |  |
|                         | Course               | S        |            | V (4)   | + Ü (2)  |   |                        | •                        |                                  |  |  |  |  |
|                         | Method               | of ass   | essment    |   |  | candidate each (20 t                          |                        |                          |                                  |  |  |  |  |
|                         |                      |          |            | Asses   | ssment will have re  | ference to two topics                         | in pure mathematics as | s agreed upon with the e | examiner. Each topic may only be |  |  |  |  |
|                         |                      |          |            |   |  | of one examination in<br>t: German and/or Eng | the sub-fields Gesamt  | uberblick (Overview).    |                                  |  |  |  |  |
| 10-M-GDZT-Ü-152-        | Overvi               | w Ordi   | nary Diffe |   | l Equations and Nu   |   | 50311                  |                          |                                  |  |  |  |  |
| mo1                     | ECTS                 | 12       | Duration   |   | 1 semester   | Method of grading                             | numerical grade        | Modul level              | undergraduate                    |  |  |  |  |
|                         | Course               |          | Duration   |   | + Ü (2)  | Method of grading                             | Thameneat grade        | Modulitevel              | undergraduate                    |  |  |  |  |
|                         |                      |          | essment    |   | ral examination of one candidate each (20 to 40 minutes)   |   |                        |                          |                                  |  |  |  |  |
|                         | Method               | 2 01 433 | essinent   | Asses   | ssment will have re  | ference to two topics                         | in pure mathematics as |                          | examiner. Each topic may only be |  |  |  |  |
|                         |                      |          |            |   | elected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).  |   |                        |                          |                                  |  |  |  |  |
|                         |                      |          |            |   | nguage of assessment: German and/or English  |   |                        |                          |                                  |  |  |  |  |
| 10-M-FTZT-Ü-152-<br>mo1 |                      |          | •          |   | nd Number Theory   | 1   |                        |                          | 1                                |  |  |  |  |
|                         | ECTS 12 Duratio      |          |            |   | 1 semester Method of grading numerical grade Modul level undergraduate   |   |                        |                          |                                  |  |  |  |  |
|                         | Course               |          |            |   | + Ü (2)  |   |                        |                          |                                  |  |  |  |  |
|                         | Method               | d of ass | essment    |   |  | candidate each (20 t                          |                        | s agreed upon with the   | ovaminar Each tonic may only be  |  |  |  |  |
|                         |                      |          |            | selec   | ssessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be elected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).   |   |                        |                          |                                  |  |  |  |  |
|                         |                      |          |            |   | uage of assessmen  |   |                        |                          |                                  |  |  |  |  |
| 10-M-GAZT-Ü-152-        | Overvi               | ew Geo   | metric Ana | alysis  | and Number Theor   | у   |                        | ,                        |                                  |  |  |  |  |
| mo1                     | ECTS                 | 12       | Duratio    | 1   | 1 semester   | Method of grading                             | numerical grade        | Modul level              | undergraduate                    |  |  |  |  |
|                         | Course               | S        |            | V (4)   | + Ü (2)  |   |                        | ,                        |                                  |  |  |  |  |
|                         | Method               | d of ass | essment    | oral e  | examination of one   | candidate each (20 t                          | o 40 minutes)          |                          |                                  |  |  |  |  |
|                         |                      |          |            |   | Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). |   |                        |                          |                                  |  |  |  |  |
|                         |                      |          |            |   |  | t: German and/or Eng                          |                        | uberblick (Overview).    |                                  |  |  |  |  |
| 10-M-PGZT-Ü-152-        | Overvie              | w Proi   | ective Geo |   | and Number Theo  |   | 100                    | ,                        |                                  |  |  |  |  |
| mo1                     | ECTS                 | 12       | Duration   | <u> </u>  | 1 semester   | Method of grading                             | numerical grade        | Modul level              | undergraduate                    |  |  |  |  |
|                         | Course               |          | 1          |   | + Ü (2)  |   |                        |                          |                                  |  |  |  |  |
|                         |                      |          | essment    |   |  | candidate each (20 t                          | o 40 minutes)          |                          |                                  |  |  |  |  |
|                         | Method of assessment |          |            | Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be |  |   |                        |                          |                                  |  |  |  |  |
|                         |                      |          |            | selec   | selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).  Language of assessment: German and/or English  |   |                        |                          |                                  |  |  |  |  |
|                         |                      |          |            | Langi   | uage of assessmen  | t: German and/or Eng                          | เเรท                   | -                        |                                  |  |  |  |  |

| 10-M-DIZT-Ü-152- | Overvi          | ew Disc              | rete Math  | emati  | cs and Number Th   | eory                  |   |                       | -                                |  |  |  |
|------------------|-----------------|----------------------|------------|--|--|-----------------------|---|-----------------------|----------------------------------|--|--|--|
| mo1              | ECTS            | 12                   | Duratio    | n  | 1 semester   | Method of grading     | numerical grade                                 | Modul level           | undergraduate                    |  |  |  |
|                  | Course          | S                    |            | V (4)  | + Ü (2)  | ,                     |   | ,                     |                                  |  |  |  |
|                  | Method          | of ass               | essment    |  |  | candidate each (20 to |   |                       |                                  |  |  |  |
|                  |                 |                      |            |  |  |                       | n pure mathematics as<br>the sub-fields Gesamti |                       | examiner. Each topic may only be |  |  |  |
|                  |                 |                      |            |  |  | nt: German and/or Eng |   | uberblick (Overview). |                                  |  |  |  |
| 10-M-FAZT-Ü-152- | Overvie         | w Func               | tional An  |  | and Number Theo  |                       |   |                       |                                  |  |  |  |
| mo1              | ECTS            | 12                   | Duration   | <u> </u>   | 1 semester   | Method of grading     | numerical grade                                 | Modul level           | undergraduate                    |  |  |  |
|                  | Course          | S                    |            | V (4)  | + Ü (2)  |                       | <del>-</del>                                    |                       |                                  |  |  |  |
|                  |                 |                      |            | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic n selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English |  |                       |   |                       |                                  |  |  |  |
| 10-M-DGPA-Ü-152- | Overvi          | ew Diffe             | rential Ge | eomet  | ry and Partial Diffe   | erential Equations    |   |                       |                                  |  |  |  |
| mo1              | ECTS            | 12                   | Duratio    | า  | 1 semester   | Method of grading     | numerical grade                                 | Modul level           | undergraduate                    |  |  |  |
|                  | Course          | S                    |            | V (4)  | + Ü (2)  |                       |   |                       |                                  |  |  |  |
|                  | Method          | d of ass             | essment    | Asse<br>selec  | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English |                       |   |                       |                                  |  |  |  |
| 10-M-GDPA-Ü-152- | Overvi          | w Ordi               | nary Diffe | rentia   | ential Equations and Partial Differential Equations  |                       |   |                       |                                  |  |  |  |
| mo1              | ECTS            | 12                   | Duration   | 1  | 1 semester   | Method of grading     | numerical grade                                 | Modul level           | undergraduate                    |  |  |  |
|                  | Course          | S                    |            | V (4)  | + Ü (2)  | •                     |   | ·                     |                                  |  |  |  |
|                  | Method          | d of ass             | essment    | Asse<br>selec  | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Easlected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English                       |                       |   |                       |                                  |  |  |  |
| 10-M-FTPA-Ü-152- | Overvi          | ew Com               | plex Anal  | ysis a   | nd Partial Differen  | tial Equations        |   |                       |                                  |  |  |  |
| mo1              | ECTS 12 Duratio |                      |            | · · · · · · · · · · · · · · · · · · ·  |  |                       |   | Modul level           | undergraduate                    |  |  |  |
|                  | Course          | S                    |            | V (4)  | + Ü (2)  |                       |   |                       |                                  |  |  |  |
|                  | Method          | Method of assessment |            |  | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English |                       |   |                       |                                  |  |  |  |

| 10-M-GAPA-Ü-152- | Overvie              | ew Geon   | netric Ana | alysis a   | and Partial Different   | al Equations  |  | "                 |                                  |  |  |  |  |  |  |
|------------------|----------------------|-----------|------------|--|---|---|--|-------------------|----------------------------------|--|--|--|--|--|--|
| mo1              | ECTS                 | 12        | Duratio    | 1  | 1 semester  | Method of grading   | numerical grade  | Modul level       | undergraduate                    |  |  |  |  |  |  |
|                  | Course               | S         | •          | V (4) -  | + Ü (2)   |   |  | •                 |                                  |  |  |  |  |  |  |
|                  | Method               | of asse   | essment    |  | xamination of one ca  |   |  |                   |                                  |  |  |  |  |  |  |
|                  |                      |           |            | Asses  | ssment will have refe   | rence to two topics i   | n pure mathematics as agre                               | eed upon with the | examiner. Each topic may only be |  |  |  |  |  |  |
|                  |                      |           |            |  | selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).  Language of assessment: German and/or English   |   |  |                   |                                  |  |  |  |  |  |  |
| 10-M-FAPA-Ü-152- | Overvie              | ew Funct  | tional An  |  | and Partial Different   |   |  |                   |                                  |  |  |  |  |  |  |
| mo1              | ECTS                 | 12        | Duratio    |  | 1 semester  | Method of grading   | numerical grade  | Modul level       | undergraduate                    |  |  |  |  |  |  |
|                  | Course               | S         |            | V (4) -  | + Ü (2)   |   |  |                   |                                  |  |  |  |  |  |  |
|                  |                      |           | essment    | Asses<br>select<br>Langu   | ted as the subject of<br>lage of assessment:  | rence to two topics i<br>one examination in<br>German and/or Engl | n pure mathematics as agre<br>the sub-fields Gesamtüberh |                   | examiner. Each topic may only be |  |  |  |  |  |  |
| 10-M-PAZT-Ü-152- | Overvie              | ew Parti  | al Differe | ntial E  | ial Equations and Number Theory   |   |  |                   |                                  |  |  |  |  |  |  |
| mo1              | ECTS 12 Duratio      |           |            | 1 semester   | Method of grading   | numerical grade   | Modul level  | undergraduate     |                                  |  |  |  |  |  |  |
|                  | Course               |           | _          |  | + Ü (2)   |   |  |                   |                                  |  |  |  |  |  |  |
|                  | Method of assessment |           |            | Asses<br>select  | Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).  Language of assessment: German and/or English |   |  |                   |                                  |  |  |  |  |  |  |
| 10-M-STO-Ü-152-  | Overvie              | w Stock   | nastics 1  | and St   | ochastics 2   |   |  | •                 |                                  |  |  |  |  |  |  |
| mo1              | ECTS                 | 12        | Duratio    | 1  | 1 semester  | Method of grading   | numerical grade  | Modul level       | undergraduate                    |  |  |  |  |  |  |
|                  | Course               | S         |            | V (4) -  | V (4) + Ü (2)   |   |  |                   |                                  |  |  |  |  |  |  |
|                  | Method               | d of asse | essment    | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).  Language of assessment: German and/or English |   |   |  |                   |                                  |  |  |  |  |  |  |
| 10-M-NUM-Ü-152-  | Overvie              | ew Num    | erical Ma  | thema  | tics 1 and Numerical  | Mathematics 2   |  |                   |                                  |  |  |  |  |  |  |
| mo1              | ECTS                 | 12        | Duratio    | n  | 1 semester  | Method of grading   | numerical grade  | Modul level       | undergraduate                    |  |  |  |  |  |  |
|                  | Course               | S         |            | V (4) -  | + Ü (2)   |   |  |                   |                                  |  |  |  |  |  |  |
|                  | Method of assessment |           |            | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English  |   |   |  |                   |                                  |  |  |  |  |  |  |

| 10-M-GD-      | Overvie                                    | w Ordin   | nary Diffe | rentia                  | Equations and Num  | nerical Mathematics                             | 1               |             |                                   |  |  |  |  |
|---------------|--|-----------|------------|-------------------------|--|---|-----------------|-------------|-----------------------------------|--|--|--|--|
| NU1-Ü-152-m01 | ECTS                                       | 12        | Duratio    | n                       | 1 semester   | Method of grading                               | numerical grade | Modul level | undergraduate                     |  |  |  |  |
|               | Courses                                    | 5         |            | V (4) ·                 | + Ü (2)  |   |                 | ,           |                                   |  |  |  |  |
|               | Method                                     | l of asse | essment    |                         |  | andidate each (20 to                            |                 |             |                                   |  |  |  |  |
|               |  |           |            |                         |  |   |                 |             | oon with the examiner. Each topic |  |  |  |  |
|               |  |           |            |                         | may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).  Language of assessment: German and/or English  |   |                 |             |                                   |  |  |  |  |
| 10-M-GD-      | Overvie                                    | w Ordin   | narv Diffe |                         |  | nerical Mathematics                             |                 |             |                                   |  |  |  |  |
| NU2-Ü-152-m01 |  | 12        | Duratio    |                         | 1 semester   | Method of grading                               |                 | Modul level | undergraduate                     |  |  |  |  |
|               | Courses                                    | S         |            | V (4) -                 | + Ü (2)  | , 5 5   | <u> </u>        |             |                                   |  |  |  |  |
|               | Method of assessment Overview Functional A |           |            | Asses<br>may c<br>Langu | only be selected as t<br>uage of assessment:   | oon with the examiner. Each topic<br>Overview). |                 |             |                                   |  |  |  |  |
| 10-M-FA-      |  |           |            |                         | 1  |   |                 |             |                                   |  |  |  |  |
| NU1-Ü-152-m01 | ECTS                                       | 12        | Duratio    |                         | 1 semester   | Method of grading                               | numerical grade | Modul level | undergraduate                     |  |  |  |  |
|               | Courses                                    |           |            |                         | + Ü (2)  |   |                 |             |                                   |  |  |  |  |
|               | Method of assessment                       |           |            | Asses<br>may o          | ral examination of one candidate each (20 to 40 minutes)<br>.ssessment will have reference to two topics in pure and applied mathematics as agreed upon with the examiner. Each topi<br>nay only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).<br>anguage of assessment: German and/or English |   |                 |             |                                   |  |  |  |  |
| 10-M-FA-      | Overvie                                    | w Func    | tional An  | alysis                  | lysis and Numerical Mathematics 2  |   |                 |             |                                   |  |  |  |  |
| NU2-Ü-152-m01 | ECTS                                       | 12        | Duratio    | n                       | 1 semester   | Method of grading                               | numerical grade | Modul level | undergraduate                     |  |  |  |  |
|               | Courses                                    | <u> </u>  | •          | V (4) ·                 | + Ü (2)  |   |                 | •           |                                   |  |  |  |  |
|               | Method                                     | l of asse | essment    |                         |  |   |                 |             |                                   |  |  |  |  |
| 10-M-OM-      | Overvie                                    | w Optir   | mization   | for Ma                  | chine Learning and I   | Numerical Mathemat                              | ics 1           | '           |                                   |  |  |  |  |
| NU1-Ü-232-m01 | ECTS 12 Duratio                            |           | Duratio    | n                       | 1 semester   | Method of grading                               | numerical grade | Modul level | undergraduate                     |  |  |  |  |
|               | Courses                                    | S         |            | V (4) ·                 | + Ü (2)  |   |                 | •           |                                   |  |  |  |  |
|               | Method of assessment                       |           |            | Asses<br>be se          | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English                |   |                 |             |                                   |  |  |  |  |

| 10-M-OM-         | Overvi               | ew Opti  | mization    | for Ma  | Machine Learning and Numerical Mathematics 2   |                          |                 |             |               |  |  |  |
|------------------|----------------------|----------|-------------|---|--|--------------------------|-----------------|-------------|---------------|--|--|--|
| NU2-Ü-232-m01    | ECTS                 | 12       | Duration    | า   | 1 semester   | Method of grading        | numerical grade | Modul level | undergraduate |  |  |  |
|                  | Course               | S        |             | V (4)   | + Ü (2)  |                          |                 |             |               |  |  |  |
|                  | Method               | d of ass | essment     | Asse<br>be se   | ral examination of one candidate each (20 to 40 minutes) ssessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only e selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). anguage of assessment: German and/or English                |                          |                 |             |               |  |  |  |
| 10-M-PA-         | Overvi               | ew Parti | ial Differe | ntial I   | tial Equations and Numerical Mathematics 1   |                          |                 |             |               |  |  |  |
| NU1-Ü-152-m01    | ECTS 12 Duratio      |          |             | <u></u> า   | 1 semester   | Method of grading        | numerical grade | Modul level | undergraduate |  |  |  |
|                  | Course               | S        |             | V (4)   | (4) + Ü (2)  |                          |                 |             |               |  |  |  |
|                  |                      |          |             | Asse<br>may<br>Lang   | l examination of one candidate each (20 to 40 minutes)<br>essment will have reference to two topics in pure and applied mathematics as agreed upon with the examine<br>y only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).<br>guage of assessment: German and/or English                  |                          |                 |             |               |  |  |  |
| 10-M-PA-         |                      | ew Parti | ial Differe | ntial I   | Equations and Nun  | nerical Mathematics 2    |                 |             |               |  |  |  |
| NU2-Ü-152-m01    | ECTS                 | 12       | Duration    | 1   | 1 semester   | Method of grading        | numerical grade | Modul level | undergraduate |  |  |  |
|                  | Course               | S        |             | V (4)   | + Ü (2)  |                          |                 |             |               |  |  |  |
|                  | Method of assessment |          |             | Asse<br>may   | oral examination of one candidate each (20 to 40 minutes)<br>Assessment will have reference to two topics in pure and applied mathematics as agreed upon with the examiner. Eac<br>may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).<br>Language of assessment: German and/or English |                          |                 |             |               |  |  |  |
| 10-M-OMFA-Ü-232- | Overvi               | ew Opti  | mization    | for Ma  | or Machine Learning and Functional Analysis  |                          |                 |             |               |  |  |  |
| mo1              | ECTS                 | 12       | Duration    | 1   | 1 semester   | Method of grading        | numerical grade | Modul level | undergraduate |  |  |  |
|                  | Course               | S        |             | V (4)   | V (4) + Ü (2)  |                          |                 |             |               |  |  |  |
|                  | Method               | d of ass | essment     | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure and applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).  Language of assessment: German and/or English |  |                          |                 |             |               |  |  |  |
| 10-M-OM-         | Overvi               | ew Opti  | mization    | for Ma  | chine Learning an  | d Partial Differential E | quations        |             |               |  |  |  |
| PA-Ü-232-m01     | ECTS                 | 12       | Duration    | 1   | 1 semester   | Method of grading        | numerical grade | Modul level | undergraduate |  |  |  |
|                  | Courses              |          |             | V (4)   | V (4) + Ü (2)  |                          |                 |             |               |  |  |  |
|                  | Method of assessment |          |             | oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure and applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English  |  |                          |                 |             |               |  |  |  |

| 10-M-ALAA-Ü-232- | Overvi          | Overview Algebra and Applied Algebra |  |  |  |  |                               |                          |                                  |  |  |  |  |  |
|------------------|-----------------|--------------------------------------|--|--|--|--|-------------------------------|--------------------------|----------------------------------|--|--|--|--|--|
| mo1              | ECTS            | 12                                   | Duratio  | 1  | 1 semester   | Method of grading                              | numerical grade               | Modul level              | undergraduate                    |  |  |  |  |  |
|                  | Course          | S                                    |  | V (4)  | + Ü (2)  |  |                               | •                        |                                  |  |  |  |  |  |
|                  | Method          | of ass                               | essment  |  |  | candidate each (20 to                          |                               |                          |                                  |  |  |  |  |  |
|                  |                 |                                      |  | Asses  | sment will have re   | ference to two topics i                        | n pure mathematics as         | agreed upon with the     | examiner. Each topic may only be |  |  |  |  |  |
|                  |                 |                                      |  | Selec  | ted as the subject (   | of one examination in<br>t: German and/or Engl | the sub-fields Gesamti<br>ish | uberblick (Overview).    |                                  |  |  |  |  |  |
| 10-M-AAZT-Ü-232- | Overvi          | w Anni                               | ied Algeh  |  | Number Theory  | - definan ana/or Engi                          | 1311                          |                          |                                  |  |  |  |  |  |
| mo1              | ECTS            | 12                                   | Duratio  |  | 1 semester   | Method of grading                              | numerical grade               | Modul level              | undergraduate                    |  |  |  |  |  |
|                  | Course          |                                      | Duratio  |  | + Ü (2)  | Method of glading                              | numerical grade               | Modulitevel              | undergraduate                    |  |  |  |  |  |
|                  |                 |                                      | eccment  |  | ral examination of one candidate each (20 to 40 minutes)   |  |                               |                          |                                  |  |  |  |  |  |
|                  | Wicthoo         | 2 01 USS                             | Cooment  |  |  |  |                               | s agreed upon with the e | examiner. Each topic may only be |  |  |  |  |  |
|                  |                 |                                      |  |  | lected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).   |  |                               |                          |                                  |  |  |  |  |  |
|                  |                 |                                      |  |  | guage of assessment: German and/or English   |  |                               |                          |                                  |  |  |  |  |  |
| 10-M-AADI-Ü-232- |                 | <del></del>                          |  |  | Discrete Mathema   |  |                               |                          |                                  |  |  |  |  |  |
| mo1              | ECTS 12 Duratio |                                      |  |  | 1 semester   Method of grading   numerical grade   Modul level   undergraduate   |  |                               |                          |                                  |  |  |  |  |  |
|                  | Course          |                                      | _  |  | + Ü (2)  |  |                               |                          |                                  |  |  |  |  |  |
|                  | Method          | d of ass                             | essment  |  |  | candidate each (20 to                          |                               | a arrand was a with that | avaminar Fach tania may anly ha  |  |  |  |  |  |
|                  |                 |                                      |  | selec  | ssessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be elected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). |  |                               |                          |                                  |  |  |  |  |  |
|                  |                 |                                      |  |  | Language of assessment: German and/or English  |  |                               |                          |                                  |  |  |  |  |  |
| 10-M-ALLO-Ü-232- | Overvi          | ew Alge                              | bra and L  | ogic   |  |  |                               |                          |                                  |  |  |  |  |  |
| mo1              | ECTS            | 12                                   | Duratio  | 1  | 1 semester   | Method of grading                              | numerical grade               | Modul level              |                                  |  |  |  |  |  |
|                  | Course          | S                                    | •  | V (4)  | + Ü (2)  |  |                               | •                        | •                                |  |  |  |  |  |
|                  | Method          | d of ass                             | essment  | oral e   | xamination of one  | candidate each (20 to                          | 40 minutes)                   |                          |                                  |  |  |  |  |  |
|                  |                 |                                      |  |  |  |  |                               |                          | examiner. Each topic may only be |  |  |  |  |  |
|                  |                 |                                      |  |  |  | of one examination in<br>t: German and/or Engl | the sub-fields Gesamti        | uberblick (Overview).    |                                  |  |  |  |  |  |
| 10-M-AALO-Ü-232- | Overvi          | w Anni                               | lied Algeb   |  |  | - definan and/or Lingt                         | 1511                          |                          |                                  |  |  |  |  |  |
| mo1              | ECTS            | 12                                   | Duratio  |  | 1 semester   | Method of grading                              | numerical grade               | Modul level              |                                  |  |  |  |  |  |
|                  | Course          |                                      | Daratio  |  | + Ü (2)  | Wethou of grading                              | numerical grade               | Modulitevel              |                                  |  |  |  |  |  |
|                  |                 |                                      | accment  |  |  | candidate each (an to                          | 40 minutes)                   |                          |                                  |  |  |  |  |  |
|                  | Method          | ı 01 a33                             | assessment oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be |  |  |  |                               |                          |                                  |  |  |  |  |  |
|                  |                 |                                      |  | selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). |  |  |                               |                          |                                  |  |  |  |  |  |
|                  |                 |                                      |  | Language of assessment: German and/or English  |  |  |                               |                          |                                  |  |  |  |  |  |

| 10-M-DILO-Ü-232- | Overvie |  |          |                 |  |                   |  |             |                                 |  |
|------------------|---------|--|----------|-----------------|--|-------------------|--|-------------|---------------------------------|--|
| mo1              | ECTS    | 12   | Duration | 1               | 1 semester                                   | Method of grading | numerical grade  | Modul level |                                 |  |
|                  | Course  | S  |          | V (4) +         | + Ü (2)                                      |                   |  |             |                                 |  |
|                  | Method  | oral examination of one candidate each (20 to 40 minutes)  Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).  Language of assessment: German and/or English |          |                 |  |                   |  |             | xaminer. Each topic may only be |  |
| 10-M-LOZT-Ü-232- | Overvie | riew Logic and Number Theory   |          |                 |  |                   |  |             |                                 |  |
| mo1              | ECTS    | 12   | Duration | า               | 1 semester                                   | Method of grading | numerical grade  | Modul level |                                 |  |
|                  | Course  | S  |          | V (4) +         | V (4) + Ü (2)                                |                   |  |             |                                 |  |
|                  | Method  | l of asse  | ssment   | Asses<br>select | sment will have refe<br>ed as the subject of |                   | n pure mathematics as agreed (<br>the sub-fields Gesamtüberblick |             | xaminer. Each topic may only be |  |

Compulsory Electives Application-oriented Subject (30 ECTS credits)

Students must successfully complete modules worth 30 ECTS credits in a single one of the focuses listed below. In addition, students must successfully complete, in the area of mandatory electives application-oriented subject, modules with numerical grading worth no less than 15 ECTS credits, cf. Section 3 Subsection 2 Sentences 2 through 4 FSB (subject-specific provisions).

### Focus Biology (o or 30 ECTS credits)

| <b>Modules General B</b> | iology I  |  |          |         |  |                   |                 |             |               |  |  |
|--------------------------|---|--|----------|---------|--|-------------------|-----------------|-------------|---------------|--|--|
| 07-1A1Z-                 | The Pla   | nt King  | dom      |         |  |                   |                 |             |               |  |  |
| PF-152-mo1               | ECTS  | 5  | Duratio  | 1       | 1 semester   | Method of grading | numerical grade | Modul level | undergraduate |  |  |
|                          | Courses   | S  |          | V (1.5) | + Ü (2.5)  |                   |                 |             |               |  |  |
|                          | Method  | l of asse  | essment  |         | n examination (appr<br>able for bonus                            | ox. 60 minutes)   |                 |             |               |  |  |
|                          | other pi  | other prerequisites  Admission prerequisite to assessment: exercises. Regular attendance of exercises (minimum 80%) and successful completion on of the respective exercises (approx. 25 to 30 hours) are prerequisites for admission to assessment. |          |         |  |                   |                 |             |               |  |  |
| 07-1A1Tl-152-m01         | Evolution   | on and t   | he Anima | al King | dom  |                   |                 |             |               |  |  |
|                          | ECTS  | 5  | Duratio  | 1       | 1 semester   | Method of grading | numerical grade | Modul level | undergraduate |  |  |
|                          | Courses   | S  |          | V (2) - | + Ü (3)  |                   |                 |             |               |  |  |
|                          | Method  | d of asse  | essment  |         | written examination (approx. 60 minutes)<br>creditable for bonus |                   |                 |             |               |  |  |
|                          | other prerequisites Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of ex ses (approx. 25 to 30 hours) are prerequisites for admission to assessment. |  |          |         |  |                   |                 |             |               |  |  |
|                          | Referre   | Referred to in LPO I § 41   Nr. 1 (4 ECTS credits) and § 41   Nr. 4 (1 ECTS credits) § 61   Nr. 1 (4 ECTS credits) and § 61   Nr. 4 (1 ECTS credits)   |          |         |  |                   |                 |             |               |  |  |

| Modules General I | Biology II           |  |           |   |  |                   |   |             |                                  |  |  |  |
|-------------------|----------------------|--|-----------|---|--|-------------------|---|-------------|----------------------------------|--|--|--|
| 07-2A2PHYPF-152-  | Plant Pl             | nysiolo  | gy        |   |  |                   |   |             |                                  |  |  |  |
| mo1               | ECTS                 | 4  | Duratio   | 1   | 1 semester   | Method of grading | numerical grade                                 | Modul level | undergraduate                    |  |  |  |
|                   | Courses              | 5  | `         | V (1)   | + Ü (2)  |                   |   | *           |                                  |  |  |  |
|                   | Method               | of ass   | essment   |   | en examination (app<br>table for bonus   | rox. 60 minutes)  |   |             |                                  |  |  |  |
|                   | other pr             | rerequi  | sites     |   |  |                   | ses. Regular attendand<br>for admission to asse |             | successful completion of exerci- |  |  |  |
|                   | Referred             | d to in l  | PO I      | § 61 l  | Nr. 2  |                   |   |             |                                  |  |  |  |
| 07-2A2PHY-        | Animal               | Physio   | logy      |   |  |                   |   | ,           |                                  |  |  |  |
| Tl-152-m01        | ECTS                 | 4  | Duratio   | 1   | 1 semester   | Method of grading | numerical grade                                 | Modul level | undergraduate                    |  |  |  |
|                   | Courses              | 5  |           | V (1)   | $(1) + \ddot{U}(2)$  |                   |   |             |                                  |  |  |  |
|                   | Method               | of ass   | essment   | written examination (approx. 60 minutes) creditable for bonus |  |                   |   |             |                                  |  |  |  |
|                   | other pr             | er prerequisites  Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of ses (approx. 25 to 30 hours) are prerequisites for admission to assessment. |           |   |  |                   |   |             |                                  |  |  |  |
|                   | Referred             | d to in l  | PO I      |   | 41   Nr. 2<br>61   Nr. 2   |                   |   |             |                                  |  |  |  |
| 07-2A2GEN-        | Genetic              | s, Neur  | obiology  | , Beha  | viour  |                   |   |             |                                  |  |  |  |
| V-152-mo1         | ECTS                 | 5  | Duratio   | า   | 1 semester   | Method of grading | numerical grade                                 | Modul level | undergraduate                    |  |  |  |
|                   | Courses              | 5  |           | V (3)   | •  |                   |   | *           |                                  |  |  |  |
|                   | Method               | of ass   | essment   |   | written examination (approx. 60 to 90 minutes)<br>creditable for bonus   |                   |   |             |                                  |  |  |  |
|                   | other pr             | rerequi  | sites     |   | Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exercises (approx. 25 to 30 hours) are prerequisites for admission to assessment. |                   |   |             |                                  |  |  |  |
|                   | Referred             | d to in I  | PO I      | § 61 l  | Nr. 2 (2 ECTS credit<br>Nr. 3 (1 ECTS credits<br>Nr. 4 (1 ECTS credits   | s)                |   |             |                                  |  |  |  |
| Modules General I | Biology III          |  |           |   |  |                   |   |             |                                  |  |  |  |
| 07-3A3EBIO-       | Develop              | menta  | l Biology | of Ani  | mals   |                   |   |             |                                  |  |  |  |
| Tl-152-m01        |                      | 4  | Duration  |   | 1 semester   | Method of grading | numerical grade                                 | Modul level | undergraduate                    |  |  |  |
|                   | Courses              |  |           | V (1)   | + Ü (3)  | , ,               |   |             |                                  |  |  |  |
|                   | Method of assessment |  |           |   | en examination (app  | rox. 60 minutes)  |   |             |                                  |  |  |  |
|                   | other prerequisites  |  |           |   | Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exercises (approx. 25 to 30 hours) are prerequisites for admission to assessment. |                   |   |             |                                  |  |  |  |
|                   | Referred             | eferred to in LPO I § 61   Nr. 5   |           |   |  |                   |   |             |                                  |  |  |  |

| 07-3A3E-         | Develo                                       | pmenta    | l Biology  | of Pla  |  |   |  |  |  |  |  |  |  |
|------------------|--|-----------|------------|---|--|---|--|--|--|--|--|--|--|
| BIOPF-152-mo1    | ECTS   | 4         | Duration   | ı   | 1 semester   | Method of grading                               | numerical grade                                | Modul level  | undergraduate                                |  |  |  |  |
|                  | Course                                       | S         |            | V (1)   | + Ü (3)  | •   |  | •  |  |  |  |  |  |
|                  | Method                                       | d of ass  | essment    |   | en examination (applated table for bonus                         | prox. 60 minutes)                               |  |  |  |  |  |  |  |
|                  | other p                                      | rerequi   | sites      |   |  | to assessment: exerci<br>urs) are prerequisites |  |  | successful completion of exerci-             |  |  |  |  |
|                  | Referre                                      | d to in l | _PO I      | § 61 l  | 61   Nr. 5   |   |  |  |  |  |  |  |  |
| 07-3A3OE-        | Plant a                                      | nd Anin   | nal Ecolog | gy  |  |   |  |  |  |  |  |  |  |
| KO-152-m01       | ECTS   | 6         | Duration   | 1   | 1 semester   | undergraduate                                   |  |  |  |  |  |  |  |
|                  | Course                                       | S         |            | V (2)   | (2) + Ü (2)  |   |  |  |  |  |  |  |  |
|                  | Method                                       |           |            |   | ritten examination (approx. 90 minutes)<br>reditable for bonus   |   |  |  |  |  |  |  |  |
|                  | Referred to in LPO I  Genes, Molecules, Tech |           |            | § 61 l  | 51 l Nr. 4   |   |  |  |  |  |  |  |  |
| 07-3A3GEM-       | Genes,                                       | Molecu    | ıles, Tech | nolog   | ies  |   |  |  |  |  |  |  |  |
| T-152-m01        | ECTS 6 Duratio                               |           |            | า   | 1 semester   | Method of grading                               | numerical grade                                | Modul level  | undergraduate                                |  |  |  |  |
|                  | Course                                       |           |            | V (4)   |  |   |  |  |  |  |  |  |  |
|                  | Method                                       | d of ass  | essment    |   | written examination (approx. 90 minutes)<br>creditable for bonus |   |  |  |  |  |  |  |  |
| 07-3A3BC-152-m01 | Basic B                                      | iochem    | istry      |   |  |   |  |  |  |  |  |  |  |
|                  | ECTS   | 4         | Duration   | า   | 1 semester   | Method of grading                               | numerical grade                                | Modul level  | undergraduate                                |  |  |  |  |
|                  | Course                                       | S         |            | V (1)   | + Ü (2)  | •   |  | •  |  |  |  |  |  |
|                  | Method                                       | d of ass  | essment    |   | en examination (applated table for bonus                         | prox. 60 minutes)                               |  |  |  |  |  |  |  |
|                  | other p                                      | rerequi   | sites      | Admi<br>on of   | ssion prerequisite the respective exe                            | to assessment: exercircises (approx. 25 to 3    | ses. Regular attendan<br>o hours) are prerequi | ice of exercises (minimun<br>sites for admission to as | n 80%) and successful completi-<br>sessment. |  |  |  |  |
| Modules Mathema  | tics/Qua                                     | ntitativ  | e Biology  | ,   |  |   |  |  |  |  |  |  |  |
| 07-M-BST-152-m01 | Mather                                       | natical   | Biology a  | nd Bio  |  |   |  |  |  |  |  |  |  |
| ,                | ECTS   | 4         | Duration   |   | 1 semester   | Method of grading                               | numerical grade                                | Modul level  | undergraduate                                |  |  |  |  |
|                  | Course                                       |           |            | V (2) + Ü (2)   |  |   |  |  |  |  |  |  |  |
|                  | Method                                       | d of ass  | essment    | written examination (approx. 60 minutes) creditable for bonus |  |   |  |  |  |  |  |  |  |

| Modules General B | iology IV                             |  |  |  |   |  |  |  |
|-------------------|---------------------------------------|--|--|--|---|--|--|--|
| 07-4A4FLO-211-    | The Flora of Germany                  |  |  |  |   |  |  |  |
| mo1               | ECTS 7 Duratio                        |  | Method of grading numerical grade  | Modul level  | undergraduate   |  |  |  |
|                   | Courses                               | V (1) + Ü (2) + E (2,5)  |  |  |   |  |  |  |
|                   | Method of assessment                  | written examination (ap  | pprox. 45 minutes) and practical identification  | assignment (approx. 4  | 5 minutes), weighted or portfolio   |  |  |  |
|                   |                                       | Assessment offered: Once a year, summer semester   |  |  |   |  |  |  |
|                   | -41                                   | creditable for bonus  Admission prerequisite to assessment: Regular participation in the excursions (at least 80% attendance) and exercises. The   |  |  |   |  |  |  |
|                   | other prerequisites                   | prerequisite for admiss  | to assessment: Regular participation in the exion to the exam is regular attendance at the exent of approx. 25 -30 hours   |  |   |  |  |  |
|                   | Participants and allocation of places | Students of the Bachelo Should the module be a chelor's degree subject located to students of the degree subjects Computed cation-oriented subject available in one quota equota. Should there be, form regulation for the concerned will be allocate least one other module. A waiting list will be made Selection process group ments. For this purpose rage grade of all assess cluding Chemie (Chemistows: First, applicants with dits (qualitative ranking applicants' position in a ding to this third ranking king or otherwise by lot Selection process group number of ECTS credits the same number of ECTs credits the same number of ECTs credits the same number of ECTs credits the module be a should the module be a stream of the stream of the same of the sa | o 2 (5%): Places will be allocated according to already achieved in modules/module compon TS credits achieved, places will be allocated by applicant; among applicants with the same nui | ECTS credits will be gives: 95% of places (a minimu) with 60 ECTS credits matics), each with 180 other 'importing' subjecting places will be alloces with a restricted nurse, places on all courses applicants who alreadiven preferential considue available. cording to the applicant mber of ECTS credits the components in the cics)) at the time of apple grade weighted according to the applicant these two rankings, at laces will be allocated the following quotas: Clents of the Faculty of Ey lot. Quota 2 (25% of mber of subject semes will be allocated the following quotas: Clents of subject semes of subject semes of subject semes of the s | ven preferential consideration. e allocated to students of the Ba- im of one place in total) will be al- and to students of the Bachelor's b ECTS credits, as part of the appli- cts). Should the number of places cated to applicants from the other mber of places, there will be a uni- s of a module component that are ly have successfully completed at deration.  hts' previous academic achieve- hey have achieved and their ave- subject of Biologie (Biology) (ex- plication. This will be done as fol- rding to the number of ECTS cre- eved (quantitative ranking). The nd places will be allocated accor- according to the qualitative ran-  Quota 1 (50 % of places): total Biology; among applicants with places): number of subject seme- ters, places will be allocated by |  |  |  |
|                   | Referred to in LPO I                  | § 41   Nr. 1 (3 LP) and § 4 § 61   Nr. 1 (3 LP) and § 6  |  |  |   |  |  |  |

| 07-4A4FAU-152- | The Fauna of Germany            |  |  |  |  |   |   |  |  |  |  |  |  |  |
|----------------|---------------------------------|--|--|--|--|---|---|--|--|--|--|--|--|--|
| mo1            | ECTS 7                          | Duration   | 1 semester   | Method of grading  | numerical grade  | Modul level   | undergraduate   |  |  |  |  |  |  |  |
|                | Courses                         | V  | (1) + Ü (2) + E (2.5)  |  |  | ·   |   |  |  |  |  |  |  |  |
|                | Method of asso                  | A  | written examination (approx. 45 minutes) and practical identification assignment (approx. 45 minutes), weighted 1:1 Assessment offered: Once a year, summer semester creditable for bonus  |  |  |   |   |  |  |  |  |  |  |  |
|                | other prerequis                 | a  | Admission prerequisite to assessment: regular attendance of field trips (minimum 80%) and completion of exercises. Regular attendance of exercises (minimum 80%) and successful completion of the respective exercises (approx. 25 to 30 hours) is a prerequisite for admission to assessment.   |  |  |   |   |  |  |  |  |  |  |  |
|                | Participants ar cation of place | nd allo- s S S S S C lo d d C a q f f c c le d d k S m r r c lo d d s S m r r c lo S S S S S S S S S S S S S S S S S S | Bo places. hould the number of ap tudents of the Bachelor' hould the module be us helor's degree subject Bocated to students of the egree subjects Compute ation-oriented subject B vailable in one quota ex uota. Should there be, vorm regulation for the cooncerned will be allocate ast one other module concerned will be main election process group and the computer of all assessments. For this purpose, age grade of all assessments. For this purpose, age grade of all assessments (qualitative ranking) pplicants' position in a tring to this third ranking, ing or otherwise by lot. election process group a umber of ECTS credits and same number of ECTS tress of the respective apot. Quota 3 (25 % of place) | plications exceed the s degree subject Bio ed in other subjects, iologie (Biology) with a Bachelor's degree sational Mathematics a iology (as well as posceed the number of a within one module courses of one module ed in the same proceomponent of the respatained and places reasonable (Physics), al be ranked, firstly, a and, secondly, according the same policants will be confird ranking will be confird ranking will be confired to the same policants will be confired to the secondly according the secondly according to the second policants will be confired to the second policant will be confired to the s | there will be two quotas in 180 ECTS credits and 5% ubject Biologie (Biology) and Mathematik (Mathematically to students of otapplications, the remaining mponent, several course component. In this case dure. In this procedure, a pective module will be givallocated as they becomparing to the number studies or of all modu. Mathematik (Mathematical coording to their average ding to their total number alculated as the sum of with the same ranking, plant allocated according to the same ranking, plant allocated decomponent aces will be allocated by cants with the same numbers of the sa | ECTS credits will be give: 95% of places will be 8% of places (a minimum) with 60 ECTS credits and ther 'importing' subjecting places will be alloces with a restricted nurse, places on all courses applicants who alreading to the applicant wen preferential considue available. For each of ECTS credits the components in the places of the time of applicant will be allocated according to the applicant will be allocated according to the following quotas: Cents of the Faculty of Berts of the Faculty of Berts of the Faculty of Berts of subject semesting the places of | ven preferential consideration. e allocated to students of the Bam of one place in total) will be allord to students of the Bachelor's ECTS credits, as part of the applicits). Should the number of places ated to applicants from the other mber of places, there will be a unice of a module component that are y have successfully completed at |  |  |  |  |  |  |  |

| Modules Special B |                      |                         |   |  |  |   |  |  |  |  |
|-------------------|----------------------|-------------------------|---|--|--|---|--|--|--|--|
| 07-4S1N-          | Neurobio             | logy 1                  |   |  |  |   |  |  |  |  |
| VO1-152-m01       | ECTS 5               | Duratio                 | n   | 1 semester   | Method of grading  | numerical grade   |  | Modul level  | undergraduate  |  |
|                   | Courses              | ,                       | $\ddot{U}(4) + S(1)$  |  |  |   |  |  |  |  |
|                   |                      |                         | 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. creditable for bonus |  |  |   |  |  |  |  |
|                   | Participal cation of | nts and allo-<br>places | Stude<br>Shoul<br>chelo<br>locate<br>degre<br>cation<br>availa<br>quota<br>form I<br>conce<br>least<br>A wai<br>Selec<br>ments<br>rage g<br>cludir<br>lows:<br>dits (d<br>applie<br>ding t<br>king o<br>Selec<br>numb<br>the sa<br>sters<br>lot. Q<br>Shoul   | Id the number of apents of the Bachelo Id the module be used to students of the subjects Comput and the subjects Comput and the subjects Comput and the subjects Comput and the subject Id | sed in other subjects Biologie (Biology) with Biologie (Biology) with Bachelor's degree stational Mathematics Biology (as well as poxceed the number of within one module courses of one moduled in the same procomponent of the resonated and places of 1 (95%): Places will applicants will be ranked, firstly, Physik (Physics) and, secondly, accounting the second of the ranking will be second of the | cologie (Biology) with the two quantity there will be two quantity the two quantity the two quantity to students applications, the resomponent, several component. In this edure. In this process pective module will e-allocated as they be primarily be allocated nked according to the primarily to their studies or of all according to their avoiding to their total nucleulated as the sufficient with the same ranking to the same | 180 ECTS cruotas: 95% cand 5% of place of other 'immaining place ourses with a case, place dure, applicate be given prepared according the number of ECT amount of these tring, places with a case, place ourses with a case, place of according the number of ECT amount of these tring, places with a case of the following to the following the f | edits will be given places will be aces (a minimum or ECTS credits and porting' subjects will be allocated numbers on all courses on all courses on the applicant of ECTS credits the ponents in the the time of application of ECTS credits achies we rankings, and the Faculty of Book of ECTS credits achies we rankings, and the Faculty of Book of ECTS credits achies we can be allocated as a country of Book of ECTS credits achies we can be allocated as a country of Book of ECTS credits achies we can be allocated as a country of Book of ECTS credits achies a country of Book of ECTS credits achies we can be allocated as a country of Book of ECTS credits achies a country of Book of ECTS credits achies a country of Book of ECTS credits achieved as a country of Book of ECTS credits achieved as a country of Book of ECTS credits achieved as a country of Book of ECTS credits achieved as a country of Book of ECTS credits achieved as a country of Book of ECTS credits achieved as a country of Book of ECTS credits achieved achieved as a country of Book of ECTS credits achieved as a country of Book of ECTS credits achieved achiev | ren preferential consideration. e allocated to students of the Bam of one place in total) will be all and to students of the Bachelor's ECTS credits, as part of the applits). Should the number of places ated to applicants from the other of places, there will be a unit of a module component that are y have successfully completed at |  |

| 07-4S1N-    | Integrative Behavioral Biology 1  ECTS   5   Duration   1 competer   Method of grading   numerical grade   Medul level   undergraduate |                        |   |   |  |  |   |  |  |  |  |  |  |
|-------------|--|------------------------|---|---|--|--|---|--|--|--|--|--|--|
| VO2-152-m01 | ECTS   | 5                      | Duration  | 1 semester  | Method of grading numerical grade  | Modul level  | undergraduate   |  |  |  |  |  |  |
|             | Course   | !S                     | V (2  | ) + S (2)   |  |  |   |  |  |  |  |  |  |
|             |  |                        | eac<br>sen<br>din<br>Stu<br>crec  | 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. creditable for bonus  |  |  |   |  |  |  |  |  |  |
|             |  | pants and<br>of places | Shows | dents of the Bache old the module be lor's degree subjects Compon-oriented subjects. Should there be regulation for the cerned will be allost one other module aiting list will be nection process grous. For this purpose grade of all asseding Chemie (Chemis: First, applicants (qualitative rankidicants' position ing to this third rank gor otherwise by lection process grouber of ECTS credits of the respective Quota 3 (25 % of pull the module be all of the control of the | up 2 (5%): Places will be allocated according to the<br>ts already achieved in modules/module compone<br>CTS credits achieved, places will be allocated by leapplicant; among applicants with the same num | CTS credits will be given 55% of places will be of places (a minimulation) of places (a minimulation), each with 180 ner 'importing' subject of places will be alloced with a restricted nurplaces on all courses pplicants who alreadien preferential consider available. Ording to the applicant of ECTS credits the components in the components in the components in the components in the component of ECTS credits achieved weighted account of ECTS credits achieves two rankings, and ces will be allocated on the following quotas: On the following quot | ven preferential consideration. e allocated to students of the Bam of one place in total) will be allocated to students of the Bachelor's ECTS credits, as part of the applicates). Should the number of places rated to applicants from the other mber of places, there will be a units of a module component that are y have successfully completed at deration.  Its' previous academic achievement have achieved and their avesubject of Biologie (Biology) (explication. This will be done as follocation. This will be done as follocation. The number of ECTS creeved (quantitative ranking). The number of the qualitative ranking to the qualitative ranking) among applicants with places): number of subject semeters, places will be allocated by |  |  |  |  |  |  |

| 07-4S1N-    | Biology and Ecology of Arthropods |                      |  |  |  |  |   |  |  |  |  |  |  |
|-------------|-----------------------------------|----------------------|--|--|--|--|---|--|--|--|--|--|--|
| VO5-152-m01 | ECTS                              | 5                    | Duration                                 | 1 semester   | Method of grading numerical grade  | Modul level  | undergraduate   |  |  |  |  |  |  |
|             | Course                            | 25                   | Ü  | (4) + S (1)  |  | ·  |   |  |  |  |  |  |  |
|             |                                   |                      | ea<br>se<br>di<br>St<br>cr               | 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. creditable for bonus   |  |  |   |  |  |  |  |  |  |
|             |                                   | pants an<br>of place | S Sh | udents of the Bachel<br>nould the module be<br>relor's degree subject<br>cated to students of<br>egree subjects Comp<br>tion-oriented subject<br>railable in one quota<br>tota. Should there be<br>rm regulation for the<br>oncerned will be allocated<br>ast one other module<br>waiting list will be me<br>election process grouents. For this purpos<br>ge grade of all asses<br>uding Chemie (Chem<br>ws: First, applicants<br>ts (qualitative ranking<br>oplicants' position in<br>ing to this third ranking<br>or otherwise by low<br>election process groumber of ECTS credits<br>e same number of ECTS credits<br>ers of the respective<br>t. Quota 3 (25 % of produld the module be | up 2 (5%): Places will be allocated according to to a lready achieved in modules/module compone<br>CTS credits achieved, places will be allocated by applicant; among applicants with the same nun | ECTS credits will be give: 95% of places (a minimum) with 60 ECTS credits ther 'importing' subjecting places will be allocated with a restricted nurse, places on all courses applicants who alread wen preferential considue available. For a possible components in the giral weighted according to the set wo rankings, and aces will be allocated the following quotas: Cents of the Faculty of Evolution of subject semestimates of subject semestimates of subject semestimates. | ren preferential consideration. e allocated to students of the Bam of one place in total) will be allocated to students of the Bachelor's ECTS credits, as part of the applicates). Should the number of places ated to applicants from the other of places, there will be a unit of a module component that are y have successfully completed at deration.  Its' previous academic achievency have achieved and their avesubject of Biologie (Biology) (exclication. This will be done as followed (quantitative ranking). The of places will be allocated accordance to the qualitative ranking) among applicants with places): number of subject semeters, places will be allocated by |  |  |  |  |  |  |

| 07-4S1AM- | Method | ds in Bio             | technology   | ,  |   |  |   |  |  |  |
|-----------|--------|-----------------------|--|--|---|--|---|--|--|--|
| B-152-m01 | ECTS   | 5                     | Duration   | 1 semester   | Method of grading numerical grade   | Modul level  | undergraduate   |  |  |  |
|           | Course | ·S                    | V (2   | V (2) + S (2)  |   |  |   |  |  |  |
|           | Method | d of asse             |  | ten examination (app<br>ditable for bonus  | prox. 30 to 60 minutes)   |  |   |  |  |  |
|           |        | oants an<br>of places | Shows Shows Shows Shows Shows I was appeared by the ster lot. Shows Show | dents of the Bachelon all the module be used to students of the ree subject I ated to students of the ree subject I ated to students of the ree subject I ated to students of the ree subject I at a subj | oplications exceed the number of available places, it's degree subject Biologie (Biology) with 180 ECTS sed in other subjects, there will be two quotas: 95 Biologie (Biology) with 180 ECTS credits and 5% of the Bachelor's degree subject Biologie (Biology) with ational Mathematics and Mathematik (Mathematics) are been subject Biologie (Biology) with ational Mathematics and Mathematik (Mathematics) (as well as potentially to students of other exceed the number of applications, the remaining position of the number of applications, the remaining position of the same procedure. In this procedure, applicated in the same procedure. In this procedure, application of the respective module will be given intained and places re-allocated as they become at 1 (95%): Places will primarily be allocated according applicants will be ranked according to the number of the taken during their studies or of all module centry), Physik (Physics), Mathematik (Mathematics)) and, secondly, according to their total number of third ranking will be calculated as the sum of these already achieved in modules/module components are allocated according to the falready achieved, places will be allocated by lot. Specificant; among applicants with the same number ces): lottery.  Seed only in the Bachelor's degree subject Biologie election process of group 1. | s credits will be given of places (a minimula h 60 ECTS credits cs), each with 180 limporting' subject that restricted nurses on all course icants who alread preferential consivailable.  In g to the applicar of ECTS credits to at the time of application of the time of application of the faculty of the Faculty of EQuota 2 (25% of the faculty of the f | ven preferential consideration. e allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's e ECTS credits, as part of the appli- cts). Should the number of places cated to applicants from the other mber of places, there will be a uni- s of a module component that are ly have successfully completed at deration.  ats' previous academic achieve- hey have achieved and their ave- subject of Biologie (Biology) (ex- colication. This will be done as fol- rding to the number of ECTS cre- eved (quantitative ranking). The nd places will be allocated accor- according to the qualitative ran-  Quota 1 (50 % of places): total Biology; among applicants with places): number of subject seme- ters, places will be allocated by |  |  |  |

| 07-4S1MOLB-152- | Aspects of                  | Molecular Bi | otechnology   |  |  |  | 1   |  |  |  |
|-----------------|-----------------------------|--------------|---|--|--|--|---|--|--|--|
| mo1             | ECTS 5                      | Duratio      | n 1 semester  | Method of grading  | numerical grade  | Modul level  | undergraduate   |  |  |  |
|                 | Courses                     |              | V (2) + S (2)   |  |  |  |   |  |  |  |
|                 | Method of                   | assessment   | written examination (approx. 30 to 60 minutes) creditable for bonus   |  |  |  |   |  |  |  |
|                 | Participant<br>cation of pl |              | Students of the Bache Should the module be chelor's degree subject located to students of degree subject scomp cation-oriented subject available in one quota quota. Should there be form regulation for the concerned will be allow least one other module. A waiting list will be m Selection process grouments. For this purpos rage grade of all asses cluding Chemie (Chem lows: First, applicants dits (qualitative ranking applicants' position in ding to this third ranking or otherwise by loselection process grounumber of ECTS credit the same number of Ects sters of the respective lot. Quota 3 (25 % of p Should the module be | lor's degree subject Biol used in other subjects, at Biologie (Biology) with the Bachelor's degree sutational Mathematics at Biology (as well as pot exceed the number of a e, within one module cocurses of one module cated in the same proceed component of the respaintained and places will be ranked, firstly, and secondly, accordant the same process at hird ranking will be cong. Among applicants wit.  The process will be salready achieved in module cated in the salready achieved in the salready achieved in module cated in the salready achieved in the salready achieved in | there will be two quotas: 91 180 ECTS credits and 5% of ubject Biologie (Biology) with and Mathematik (Mathematic entially to students of othe applications, the remaining emponent, several courses we component. In this case, pladure. In this procedure, applicative module will be giventially be allocated according to the number studies or of all module of Mathematik (Mathematics) according to their total number of alculated as the sum of the ith the same ranking, place allocated according to the odules/module componentially according to the same ranking to the odules/module componentially according to the same number of the odules according to the odules will be allocated by lot cants with the same number of segree subject Biologies. | rs credits will be given to so of places (a minimu th 60 ECTS credits cics), each with 180 or 'importing' subject places will be allocated to the applicants who alread a preferential consideration of ECTS credits to components in the at the time of applicants who alread the components in the at the time of applicants will be allocated following quotas: On the faculty of Example 2 (25% of the f | ven preferential consideration. e allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- cts). Should the number of places cated to applicants from the other mber of places, there will be a uni- s of a module component that are y have successfully completed at |  |  |  |

| 07-4S1M-   | Special Bioinformatics 1 |          |          |  |  |  |  |  |   |  |  |  |  |
|------------|--------------------------|----------|----------|--|--|--|--|--|---|--|--|--|--|
| Z6-152-m01 | ECTS                     | 5        | Duration | n  | 1 semester   | Method of grading  | numerical grade  | Modul level  | undergraduate   |  |  |  |  |
|            | Course                   | :S       |          | V (1) + Ü (5)  |  |  |  |  |   |  |  |  |  |
|            | Method                   | d of ass | essment  |  | approx. 10 to 20 pa  |  |  |  |   |  |  |  |  |
|            |                          |          |          |  | Language of assessment: German or English creditable for bonus   |  |  |  |   |  |  |  |  |
|            |                          | oants ar |          | Stude Shoul chelo locate degree cation availa quota form I conce least A wair Select ments rage geludir lows: dits (dapplied ding the sasters lot. Q Shoul | ents of the Bachelo Id the module be units of the module be units of the esubjects Computation on the content of the content o | or's degree subject Biolosed in other subjects, Biologie (Biology) with the Bachelor's degree stational Mathematics as Biology (as well as pot exceed the number of a within one module concurses of one module ted in the same procest of the respintained and places will be ranked, firstly, and applicants will be ranked, firstly, and third ranking will be constituted and applicants will be constituted and applicants will be already achieved in more strength. | a 180 ECTS credits and 5% of plaubject Biologie (Biology) with 6 and Mathematik (Mathematics) centially to students of other 'implications, the remaining place imponent, several courses with component. In this case, place dure. In this procedure, applications with ending the difference of the condition of the sective module will be given presented as they become avair imarily be allocated according to the number of eir studies or of all module compathematik (Mathematics)) at according to their average gradeding to their total number of EC calculated as the sum of these thin the same ranking, places with the same ranking, places with the same number of acces will be allocated by lot. Quants with the same number of or's degree subject Biologie (Biologie) | redits will be given of places will be acces (a minimum to ECTS credits at a each with 180 apporting' subjectes will be alloca restricted nursed on all courses and with a policial to the applicant of ECTS credits the ponents in the the time of appweighted according to the allocated according quotas: Quite Faculty of Buota 2 (25 % of public to the semester of policial subject semester of places and the faculty of Buota 2 (25 % of public to the semester of places and the semester of places and the faculty of Buota 2 (25 % of public to the semester of places and the semester of places | ren preferential consideration. E allocated to students of the Bam of one place in total) will be almost of the Bam of one place in total) will be almost of the Bachelor's ECTS credits, as part of the applits). Should the number of places ated to applicants from the other of places, there will be a unit of a module component that are y have successfully completed at deration.  Its' previous academic achievency have achieved and their avesubject of Biologie (Biology) (explication. This will be done as folding to the number of ECTS creaved (quantitative ranking). The old places will be allocated accordance according to the qualitative rankuota 1 (50 % of places): total |  |  |  |  |

| 07-4S1PS2-211- | Met  | hods in               |                  |   |  |   |  |   |  |  |
|----------------|------|-----------------------|------------------|---|--|---|--|---|--|--|
| mo1            | ECT: | S 5                   | Duratio          | n   | 1 semester   | Method of grading numerical grade   | Modul level  | undergraduate   |  |  |
|                | Cou  | rses                  |                  | Ü (4)   | + S (1)  |   |  |   |  |  |
|                | Met  | hod of a              | ssessment        | 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 |  |   |  |   |  |  |
|                |      | icipants<br>on of pla | and allo-<br>ces | credit<br>15 ye:<br>Shou  | table for bonus s Id the number of ap  | udents will be informed about the method and leading of the place of available place is degree subject Biologie (Biology) with 180 EC   | es, places will be allo  | ocated as follows:  |  |  |
|                |      |                       |                  | Shou chelo located degree cation availa quota form conceleast A wai Select ment rage; cluding lows: dits (appli ding the sasters lot. Q Shou  | Id the module be user's degree subject Beed to students of the see subjects Computed noriented subject Beable in one quota exacts. Should there be, we regulation for the coerned will be allocated one other module coerned will be maintion process groupes. For this purpose, grade of all assessming Chemie (Chemist First, applicants will qualitative ranking) cants' position in a second this third ranking or otherwise by lotation process groupes of ECTS credits a game number of ECTS of the respective apuota 3 (25 % of place ld the module be used to students of the respective and the module be used to students of the respective and the module be used to students of the respective and the module be used to students of the respective and the module be used to students of the respective and the module be used to students of the respective and the module be used to students of the respective and the module be used to students of the respective and the module be used to students of the respective and the module be used to students of the respective and the module be used to students of the respective and the module be used to students of the respective and the module be used to students of the respective and the module be used to students of the respective and the module the mo | sed in other subjects, there will be two quotas: of Biologie (Biology) with 180 ECTS credits and 5% be Bachelor's degree subject Biologie (Biology) was ational Mathematics and Mathematik (Mathematics) golden (as well as potentially to students of othe sceed the number of applications, the remaining within one module component, several courses ourses of one module component. In this case, pleed in the same procedure. In this procedure, appomponent of the respective module will be given tained and places re-allocated as they become 1 (95%): Places will primarily be allocated accordapplicants will be ranked according to the number taken during their studies or of all module cry), Physik (Physics), Mathematik (Mathematics) and, secondly, according to their average gand, secondly, according to their total number third ranking will be calculated as the sum of the Among applicants with the same ranking, place (5%): Places will be allocated according to the Iready achieved in modules/module components credits achieved, places will be allocated by logicant; among applicants with the same number policant; among applicants with the same number the same number the same applicants with the same number the same number the same applicants with the same number the same | of places will be of places (a minimuly with 60 ECTS credits atics), each with 180 per 'importing' subject g places will be alloct with a restricted nurplaces on all courses oplicants who alreaden preferential consideravailable. The applicant ber of ECTS credits the components in the solution of ECTS credits achieves two rankings, and the following quotas: Onts of the Faculty of Ects of subject semesters of subject semesters of subject semesters of subject semesters of places of subject semesters of subject semisters of subject semesters of subject semisters of subject semisters of subject sem | e allocated to students of the Bam of one place in total) will be allocated to students of the Bachelor's ECTS credits, as part of the applicates). Should the number of places rated to applicants from the other of places, there will be a unite of a module component that are y have successfully completed at deration.  Its' previous academic achievement have achieved and their avesubject of Biologie (Biology) (explication. This will be done as folloging to the number of ECTS creaved (quantitative ranking). The not places will be allocated accordance or the qualitative ranking to the qualitative ranking) among applicants with places): number of subject semeters, places will be allocated by |  |  |

| 07-4S1PS3-152- | Pharmaceutical Drugs in Plants  CCTS   5 |                        |  |  |  |  |   |  |  |  |  |  |  |
|----------------|--|------------------------|--|--|--|--|---|--|--|--|--|--|--|
| mo1            | ECTS                                     | 5                      | Duration   | 1 semester   | Method of grading numerical grade  | Modul level  | undergraduate   |  |  |  |  |  |  |
|                | Course                                   | S                      | Ü (4)  | + S (1)  |  |  |   |  |  |  |  |  |  |
|                |  |                        | each<br>sent<br>ding<br>Stuc<br>cred   | 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. creditable for bonus |  |  |   |  |  |  |  |  |  |
|                |  | oants and<br>of places | Shool Stude Shool Shool Stude Shool Chell local degree Cation avail quot form conceived as Selemen rage clude lower dits apple ding king Selemen the selemen sters lot. On Shool Sho | lents of the Bachel ald the module be or's degree subject ted to students of tee subject subject lends of the subject lable in one quota a. Should there be regulation for the terned will be allocated one other module liting list will be motion process grouts. For this purpos grade of all asses ing Chemie (Chemic First, applicants (qualitative ranking icants' position in to this third ranking or otherwise by location process group ber of ECTS credits ame number of ECTS of the respective Quota 3 (25 % of puld the module be                             | p 2 (5%): Places will be allocated according to the already achieved in modules/module compone CTS credits achieved, places will be allocated by applicant; among applicants with the same num | ECTS credits will be given as the second and the second and the second and the second are as the second as the sec | ven preferential consideration. e allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- cts). Should the number of places rated to applicants from the other mber of places, there will be a uni- s of a module component that are y have successfully completed at deration.  tts' previous academic achieve- hey have achieved and their ave- subject of Biologie (Biology) (ex- clication. This will be done as fol- reding to the number of ECTS cre- eved (quantitative ranking). The nd places will be allocated accor- according to the qualitative ran- Quota 1 (50 % of places): total Biology; among applicants with places): number of subject seme- ters, places will be allocated by |  |  |  |  |  |  |

| 07-S1-LP1-152-m01 | Laboratory Practical Course I |          |            |  |   |                                     |             |               |  |  |  |  |
|-------------------|-------------------------------|----------|------------|--|---|-------------------------------------|-------------|---------------|--|--|--|--|
| İ                 | ECTS                          | 5        | Duration   | ı  | 1 semester  | Method of grading numerical grade   | Modul level | undergraduate |  |  |  |  |
|                   | Course                        | S        |            | P (5)<br>Modu  | P (5) Module taught in: German and/or English   |                                     |             |               |  |  |  |  |
|                   | Method                        | l of ass | essment    | each<br>senta<br>ding t<br>Stude   | 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. creditable for bonus |                                     |             |               |  |  |  |  |
|                   | other p                       | rerequi  | sites      | Pleas  | e consult with cour   | se advisory service in advance.     |             |               |  |  |  |  |
| 07-S1-Ex1-152-m01 | Excursi                       | on I     |            |  |   |                                     | '           |               |  |  |  |  |
| [                 | ECTS                          | 5        | Duration   | 1  | 1 semester  | Method of grading numerical grade   | Modul level | undergraduate |  |  |  |  |
|                   | Courses                       |          |            |  | (2)<br>odule taught in: German and/or English   |                                     |             |               |  |  |  |  |
|                   | Method of assessment          |          |            | each<br>senta<br>ding t<br>Stude   | 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. creditable for bonus |                                     |             |               |  |  |  |  |
|                   | other p                       | rerequi  | sites      | Pleas  | e consult with cour   | se advisory service in advance.     |             |               |  |  |  |  |
| 07-S1-IP1-152-m01 | Interdi                       | sciplina | ry Project | i I  |   |                                     |             |               |  |  |  |  |
|                   | ECTS                          | 5        | Duration   |  | 1 semester  | Method of grading   numerical grade | Modul level | undergraduate |  |  |  |  |
|                   | Course                        | S        |            | R (5)<br>Modu  | ıle taught in: Germa  | an and/or English                   |             |               |  |  |  |  |
|                   | Method                        | l of ass | essment    | 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. creditable for bonus |   |                                     |             |               |  |  |  |  |
|                   | other p                       | rerequi  | sites      | Pleas  | e consult with cour   | se advisory service in advance.     |             |               |  |  |  |  |

| Modules Special B | ioscienc             | es II   |            |   |  |                     |                   |             |               |  |  |
|-------------------|----------------------|---|------------|---|--|---------------------|-------------------|-------------|---------------|--|--|
| 07-5EP-152-m01    | Extern               | al Pract  | ical Cours | e   |  |                     |                   |             |               |  |  |
|                   | ECTS                 | 10  | Duratio    | า   | 1 semester   | Method of gradin    | g numerical grade | Modul level | undergraduate |  |  |
|                   | Course               | !S  | '          | P (1)   | •  | •                   |                   | •           |               |  |  |
|                   |                      |   |            | Module taught in: German and/or English   |  |                     |                   |             |               |  |  |
|                   |                      |   |            | each<br>senta<br>ding t<br>Stude<br>Langu<br>credit   | 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  |                     |                   |             |               |  |  |
|                   | other p              | prerequisites Please consult with course advisory service in advance. |            |   |  |                     |                   |             |               |  |  |
| 07-S2-EX2-152-    | Excurs               | ion II  |            |   |  |                     |                   |             |               |  |  |
| mo1               | ECTS                 | 10  | Duration   | 1   | 1 semester   | Method of gradin    | g numerical grade | Modul level | undergraduate |  |  |
|                   | Courses              |   |            | E (8)<br>Modu   | Module taught in: German and/or English  |                     |                   |             |               |  |  |
|                   | Method of assessment |   |            | each<br>senta<br>ding t<br>Stude<br>Lang  | 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) per sentation (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 |                     |                   |             |               |  |  |
|                   | other p              | rerequi   | sites      | Pleas   | e consult with cour  | se advisory service | n advance.        |             |               |  |  |
| 07-S2-IP2-152-m01 | Interdi              | sciplina  | ry Project | t II  |  |                     |                   | ,           |               |  |  |
|                   | ECTS                 | 10  | Duratio    | n   | 1 semester   | Method of gradin    | g numerical grade | Modul level | undergraduate |  |  |
|                   | Course               | !S  |            | R (8)<br>Modu   | ıle taught in: Germa   | ın and/or English   |                   |             |               |  |  |
|                   |                      |   |            | 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 |  |                     |                   |             |               |  |  |
|                   | other p              | rerequi   | sites      | Pleas   | e consult with cour  | se advisory service | n advance.        |             | _,            |  |  |

| 07-S2-LP2-152-    | Labora               | tory Pra | actical Co | urse II                                   | '   | '                                       |                              |               |  |  |  |  |
|-------------------|----------------------|----------|------------|---|---|---|------------------------------|---------------|--|--|--|--|
| mo1               | ECTS                 | 10       | Duratio    | n   | 1 semester  | Method of grading                       | numerical grade              | Modul level   | undergraduate  |  |  |  |
|                   | Course               | S        |            | P (8)<br>Modu                             | P (8) Module taught in: German and/or English   |   |                              |               |  |  |  |  |
|                   | Method               | d of ass | essment    | each<br>senta<br>ding t<br>Stude<br>Langt | 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 |   |                              |               |  |  |  |  |
|                   | other p              | rerequi  | sites      | Pleas                                     | e consult with cours  | se advisory service in                  | advance.                     |               |  |  |  |  |
| Focus Chemistry ( | o or 30 E            | CTS cre  | dits)      |   |   |   |                              |               |  |  |  |  |
| Compulsory (21 EC | TS credi             | ts)      |            |   |   |   |                              |               |  |  |  |  |
| o8-AC-Ex-         | Experi               | mental   | Chemistry  | ,   |   |   |                              |               |  |  |  |  |
| Chem-152-m01      | ECTS 5 Duration      |          | n          | 1 semester                                | Method of grading   | numerical grade                         | Modul level                  | undergraduate |  |  |  |  |
|                   | Course               | S        |            | V (4)                                     | •   |   |                              |               |  |  |  |  |
|                   | Method of assessment |          |            |   |   | rox. 90 minutes)<br>: German and/or Eng | lish                         |               |  |  |  |  |
| 08-0C1-152-m01    | Organi               | c Chem   | istry 1    |   |   |   |                              |               |  |  |  |  |
|                   | ECTS                 | 5        | Duratio    | n   | 1 semester  | Method of grading                       | numerical grade              | Modul level   | undergraduate  |  |  |  |
|                   | Course               |          |            |   | + Ü (1)   |   |                              |               | _  |  |  |  |
|                   | Method of assessment |          |            | exam<br>(appr                             | ination in groups of ox. 30 minutes)  |   | approx. 15 minutes per candi |               | each (20 to 30 minutes) or c) oral oprox. 20 pages) or e) presentation |  |  |  |
|                   | Referre              | d to in  | LPO I      | § 62 l                                    | Nr. 2   |   |                              |               |  |  |  |  |
| o8-PC-QMS-        | Princip              | les of q | uantum n   | nechar                                    | nics and spectrosco   | py for engineering st                   | udents                       |               |  |  |  |  |
| FU-152-m01        | ECTS                 | 8        | Duratio    |   | 1 semester  | Method of grading                       | numerical grade              | Modul level   | undergraduate  |  |  |  |
|                   | Course               |          |            |   | + Ü (2)   |   |                              |               |  |  |  |  |
|                   |                      |          |            | exam<br>(appr<br>Langı                    | ination in groups of<br>ox. 30 minutes)   | e of assessment: German and/or English  |                              |               |  |  |  |  |

| 08-TC-152-m01       | Quantu                                     | m Che    | mistry     |  |   |  | ,           |               |  |  |  |  |
|---------------------|--|----------|------------|--|---|--|-------------|---------------|--|--|--|--|
|                     | ECTS                                       | 3        | Duration   | า  | 1 semester  | Method of grading numerical grade  | Modul level | undergraduate |  |  |  |  |
|                     | Course                                     | S        |            | V (2)  | $V(2) + \ddot{U}(1)$  |  |             |               |  |  |  |  |
|                     | Method                                     | d of ass | sessment   | exam<br>(appr<br>Langu   | a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes)<br>Language of assessment: German and/or English creditable for bonus |  |             |               |  |  |  |  |
|                     | Referre                                    | d to in  | LPO I      | § 22    Nr. 1 h)<br>§ 22    Nr. 2 f)<br>§ 22    Nr. 3 f)   |   |  |             |               |  |  |  |  |
| Compulsory Elective | ves (9 EC                                  | TS cred  | dits)      |  |   |  |             |               |  |  |  |  |
| 08-0C2-152-m01      | Organi                                     | c Chem   | istry 2 an | d analy  | ytical methods in o   | organic chemistry  |             |               |  |  |  |  |
|                     | ECTS                                       | 9        | Duration   | 1  | 1 semester  | Method of grading   numerical grade  | Modul level | undergraduate |  |  |  |  |
|                     | Course                                     | S        |            | V (3) ·  | / (3) + Ü (1) + V (2)   |  |             |               |  |  |  |  |
|                     |  |          |            | a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes)  Language of assessment: German and/or English |   |  |             |               |  |  |  |  |
| 08-PC-TKE-152-      | Thermodynamics, Kinetics, Electrochemistry |          |            |  |   |  |             |               |  |  |  |  |
| mo1                 |  | 9        | Duration   |  | 1 semester  | Method of grading   numerical grade  | Modul level | undergraduate |  |  |  |  |
|                     | Course                                     |          |            | V (4) + Ü (2)  |   |  |             |               |  |  |  |  |
|                     | Method                                     | d of ass | sessment   | exam<br>(appr<br>Langu   | ination in groups o<br>ox. 30 minutes)  | approx. 90 to 180 minutes) or b) oral examination f up to 3 candidates (approx. 15 minutes per caret: German and/or English      |             |               |  |  |  |  |
|                     | Referre                                    | d to in  | LPO I      | § 62 l   | Nr. 1   |  |             |               |  |  |  |  |
| 08-PC-SBL-152-      | Symme                                      | try, ch  | emical bo  | nding  | and light   |  |             |               |  |  |  |  |
| mo1                 | ECTS                                       | 9        | Duration   | 1  | 2 semester  | Method of grading   numerical grade  | Modul level | undergraduate |  |  |  |  |
|                     | Course                                     | S        |            | V (3)  | + Ü (2) + V (2) + Ü (   | 2)   |             |               |  |  |  |  |
|                     | Method                                     | d of ass | sessment   | exam<br>(appr  | ination in groups o<br>ox. 30 minutes)  | approx. 90 to 180 minutes) or b) oral examinatio<br>f up to 3 candidates (approx. 15 minutes per car<br>t: German and/or English |             |               |  |  |  |  |

| 08-AS1-152-m01    | Inorg                | anic Chen  | nistry of t | the Ele   | ments   |                   |                 |             |               |  |  |  |  |
|-------------------|----------------------|--|-------------|---|---|-------------------|-----------------|-------------|---------------|--|--|--|--|
|                   | ECTS                 | 6  | Duration    | n   | 1 semester  | Method of grading | numerical grade | Modul level | undergraduate |  |  |  |  |
|                   | Cours                | es   | •           | V (2) ·   | V (2) + V (2)   |                   |                 |             |               |  |  |  |  |
|                   | Metho                | od of asse   | essment     | a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral |   |                   |                 |             |               |  |  |  |  |
|                   |                      |  |             |   | examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) |                   |                 |             |               |  |  |  |  |
|                   |                      |  |             | Language of assessment: German and/or English   |   |                   |                 |             |               |  |  |  |  |
|                   | Referred to in LPO I |  |             |   | § 62   Nr. 1  |                   |                 |             |               |  |  |  |  |
| Focus Geography ( | o or 30              | ECTS cre   | dits)       |   |   |                   |                 |             |               |  |  |  |  |
| 04-Geo-PG1Ex-152- | Gene                 | ral Physic   | al Geogra   | aphy: I   | Exogenic Dynamics -   | Geomorphology     |                 |             |               |  |  |  |  |
| mo1               | ECTS                 | 5  | Duration    | 1   | 1 semester  | Method of grading | numerical grade | Modul level | undergraduate |  |  |  |  |
|                   | Cours                | es   |             |   | V (3) + T (1) Module taught in: German and/or English   |                   |                 |             |               |  |  |  |  |
|                   | Metho                | od of asse   | essment     | written examination (approx. 45 minutes) Language of assessment: German and/or English creditable for bonus                   |   |                   |                 |             |               |  |  |  |  |
|                   | Referred to in LPO I |  |             | § 47 I<br>§ 66 I  | Nr. 1<br>Nr. 1  |                   |                 |             |               |  |  |  |  |
| o4-Geo-           | Gene                 | General Physical Geography: Endogenic Dynamics - Introduction to Geology |             |   |   |                   |                 |             |               |  |  |  |  |
| PG1En-152-m01     | ECTS                 | 5  | Duration    | n   | 1 semester  | Method of grading | numerical grade | Modul level | undergraduate |  |  |  |  |
|                   | Cours                | es   |             | V (3) + T (1) Module taught in: German and/or English   |   |                   |                 |             |               |  |  |  |  |
|                   | Method of assessment |  |             | written examination (approx. 45 minutes) Language of assessment: German and/or English creditable for bonus                   |   |                   |                 |             |               |  |  |  |  |
|                   | Refer                | Referred to in LPO I   |             |   | § 47   Nr. 1<br>§ 66   Nr. 1  |                   |                 |             |               |  |  |  |  |
| 04-Geo-PG1Kl-152- | Gene                 | ral Physic   | al Geogra   | aphy: (   | Climate System  |                   |                 |             |               |  |  |  |  |
| mo1               | ECTS                 | 5  | Duration    | n   | 1 semester  | Method of grading | numerical grade | Modul level | undergraduate |  |  |  |  |
|                   | Cours                | es   |             | V (3) Module taught in: German and/or English   |   |                   |                 |             |               |  |  |  |  |
|                   | Metho                | od of asse   | essment     | written examination (approx. 45 minutes) Language of assessment: German and/or English  |   |                   |                 |             |               |  |  |  |  |
|                   | Refer                |  |             |   | § 47   Nr. 1<br>§ 66   Nr. 1  |                   |                 |             |               |  |  |  |  |

| 04-Geo-HG1S-152- | Genera               | l Humai  | n Geogra  | ohy: Introduction to  | the Geography of Cities, Towns and Vill       | lages             |               |  |  |  |  |  |
|------------------|----------------------|--|-----------|---|---|-------------------|---------------|--|--|--|--|--|
| mo1              | ECTS                 | 5  | Duration  | 1 semester  | Method of grading numerical g                 | rade Modul level  | undergraduate |  |  |  |  |  |
|                  | Course               | S  |           | V (3)<br>Module taught in: German and/or English  |   |                   |               |  |  |  |  |  |
|                  | Method               | d of asso  | essment   | written examination (approx. 45 minutes) Language of assessment: German and/or English                      |   |                   |               |  |  |  |  |  |
|                  | Referre              | d to in l  | .PO I     | § 47   Nr. 1<br>§ 66   Nr. 1  |   |                   |               |  |  |  |  |  |
| 04-Geo-HG1W-152- | Genera               | l Humai  | n Geogra  | ohy: Introduction to  | Economic Geography                            |                   |               |  |  |  |  |  |
| mo1              | ECTS                 | 5  | Duration  | 1 semester  | Method of grading numerical g                 | grade Modul level | undergraduate |  |  |  |  |  |
|                  | Courses              |  |           |   | V (3) Module taught in: German and/or English |                   |               |  |  |  |  |  |
|                  | Method of assessment |  |           | written examination (approx. 45 minutes) Language of assessment: German and/or English                      |   |                   |               |  |  |  |  |  |
|                  | Referred to in LPO I |  |           | § 47   Nr. 1<br>§ 66   Nr. 1  |   |                   |               |  |  |  |  |  |
| 04-Geo-HG1B-152- | Genera               | General Human Geography: Introduction to Social and Population Geography |           |   |   |                   |               |  |  |  |  |  |
| mo1              | ECTS 5 Duratio       |  |           | 1 semester  | Method of grading numerical g                 | grade Modul level | undergraduate |  |  |  |  |  |
|                  | Courses              |  |           | V (3)<br>Module taught in: German and/or English  |   |                   |               |  |  |  |  |  |
|                  | Method of assessment |  |           | written examination (approx. 45 minutes) Language of assessment: German and/or English                      |   |                   |               |  |  |  |  |  |
|                  | Referred to in LPO I |  |           | § 47   Nr. 1<br>§ 66   Nr. 1  |   |                   |               |  |  |  |  |  |
| 04-Geo-KART-152- | Cartog               | raphy a  | nd Geoinf | ormation  |   |                   |               |  |  |  |  |  |
| mo1              | ECTS                 | 5  | Duration  | 1 semester  | Method of grading numerical g                 | grade Modul level | undergraduate |  |  |  |  |  |
|                  | Courses              |  |           | V (2) + T (2) Module taught in: German and/or English   |   |                   |               |  |  |  |  |  |
|                  | Method of assessment |  |           | written examination (approx. 75 minutes) Language of assessment: German and/or English creditable for bonus |   |                   |               |  |  |  |  |  |
|                  |                      |  |           | creditable for bolius   | 5   |                   |               |  |  |  |  |  |

| 04-Geo-FER-       | Introdu                               | ction to             | Geograp   | hical F   | Remote Sensing   |                   |                 | ,           |               |  |  |  |
|-------------------|---------------------------------------|----------------------|-----------|---|--|-------------------|-----------------|-------------|---------------|--|--|--|
| NE-152-m01        | ECTS                                  | 5                    | Duratio   | n   | 1 semester   | Method of grading | numerical grade | Modul level | undergraduate |  |  |  |
|                   | Course                                | S                    |           |   | V (2) + T (2) Module taught in: German and/or English  |                   |                 |             |               |  |  |  |
|                   | Method of assessment                  |                      |           | Langu   | written examination (approx. 45 minutes) Language of assessment: German and/or English creditable for bonus  |                   |                 |             |               |  |  |  |
|                   | Referre                               | d to in L            | .PO I     | § 66 I  | Nr. 2  |                   |                 |             |               |  |  |  |
| 04-Geo-FER-       | Applica                               | ations o             | f Remote  | Sensir  | ng in Geography  |                   |                 |             |               |  |  |  |
| NA-152-m01        | ECTS                                  | 5                    | Duratio   | n   | 1 semester   | Method of grading | numerical grade | Modul level | undergraduate |  |  |  |
|                   | Courses                               |                      |           | V (2) -<br>Modu   | + T (2)<br>le taught in: Germar  | n and/or English  |                 |             |               |  |  |  |
|                   | Method of assessment                  |                      |           | written examination (approx. 45 minutes) Language of assessment: German and/or English creditable for bonus |  |                   |                 |             |               |  |  |  |
| 04-Geo-RG-V1-152- | Regional Geography - Lecture course 1 |                      |           |   |  |                   |                 |             |               |  |  |  |
| mo1               | ECTS 5 Duratio                        |                      |           | n   | 1 semester   | Method of grading | numerical grade | Modul level | undergraduate |  |  |  |
|                   | Courses                               |                      |           | V (2)<br>Modu   | le taught in: Germar   | n and/or English  |                 |             |               |  |  |  |
|                   | Method                                | Method of assessment |           |   | a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 15 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate)  Language of assessment: German and/or English |                   |                 |             |               |  |  |  |
|                   | Referred to in LPO I                  |                      |           | § 47   Nr. 2<br>§ 66   Nr. 1  |  |                   |                 |             |               |  |  |  |
| 04-Geo-RG-V2-152- | Region                                | al Geog              | raphy - L | ecture course 2   |  |                   |                 |             |               |  |  |  |
| mo1               | ECTS                                  | 5                    | Duratio   | n   | 1 semester   | Method of grading | numerical grade | Modul level | undergraduate |  |  |  |
|                   | Course                                | S                    |           | V (2)<br>Modu   | le taught in: Germar   | n and/or English  |                 |             |               |  |  |  |
|                   | Method                                | Method of assessment |           |   | a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 15 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate)  Language of assessment: German and/or English |                   |                 |             |               |  |  |  |
|                   | Referre                               | Referred to in LPO I |           |   | Nr. 2<br>Nr. 1   |                   |                 |             |               |  |  |  |

| Focus Computer Sc | ience (o or          | 30 ECTS    | credit   | ts)   |                              |                        |                             |                          |                                |  |  |
|-------------------|----------------------|------------|----------|---|------------------------------|------------------------|-----------------------------|--------------------------|--------------------------------|--|--|
| 10-I-GdP-172-m01  | Fundamer             | ntals of I | Progra   | mmin  | 3                            |                        |                             |                          |                                |  |  |
|                   | ECTS 5               | D          | uration  |   | 1 semester                   | Method of grading      | numerical grade             | Modul level              | undergraduate                  |  |  |
|                   | Courses              |            |          | V (2)   | + Ü (2)                      |                        |                             |                          |                                |  |  |
|                   | Method of            | f assess   |          | written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  creditable for bonus   |                              |                        |                             |                          |                                |  |  |
| 10-I-ADS-152-m01  | Algorithm            | is and da  | ata stri | ucture  | S                            |                        |                             | ,                        |                                |  |  |
|                   | ECTS 10              | o D        | uration  |   | 1 semester                   | Method of grading      | numerical grade             | Modul level              | undergraduate                  |  |  |
|                   | Courses              |            |          | V (4)   | + Ü (2)                      |                        |                             | ,                        |                                |  |  |
|                   | Method of assessment |            |          | written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  creditable for bonus   |                              |                        |                             |                          |                                |  |  |
|                   | Referred t           | o in LPO   |          |   | Nr. 1a<br>Nr. 1a             |                        |                             |                          |                                |  |  |
| 10-l-ST-152-m01   | Software Technology  |            |          |   |                              |                        |                             |                          |                                |  |  |
|                   | ECTS 10              | o D        | uration  |   | 1 semester                   | Method of grading      | numerical grade             | Modul level              | undergraduate                  |  |  |
|                   | Courses              |            |          | V (4)   | + Ü (2)                      |                        |                             |                          |                                |  |  |
|                   | Method of assessment |            |          | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per cadate). creditable for bonus  |                              |                        |                             |                          |                                |  |  |
|                   | Referred t           |            |          | § 69 l  | Nr. 1b<br>Nr. 1b             |                        |                             |                          |                                |  |  |
| 10-I-PP-191-m01   | Practical (          | Course i   | n Prog   | rammi   | ng                           |                        |                             |                          |                                |  |  |
|                   | ECTS 10              | o D        | uration  |   |                              | Method of grading      | (not) successfully comple   | eted Modul level         | undergraduate                  |  |  |
|                   | Courses              |            |          | P (6)   |                              |                        |                             |                          |                                |  |  |
|                   | Method of assessment |            |          | practical examination (programming exercises, approx. 240 hours) and written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). |                              |                        |                             |                          |                                |  |  |
|                   | other prer           | requisite  | !S       |   | ded learning outco<br>efore. | mes of the following i | module are required: 10-l-0 | GdP. It is therefore str | rongly recommended to complete |  |  |

| 10-I-SWP-152-m01 | Practic                        | al cours  | se in softv               | vare  | ,   |   | ,              |               |  |  |  |  |
|------------------|--------------------------------|-----------|---------------------------|---|---|---|----------------|---------------|--|--|--|--|
|                  | ECTS                           | 10        | Duration                  | า   | 1 semester  | Method of grading (not) successfully complete | ed Modul level | undergraduate |  |  |  |  |
|                  | Course                         | S         |                           | P (6)   | <sup>2</sup> (6)  |   |                |               |  |  |  |  |
|                  | Method                         | of ass    | essment                   |   | practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group) |   |                |               |  |  |  |  |
|                  | Modules successfully completed |           |                           |   | 10-I-PP, 10-I-ST  |   |                |               |  |  |  |  |
|                  | other p                        | rerequi   | sites                     |   | addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefor ighly recommended.               |   |                |               |  |  |  |  |
|                  | Referre                        | d to in I | PO I                      | § 69  | Nr. 1d  |   |                |               |  |  |  |  |
| 10-I-RAL-152-m01 |                                | compu     | ter systen                | ns  |   |   |                |               |  |  |  |  |
|                  | ECTS                           | 10        | Duration                  | n   | 1 semester  | Method of grading numerical grade             | Modul level    | undergraduate |  |  |  |  |
|                  | Course                         |           |                           |   | + Ü (2)   | rox. 60 to 120 minutes).                      |                |               |  |  |  |  |
|                  |                                |           | of ond<br>date)<br>credit | If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus  |   |   |                |               |  |  |  |  |
| 10-I-RIÜ-191-m01 |                                |           |                           |   |   |   |                |               |  |  |  |  |
|                  |                                | 10        | Duration                  | ,   | 1 semester  | Method of grading   numerical grade           | Modul level    | undergraduate |  |  |  |  |
|                  | Course                         |           |                           | V (4) + Ü (2)   |   |   |                |               |  |  |  |  |
|                  | Method of assessment           |           |                           | written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  creditable for bonus |   |   |                |               |  |  |  |  |
| 10-I-HWP-152-m01 | Practic                        | al cours  | se in hard                | ware  |   |   |                |               |  |  |  |  |
|                  | ECTS                           | 10        | Duratio                   | 1   | 1 semester  | Method of grading (not) successfully complet  | ed Modul level | undergraduate |  |  |  |  |
|                  | Course                         | S         |                           | P (6)   |   |   |                |               |  |  |  |  |
|                  |                                |           |                           | portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)   |   |   |                |               |  |  |  |  |
|                  | Referred to in LPO I           |           | § 22 l                    | l Nr. 3b  |   |   |                |               |  |  |  |  |

| 10-I-TIV-152-m01 | Theore                | tical Inf | ormatics    |  |   |                   |                              | -           |               |  |  |  |
|------------------|-----------------------|-----------|-------------|--|---|-------------------|------------------------------|-------------|---------------|--|--|--|
|                  | ECTS                  | 5         | Duration    | า  | 1 semester  | Method of grading | numerical grade              | Modul level | undergraduate |  |  |  |
|                  | Course                | ·S        |             | V (4)  | •   |                   |                              | -           |               |  |  |  |
|                  | Method                | d of asso | essment     | written examination (approx. 60 to 120 minutes).     |   |                   |                              |             |               |  |  |  |
|                  |                       |           |             | If anr<br>of on<br>date)                             | If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).   |                   |                              |             |               |  |  |  |
|                  | Referre               | d to in L | PO I        |  | § 49   Nr. 1a<br>§ 69   Nr. 1a  |                   |                              |             |               |  |  |  |
| 10-I-TIT-191-m01 | Tutoria               | l Theore  | etical Info | rmatio   | :s  |                   |                              | ,           |               |  |  |  |
|                  | ECTS                  | 5         | Duratio     | า  | 1 semester  | Method of grading | (not) successfully completed | Modul level | undergraduate |  |  |  |
|                  | Course                | :S        | •           | Ü (2)  | •   |                   |                              |             |               |  |  |  |
|                  | Method                | d of asso | essment     | group<br>nutes                                       | exercises (consisting in completion of approx. 11 home work exercise sheets, presentation of own solutions in the exercise roups as well as approx. 5 short assessments written in the exercise group) or b) Written examination (approx. 180 to 240 miutes) ie Prüfungsart ist vom Prüfling festzulegen  |                   |                              |             |               |  |  |  |
| 10-I-LOG-152-m01 | Logic for informatics |           |             |  |   |                   |                              |             |               |  |  |  |
|                  | ECTS                  | 5         | Duration    | n  | 1 semester  | Method of grading | numerical grade              | Modul level | undergraduate |  |  |  |
|                  | Course                | :S        | •           | V (2)  | + Ü (2)   |                   |                              |             |               |  |  |  |
|                  | Method of assessment  |           |             | If anr<br>of on<br>date)<br>Langi                    | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examinat of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candate). Language of assessment: German and/or English creditable for bonus        |                   |                              |             |               |  |  |  |
|                  | Referre               | d to in L | PO I        | § 22   | l Nr. 3b  | ,                 |                              | 1           |               |  |  |  |
| 10-I-AGT-152-m01 | Algorit               | hmic Gr   | aph Theo    |  | '   | ,                 |                              | 1           |               |  |  |  |
|                  | ECTS                  | 5         | Duration    | <u> </u>   | 1 semester  | Method of grading | numerical grade              | Modul level | undergraduate |  |  |  |
|                  | Course                | S         |             | V (2)  | + Ü (2)   |                   | -                            |             |               |  |  |  |
|                  |                       |           |             | writte<br>If anr<br>of on<br>date)<br>Langu<br>credi | written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus |                   |                              |             |               |  |  |  |
|                  | Referre               | d to in L | PO I        | § 22 l   | l Nr. 3b  | ,                 |                              | -           |               |  |  |  |

| 10-l=ICG-161-m01 | Interac              | tive Co              | mputer Gr | aphics  |   |  |                  |                       |  |  |  |  |
|------------------|----------------------|----------------------|-----------|---|---|--|------------------|-----------------------|--|--|--|--|
|                  | ECTS                 | 5                    | Duration  | 1   | 1 semester  | Method of grading numerical grade                | Modul level      | graduate              |  |  |  |  |
|                  | Course               | S                    |           | V (2) -   | $V(2) + \ddot{U}(2)$  |  |                  |                       |  |  |  |  |
|                  | Method               | d of ass             | essment   | If ann<br>of one<br>date).<br>Separ<br>Langu  | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Separate written examination for Master's students. Language of assessment: German and/or English creditable for bonus |  |                  |                       |  |  |  |  |
|                  | Additio              | nal Info             | rmation   | Focus   | es available for stu  | dents of the Master's programme Informatik (Comp | uter Science, 12 | o ECTS credits): HCI. |  |  |  |  |
| 10-I-DB-152-m01  | Databa               | ses                  |           |   |   |  |                  |                       |  |  |  |  |
|                  | ECTS                 | 5                    | Duration  |   | 1 semester  | Method of grading   numerical grade              | Modul level      | undergraduate         |  |  |  |  |
|                  | Course               |                      |           |   | V (2) + Ü (2)   |  |                  |                       |  |  |  |  |
|                  | Method of assessment |                      |           | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus   |   |  |                  |                       |  |  |  |  |
|                  | Referred to in LPO I |                      |           | § 49   Nr. 1b<br>§ 69   Nr. 1b  |   |  |                  |                       |  |  |  |  |
| 10-I-WBS-152-m01 | Knowle               | dge-ba               | sed Syste | ems   |   |  |                  |                       |  |  |  |  |
|                  | ECTS                 | 5                    | Duration  |   | 1 semester  | Method of grading   numerical grade              | Modul level      | undergraduate         |  |  |  |  |
|                  | Course               |                      |           | $V(2) + \ddot{U}(2)$  |   |  |                  |                       |  |  |  |  |
|                  | Method               | d of ass             | essment   | written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus |   |  |                  |                       |  |  |  |  |
|                  | Referre              | Referred to in LPO I |           |   | l Nr. 3b  |  |                  |                       |  |  |  |  |

| 10-l-DM-152-m01 | Data M               | ining                          |            |   |   | ,   |  | _  |   |  |  |  |  |
|-----------------|----------------------|--------------------------------|------------|---|---|---|--|--|---|--|--|--|--|
|                 | ECTS                 | 5                              | Duration   | n   | 1 semester  | Method of grading                             | numerical grade  | Modul level  | undergraduate   |  |  |  |  |
|                 | Courses              | S                              |            | V (2)   | + Ü (2)   | •   | •  | •  | -   |  |  |  |  |
|                 | Method               | of ass                         | essment    | written examination (approx. 60 to 120 minutes).    |   |   |  |  |   |  |  |  |  |
|                 |                      |                                |            | of on<br>date)<br>Langi                             | If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus   |   |  |  |   |  |  |  |  |
|                 | Referre              | d to in I                      | LPO I      | § 22  | II Nr. 3b   |   |  |  |   |  |  |  |  |
| 10-l-KT-191-m01 | Compu                | tationa                        | l Complex  | ity   | ,   | '   |  | '  |   |  |  |  |  |
|                 | ECTS                 | 5                              | Duration   | า   | 1 semester  | Method of grading                             | numerical grade  | Modul level  | undergraduate   |  |  |  |  |
|                 | Courses              | S                              |            | V (2)   | + Ü (2)   |   |  | •  | •   |  |  |  |  |
|                 | Method of assessment |                                |            | If anr<br>of on<br>date)<br>Asses<br>Langu<br>credi | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English creditable for bonus |   |  |  |   |  |  |  |  |
| 10-l-KD-191-m01 | Cryptog              | Cryptography and Data Security |            |   |   |   |  |  |   |  |  |  |  |
|                 | ECTS                 | 5                              | Duration   |   | 1 semester  | Method of grading                             | numerical grade  | Modul level  | undergraduate   |  |  |  |  |
|                 | Courses              | s                              |            | V (2)   | + Ü (2)   |   |  |  |   |  |  |  |  |
|                 | Method of assessment |                                |            | If anr<br>of on<br>date)<br>Asses<br>Lange          | nounced by the led<br>e candidate each<br>ssment offered: In  | turer at the beginning (approx. 20 minutes) o | of the course, the writt<br>r an oral examination<br>the course is offered a | en examination may be<br>in groups of 2 candidates<br>and in the subsequent se | replaced by an oral examination s (approx. 15 minutes per candi-    |  |  |  |  |
| 10-l-3D-152-m01 | 3D Poir              | nt Cloud                       | l Processi | ng  |   |   |  |  |   |  |  |  |  |
|                 | ECTS                 | 5                              | Duration   | า   | 1 semester  | Method of grading                             | numerical grade  | Modul level  | undergraduate   |  |  |  |  |
|                 | Courses              | S                              |            | V (2)   | + Ü (2)   |   |  | ·  | •   |  |  |  |  |
|                 | Method of assessment |                                |            | If anr<br>of on<br>date)<br>Langi<br>credi          | nounced by the led<br>e candidate each<br>uage of assessme<br>table for bonus   | turer at the beginning                        | of the course, the writt<br>r an oral examination                            |  | replaced by an oral examination<br>s (approx. 15 minutes per candi- |  |  |  |  |
|                 | Referre              | d to in l                      | LPO I      | § 22  | II Nr. 3b   |   |  |  |   |  |  |  |  |

| 10-l-BS-191-m01  | Operating Systems                                  |             |                                      |  |                   |  |             |   |  |  |  |  |
|------------------|--|-------------|--------------------------------------|--|-------------------|--|-------------|---|--|--|--|--|
|                  | ECTS 5   | Duratio     | n                                    | 1 semester   | Method of grading | numerical grade                                | Modul level | undergraduate   |  |  |  |  |
|                  | Courses  |             | V (2) +<br>Modul                     | - Ü (2)<br>le taught in: Engli   | sh                |  |             |   |  |  |  |  |
|                  | Method of a  | assessment  | If anno<br>of one<br>date).<br>Langu | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus                             |                   |  |             |   |  |  |  |  |
| 10-I-RAK-152-m01 | Computer A   | rchitecture |                                      |  |                   |  |             |   |  |  |  |  |
|                  | ECTS 5   | Duratio     | n V (2) +                            | 1 semester<br>- Ü (2)  | Method of grading | numerical grade                                | Modul level | undergraduate   |  |  |  |  |
|                  | Method of a  | assessment  | If anno<br>of one<br>date).<br>Langu | written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus                            |                   |  |             |   |  |  |  |  |
|                  | Referred to  | in LPO I    |                                      | Nr. 3b<br>Nr. 1c: Rechnerar  | chitektur         |  |             |   |  |  |  |  |
| 10-I-SKS-191-m01 | Control Principles of Modern Communication Systems |             |                                      |  |                   |  |             |   |  |  |  |  |
|                  | ECTS 8   | Duratio     |                                      | 1 semester   | Method of grading | numerical grade                                | Modul level | undergraduate   |  |  |  |  |
|                  | Courses  |             | V (4) +                              | - Ü (2)  |                   |  |             |   |  |  |  |  |
|                  | Method of a  | assessment  | If anno<br>of one<br>date).<br>Langu | ounced by the lec<br>e candidate each (  |                   | f the course, the written examination in group |             | replaced by an oral examination<br>s (approx. 15 minutes per candi- |  |  |  |  |
| 10-I-AR-152-m01  | Automation   | and Contro  | l Techn                              | ology  |                   |  |             |   |  |  |  |  |
|                  | ECTS 8   | Duratio     | n  <br>  V (4) +                     | 1 semester   | Method of grading | numerical grade                                | Modul level | undergraduate   |  |  |  |  |
|                  |  | assessment  | writter If anno of one date). Langu  | written examination (approx. 60 to 120 minutes).<br>f announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes) |                   |  |             |   |  |  |  |  |

| 10-I-MCS-191-m01   | Introduct   | Introduction into Human-Computer Interaction |   |  |                  |               |  |  |  |  |  |  |  |
|--------------------|---|--|---|--|------------------|---------------|--|--|--|--|--|--|--|
|                    | ECTS 5  | Duration                                     | 1 semester  | Method of grading   numerical grade  | Modul level      | undergraduate |  |  |  |  |  |  |  |
|                    | Courses   | ·  | V (3) + Ü (1)   |  | •                |               |  |  |  |  |  |  |  |
|                    | Method o  | of assessment                                | If announced by the led<br>of one candidate each<br>date).<br>Language of assessmen   | ritten examination (approx. 120 minutes). fannounced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination fone candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  [ate]. anguage of assessment: German and/or English |                  |               |  |  |  |  |  |  |  |
|                    |   |  | reditable for bonus   |  |                  |               |  |  |  |  |  |  |  |
| 10-I-SEC-191-m01   | IT Securi   | •  |   |  |                  |               |  |  |  |  |  |  |  |
|                    | ECTS 5  | Duration                                     |   | Method of grading   numerical grade  | Modul level      | undergraduate |  |  |  |  |  |  |  |
|                    | Courses   |  |   | V (2) + Ü (2)<br>Module taught in: German and/or English   |                  |               |  |  |  |  |  |  |  |
|                    | Method o  | of assessment                                | written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus |  |                  |               |  |  |  |  |  |  |  |
| 10-l-Gl-152-m01    | Selected  | Basics of Com                                | outer Science   |  | ,                |               |  |  |  |  |  |  |  |
|                    | ECTS 5  | Duration                                     | 1 semester  | Method of grading numerical grade  | Modul level      | undergraduate |  |  |  |  |  |  |  |
|                    | Courses   | ,  | V (4) + Ü (2)   |  | ,                |               |  |  |  |  |  |  |  |
|                    | Method of assessment                                    |  | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral exa of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes p date). Language of assessment: German and/or English creditable for bonus                  |  |                  |               |  |  |  |  |  |  |  |
| Focus Philosophy ( | o or 30 EC  | TS credits)                                  |   |  |                  |               |  |  |  |  |  |  |  |
| o6-Ph-B-P1/1-152-  | Introduct   | tion to Philosop                             | ohy   |  |                  |               |  |  |  |  |  |  |  |
| mo1                | ECTS 5  | Duration                                     | 1 semester  | Method of grading (not) successfully comple  | eted Modul level | undergraduate |  |  |  |  |  |  |  |
|                    | Courses   | <u> </u>                                     | V (2) + Ü (2)   | ·  | •                |               |  |  |  |  |  |  |  |
|                    | Method of assessment   written examination (90 minutes) |  |   |  |                  |               |  |  |  |  |  |  |  |
| 06-Ph-B-P1/2-152-  | Historica   | l epochs, main                               | works, authors  |  |                  |               |  |  |  |  |  |  |  |
| mo1                | ECTS 5  | Duration                                     | 1 semester  | Method of grading   numerical grade  | Modul level      | undergraduate |  |  |  |  |  |  |  |
|                    | Courses   | ,  | S (2)   | <u>.                                      </u>   |                  |               |  |  |  |  |  |  |  |
|                    | Method o  | of assessment                                | t oral examination (approx. 25 minutes)   |  |                  |               |  |  |  |  |  |  |  |

| o6-Ph-B-P2/1-152- | Philosophic                                | cal principles | of sci   | ences I  |                   |                          |           |                                   |                                   |  |
|-------------------|--|----------------|--|--|-------------------|--------------------------|-----------|-----------------------------------|-----------------------------------|--|
| mo1               | ECTS 5                                     | Duratio        | n  | 1 semester   | Method of grading | (not) successfully compl | leted Mod | lul level                         | undergraduate                     |  |
|                   | Courses                                    | ·              | V (2)  |  |                   |                          |           |                                   |                                   |  |
|                   | Method of a                                | assessment     | writte   | written examination (45 minutes)   |                   |                          |           |                                   |                                   |  |
|                   | Participants<br>cation of pl               |                | ber of<br>me nu  | Only as part of pool of general transferable skills (ASQ): max. 20 places. Should the number of applications exceed the number of available places, 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. A waiting list will be maintained and places re-allocated by lot as they become available. |                   |                          |           |                                   |                                   |  |
| o6-Ph-B-P2/2-152- | Philosophical principles of sciences II    |                |  |  |                   |                          |           |                                   |                                   |  |
| mo1               | ECTS 5                                     | Duratio        | n  | 1 semester   | Method of grading | numerical grade          | Mod       | lul level                         | undergraduate                     |  |
|                   | Courses                                    |                | S (2)  |  |                   |                          |           |                                   |                                   |  |
|                   | Method of a                                | assessment     | writte   | n examination (90 m  | ninutes)          |                          |           |                                   |                                   |  |
| o6-Ph-B-P3/1-152- | Theoretical                                | Philosophy     | Ī  |  |                   |                          |           |                                   |                                   |  |
| mo1               | ECTS 5                                     | Duratio        | า  | 1 semester   | Method of grading | (not) successfully compl | leted Moc | lul level                         | undergraduate                     |  |
|                   | Courses                                    |                | V (2)  | •  |                   |                          | •         |                                   |                                   |  |
|                   | Method of a                                | assessment     | writte   | n examination (45 m  | inutes)           |                          |           |                                   |                                   |  |
|                   | Participants<br>cation of pl               |                | ber of<br>me nu  | Only as part of pool of general transferable skills (ASQ): max. 20 places. Should the number of applications exceed the number of available places, 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. A waiting list will be maintained and places re-allocated by lot as they become available. |                   |                          |           |                                   |                                   |  |
| o6-Ph-B-P4/1-152- | Practical Philosophy I                     |                |  |  |                   |                          |           |                                   |                                   |  |
| mo1               | ECTS 5                                     | Duratio        | 1  | 1 semester   | Method of grading | (not) successfully compl | leted Mod | lul level                         | undergraduate                     |  |
|                   | Courses                                    | ·              | V (2)  |  |                   |                          |           |                                   |                                   |  |
|                   | Method of a                                | assessment     | written examination (45 minutes)   |  |                   |                          |           |                                   |                                   |  |
|                   | Participants<br>cation of pl               |                | Only as part of pool of general transferable skills (ASQ): max. 20 places. Should the number of applications exceed the number of available places, 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. A waiting list will be maintained and places re-allocated by lot as they become available. |  |                   |                          |           |                                   | rs. Among applicants with the sa- |  |
| o6-Ph-B-P5/1-152- | History of P                               | hilosophy I    |  |  |                   |                          |           |                                   |                                   |  |
| mo1               | ECTS 5                                     | Duratio        | 1  | 1 semester   | Method of grading | (not) successfully compl | leted Mod | lul level                         | undergraduate                     |  |
|                   | Courses                                    |                | V (2)  |  |                   |                          |           |                                   |                                   |  |
|                   | Method of a                                | assessment     |  | n examination (45 m  | •                 |                          |           |                                   |                                   |  |
|                   | Participants and allo-<br>cation of places |                |  |  |                   |                          |           | rs. Among applicants with the sa- |                                   |  |

| o6-Ph-B-P6/1-152-         | Issues of resea      | arch in ph | ilosophy I                  |  |                         |                                    |                       |                                       |  |  |
|---------------------------|----------------------|------------|-----------------------------|--|-------------------------|------------------------------------|-----------------------|---------------------------------------|--|--|
| mo1                       | ECTS 5               | Duration   | 1 seme                      | ster   | Method of grading       | numerical grade                    | Modul level           | undergraduate                         |  |  |
|                           | Courses              |            | S (2)                       |  | ,                       |                                    | ,                     |                                       |  |  |
|                           | Method of ass        | essment    | oral examinat               | on (appro  | ox. 25 minutes)         |                                    |                       |                                       |  |  |
| 06-Ph-B-W1-152-           | Text Analysis:       | Ancient P  | hilosophy                   |  |                         |                                    |                       |                                       |  |  |
| mo1                       | ECTS 5               | Duration   | 1 seme                      | ster   | Method of grading       | numerical grade                    | Modul level           | undergraduate                         |  |  |
|                           | Courses              |            | S (2)                       |  |                         |                                    |                       |                                       |  |  |
|                           | Method of ass        |            |                             | nation (ap   | prox. 90 minutes) or te | erm paper (10 to 12 pages)         |                       |                                       |  |  |
|                           | Referred to in LPO I |            | § 68   Nr. 2 a)             |  |                         |                                    |                       |                                       |  |  |
| o6-Ph-B-W2-152-           | Text Analysis:       | Medieval   | Philosophy                  | hilosophy  |                         |                                    |                       |                                       |  |  |
| mo1                       | ECTS 5               | Duration   | n 1 seme                    | ster   | Method of grading       | numerical grade                    | Modul level           | undergraduate                         |  |  |
|                           | Courses              |            | S (2)                       |  |                         |                                    | _                     | -                                     |  |  |
|                           | Method of ass        | essment    | written exami               | ritten examination (90 minutes) or term paper (10 to 12 pages) |                         |                                    |                       |                                       |  |  |
| o6-Ph-B-W3-152-           | Text Analysis:       | Modern F   | hilosophy                   |  |                         |                                    |                       |                                       |  |  |
| mo1                       | ECTS 5               | Duration   | 1 seme                      | ster   | Method of grading       | (not) successfully completed       | Modul level           | undergraduate                         |  |  |
|                           | Courses              |            | S (2)                       |  |                         |                                    |                       |                                       |  |  |
|                           | Method of ass        | essment    | portfolio: 2 to             | 3 essays (   | (approx. 10 pages total | )                                  |                       |                                       |  |  |
| 06-Ph-B-W4-152-           | Text Analysis:       | Contemp    | orary Philosop              | ny   |                         |                                    | _                     | _                                     |  |  |
| mo1                       | ECTS 5               | Duration   |                             | ster   | Method of grading       | (not) successfully completed       | Modul level           | undergraduate                         |  |  |
|                           | Courses              |            | S (2)                       |  |                         |                                    | _                     |                                       |  |  |
|                           | Method of ass        | essment    | portfolio: 2 to             | 3 essays (   | (approx. 10 pages total | )                                  |                       |                                       |  |  |
| 06-Ph-B-W5-152-           | Basic disciplin      | es of the  | oretical philoso            | phy: Meta  | aphysics and Epistemo   | ology                              |                       |                                       |  |  |
| mo1                       | ECTS 5               | Duration   |                             | ster   | Method of grading       | numerical grade                    | Modul level           | undergraduate                         |  |  |
|                           | Courses              |            | S (2)                       |  |                         |                                    |                       |                                       |  |  |
|                           | Method of assessment |            | term paper (10 to 12 pages) |  |                         |                                    |                       |                                       |  |  |
|                           | Referred to in I     |            | § 32   Nr. 1 c)             |  |                         |                                    |                       |                                       |  |  |
| o6-Ph-B-W6-152-           | Specific discip      | 1          |                             | sophy  |                         |                                    | <u>.</u>              |                                       |  |  |
| mo1                       | ECTS 5               | Duration   |                             | ster   | Method of grading       | numerical grade                    | Modul level           | undergraduate                         |  |  |
|                           | Courses              |            | S (2)                       |  |                         |                                    |                       |                                       |  |  |
|                           | Method of ass        |            |                             | to 12 pag  | ges)                    |                                    |                       |                                       |  |  |
|                           | Referred to in I     | LPO I      | § 32 l Nr. 1 c)             |  |                         |                                    |                       |                                       |  |  |
| 06-Ph-B-W7-152-           | Basic disciplin      | es of prac | tical philosop              | ıy   |                         |                                    |                       |                                       |  |  |
| mo1                       | ECTS 5               | Duration   |                             | ster   | Method of grading       | numerical grade                    | Modul level           | undergraduate                         |  |  |
|                           | Courses              |            | S (2)                       |  |                         |                                    |                       |                                       |  |  |
|                           | Method of ass        | essment    | term paper (10              | to 12 pag  | ges)                    |                                    |                       |                                       |  |  |
|                           | Referred to in I     | LPO I      | § 32   Nr. 1 c)             |  |                         |                                    |                       |                                       |  |  |
| Bachelor's with 1 major N | Mathematics (2023)   |            |                             |  |                         | JMU Würzburg • generated 03-Feb-20 | 024 • exam. reg. data | record 82 105 - - H 2023 page 50 / 61 |  |  |

| 06-Ph-B-W8-152-         | Specific discip  | c disciplines of practical philosophy |  |  |   |  |   |  |  |  |
|-------------------------|------------------|---------------------------------------|--|--|---|--|---|--|--|--|
| mo1                     | ECTS 5           | Duratio                               | n  | 1 semester   | Method of grading numerical grade   | Modul level  | undergraduate   |  |  |  |
|                         | Courses          | ·                                     | S (2)  |  |   | •  |   |  |  |  |
|                         | Method of ass    | essment                               | term p   | paper (10 to 12 page   | es)   |  |   |  |  |  |
|                         | Referred to in   |                                       |  | Nr. 1 c)   |   |  |   |  |  |  |
| 06-Ph-B-W10-152-        | Problems of N    | lodern Ph                             | ilosopl  |  |   |  |   |  |  |  |
| mo1                     | ECTS 5           | Duratio                               |  |  | Method of grading   numerical grade   | Modul level  | undergraduate   |  |  |  |
|                         | Courses          |                                       | S (2)  |  |   |  |   |  |  |  |
|                         |                  |                                       |  | oral examination (approx. 25 minutes)  |   |  |   |  |  |  |
|                         | Referred to in   |                                       |  | Nr. 1 c)   |   |  |   |  |  |  |
| o6-Ph-B-W11-152-        | Problems of T    |                                       |  | <del>' '</del>   |   |  |   |  |  |  |
| mo1                     | ECTS 5           | Duratio                               |  | 1 semester   | Method of grading   numerical grade   | Modul level  | undergraduate   |  |  |  |
|                         | Courses          |                                       | S (2)  |  |   |  |   |  |  |  |
|                         |                  |                                       |  |  | approx. 10 pages total)   |  |   |  |  |  |
| o6-Ph-B-W12-152-<br>mo1 | Problems of P    | _                                     |  |  |   | 1  |   |  |  |  |
| IIIO1                   | ECTS 5           | Duratio                               |  | 1 semester   | Method of grading   numerical grade   | Modul level  | undergraduate   |  |  |  |
|                         | Courses          |                                       | S (2)  |  | 0   |  |   |  |  |  |
|                         |                  |                                       | portfo   | olio: 2 to 3 essays (a   | approx. 10 pages total)   |  |   |  |  |  |
| Focus Physics (o or     | 30 ECTS credit   | ts)                                   |  |  |   |  |   |  |  |  |
| Compulsory Course       | es (14 ECTS cred | dits)                                 |  |  |   |  |   |  |  |  |
| 11-ENNF1-152-m01        |                  | 1                                     |  | s of Physics relate  | d Disciplines   |  |   |  |  |  |
|                         | ECTS 7           | Duratio                               |  | 1 semester   | Method of grading   numerical grade   | Modul level  | undergraduate   |  |  |  |
|                         | Courses          |                                       | V (4) -<br>Modu  | + Ü (2)<br>le taught in: Ü: Ger  | man or English  |  |   |  |  |  |
|                         | Method of ass    | sessment                              |  | n examination (app<br>age of assessment  | orox. 120 minutes)<br>:: German and/or English  |  |   |  |  |  |
|                         | other prerequi   | isites                                | Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.   |  |   |  |   |  |  |  |
|                         | Additional Info  | ormation                              | consideral the quantity stude for an sessing consideral consideration consideral conside | dered a declaration academic and exar ualification for adm nts that meet the reassessment or who | registers for the exercises and obtains the q<br>of will to seek admission to assessment pur<br>nination regulations). If the module coordina<br>ission to assessment, they will put the stude<br>espective prerequisites can successfully regis<br>ose registration for an assessment was not p<br>kes an assessment to which he/she has not | rsuant to Section 20 Su<br>stors subsequently find<br>ent's registration for ass<br>ster for an assessment.<br>out into effect will not be | bsection 3 Sentence 4 ASPO (gethat the student has obtained sessment into effect. Only those Students who did not register admitted to the respective as- |  |  |  |

| 11-ENNF2-152-m01                         | Classic              | al Phvs  | ics 2 for S | Studen  | ts of Physics relate   | d Disciplines                                     |  |  | ···  |  |  |
|--|----------------------|----------|-------------|---|--|---|--|--|--|--|--|
|  |                      | 7        | Duration    |   | 1 semester   | Method of grading                                 | numerical grade  | Modul level                            | undergraduate  |  |  |
|  | Course               | S        |             |   | r<br>+ Ü (2)<br>lle taught in: Ü: Geri   |   | <u> </u>   |  |  |  |  |
|  | Method               | l of ass | essment     | written examination (approx. 120 minutes) Language of assessment: German and/or English   |  |   |  |  |  |  |  |
|  | other p              | rerequi  | sites       | succe   | Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester. |   |  |  |  |  |  |
|  | Additio              | nal Info | ormation    | Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered. |  |   |  |  |  |  |  |
| Compulsory Electiv<br>Students must take |                      |          |             | or the t  | wo modules 11-P-PA   | and 11-P-FR1. Other                               | combinations are not permitted                               | d.                                     |  |  |  |
| 11-PNNF-152-m01                          | Laborat              | tory Co  | urse Phys   | ics for Students of Physics Related Disciplines   |  |   |  |  |  |  |  |
|  | ECTS                 | 3        | Duration    | 1   | 1 semester   | Method of grading                                 | (not) successfully completed                                 | Modul level                            | undergraduate  |  |  |
|  | Courses              | S        |             | P (4)   |  |   |  |  |  |  |  |
|  | Method               | l of ass | essment     | Each  | ctical assignment wexperiment comprispeated once.  | vith oral test (approx.<br>ses preparation, perfo | 15 minutes, during experiment ormance and evaluation. Test a | ts) and b) writte<br>s well as perfori | n examination (90 minutes).<br>mance of experiments can each |  |  |
| 11-P-PA-152-m01                          | Laborat              | tory Co  | urse Phys   | ics A (   | Mechanics, Heat, El  | ectromagnetism)                                   |  |  |  |  |  |
|  | ECTS                 | 3        | Duration    |   | 1 semester   | Method of grading                                 | (not) successfully completed                                 | Modul level                            | undergraduate  |  |  |
|  | Courses              | S        |             | P (2)   |  |   |  |  |  |  |  |
|  | Method of assessment |          |             | practical assignment with talk (approx. 30 minutes)  Preparing, performing and evaluating (record of readings or lab report) the experiments will be considered successfully completed if a Testat (exam) is passed. Exactly one experiment that was not successfully completed can be repeated once. After completion of all experiments, talk (with discussion; approx. 30 minutes) to test the candidate's understanding of the physics-related contents of the module. Talks that were not successfully completed can be repeated once. Both components of the assessment have to be successfully completed.  |  |   |  |  |  |  |  |

| 11-P-FR1-152-m01   | Data and E  | rror Analysis |  |   | _                  |                             | ,                  |                        |  |  |
|--------------------|---|---------------|--|---|--------------------|-----------------------------|--------------------|------------------------|--|--|
|                    | ECTS 2  | Duratio       | n  | 1 semester  | Method of grading  | (not) successfully complete | ed Modul level     | undergraduate          |  |  |
|                    | Courses   |               | V (1) +<br>Modu  | ⊦ Ü (1)<br>ıle taught in: Ü: Ger  | man or English     |                             | ,                  |                        |  |  |
|                    | Method of   | assessment    | written examination (approx. 120 minutes) Language of assessment: German and/or English  |   |                    |                             |                    |                        |  |  |
|                    | other prere   | quisites      | Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.   |   |                    |                             |                    |                        |  |  |
|                    | Additional  | Information   | consideral the quantity stude for an sessing consideral consideration consideral consideration conside | Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered. |                    |                             |                    |                        |  |  |
|                    | Referred to   | in LPO I      |  | § 53   Nr. 1 c)<br>§ 77   Nr. 1 d)  |                    |                             |                    |                        |  |  |
| 11-P-NFB-152-m01   | Laboratory Course Physics B for Students of other Disciplines |               |  |   |                    |                             |                    |                        |  |  |
|                    | ECTS 4  | Duratio       | n  | 1 semester  | Method of grading  | (not) successfully complete | ed Modul level     | undergraduate          |  |  |
|                    | Courses   |               | P (2)  |   | •                  |                             | •                  |                        |  |  |
|                    | Method of   | assessment    | practical assignment with talk (approx. 30 minutes) Preparing, performing and evaluating (record of readings or lab report) the experiments will be considered successfully completed if a Testat (exam) is passed. Exactly one experiment that was not successfully completed can be repeated once. After completion of all experiments, talk (with discussion; approx. 30 minutes) to test the candidate's understanding of the physics-related contents of the module. Talks that were not successfully completed can be repeated once. Both components of the assessment have to be successfully completed.  |   |                    |                             |                    |                        |  |  |
|                    | other prere   | quisites      | Stude  | nts are highly reco   | mmended to complet | e modules 11-P-PA and 11-P- | FR1 prior to compl | eting module 11-P-NFB. |  |  |
| Compulsory Electiv |   |               |  |   |                    |                             |                    |                        |  |  |
| 11-E-O-152-m01     | Optics and  | Waves         |  |   |                    |                             |                    |                        |  |  |
|                    | ECTS 8  | Duratio       |  | 1 semester  | Method of grading  | numerical grade             | Modul level        | undergraduate          |  |  |
|                    | Courses   |               | \ \ \/   | V (4) + Ü (2)<br>Module taught in: Ü: German or English   |                    |                             |                    |                        |  |  |
|                    | Method of assessment  |               | written examination (approx. 120 minutes) Language of assessment: German and/or English  |   |                    |                             |                    |                        |  |  |

| 11-E-A-152-m01 | Atoms                | and Qu                | anta     |  |  |  |  |   |  |  |  |
|----------------|----------------------|-----------------------|----------|--|--|--|--|---|--|--|--|
|                | ECTS                 | 8                     | Duratio  | 1  | 1 semester   | Method of grading   numerical grade  | Modul level  | undergraduate   |  |  |  |
|                | Course               | S                     |          |  | V (4) + Ü (2)<br>Module taught in: Ü: German or English  |  |  |   |  |  |  |
|                | Method               | d of ass              | essment  |  | written examination (approx. 120 minutes)<br>Language of assessment: German and/or English               |  |  |   |  |  |  |
| 11-E-F-152-m01 | Introdu              | ction to              | Solid St | ate Ph   | e Physics  |  |  |   |  |  |  |
|                | ECTS                 | 8                     | Duratio  | 1  | 1 semester   | Method of grading numerical grade  | Modul level  | undergraduate   |  |  |  |
|                | Course               | S                     |          |  | + Ü (2)<br>ıle taught in: Ü: Ge  | erman or English   |  |   |  |  |  |
|                | Method of assessment |                       |          |  | oprox. 120 minutes)<br>nt: German and/or English   |  |  |   |  |  |  |
| 11-E-T-152-m01 | Nuclea               | r and El              | ementary | Partic   | le Physics   |  |  |   |  |  |  |
|                | ECTS                 | 6                     | Duration | า  | 1 semester   | Method of grading   numerical grade  | Modul level  | undergraduate   |  |  |  |
|                | Courses              |                       |          |  | V (3) + Ü (1) Module taught in: Ü: German or English   |  |  |   |  |  |  |
|                | Method of assessment |                       |          |  |  | pprox. 120 minutes)<br>nt: German and/or English   |  |   |  |  |  |
| 11-T-M-152-m01 | Theore               | Theoretical Mechanics |          |  |  |  |  |   |  |  |  |
|                | ECTS 8 Duratio       |                       |          | 1  | 1 semester   | Method of grading   numerical grade  | Modul level  | undergraduate   |  |  |  |
|                | Course               | S                     |          | V (4) + $\ddot{\text{U}}$ (2)<br>Module taught in: $\ddot{\text{U}}$ : German or English   |  |  |  |   |  |  |  |
|                | Method of assessment |                       |          | written examination (approx. 120 minutes) Language of assessment: German and/or English  |  |  |  |   |  |  |  |
|                | other prerequisites  |                       |          | Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester. |  |  |  |   |  |  |  |
|                | Additio              | nal Info              | ormation | consi<br>neral<br>the qu<br>stude<br>for an<br>sessn   | dered a declaratio<br>academic and exa<br>ualification for adr<br>ents that meet the<br>assessment or wl | nt registers for the exercises and obtains the or of will to seek admission to assessment purmination regulations). If the module coordination to assessment, they will put the studies respective prerequisites can successfully regulation for an assessment was not packed an assessment to which he/she has not packed as the packed and the | irsuant to Section 20 Su<br>ators subsequently find<br>ent's registration for ass<br>ister for an assessment.<br>put into effect will not be | bsection 3 Sentence 4 ASPO (gethat the student has obtained sessment into effect. Only those Students who did not register admitted to the respective as- |  |  |  |

| 11-T-Q-152-m01    | Quantum Mech        | nanics   |  |   | '           |               |  |  |  |  |  |
|-------------------|---------------------|----------|--|---|-------------|---------------|--|--|--|--|--|
|                   | ECTS 8              | Duration | 1 semester   | Method of grading   numerical grade   | Modul level | undergraduate |  |  |  |  |  |
|                   | Courses             | ·        | V (4) + Ü (2)<br>Module taught in: Ü:  | German or English   |             |               |  |  |  |  |  |
|                   | Method of asso      | essment  | written examination (approx. 120 minutes) Language of assessment: German and/or English  |   |             |               |  |  |  |  |  |
|                   | other prerequis     | sites    | Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester. |   |             |               |  |  |  |  |  |
|                   | Additional Info     | rmation  | considered a declarate neral academic and e the qualification for a students that meet the for an assessment or sessment. If a studen  | Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered. |             |               |  |  |  |  |  |
| 11-T-S-152-m01    | Statistical Physics |          |  |   |             |               |  |  |  |  |  |
|                   | ECTS 8 Duration     |          | 1 semester   | Method of grading numerical grade   | Modul level | undergraduate |  |  |  |  |  |
|                   | Courses             |          | V (4) + Ü (2)<br>Module taught in: Ü: German or English  |   |             |               |  |  |  |  |  |
|                   | Method of asso      | essment  | written examination (approx. 120 minutes) Language of assessment: German and/or English  |   |             |               |  |  |  |  |  |
| 11-T-E-152-m01    | Electrodynami       | cs       |  |   |             |               |  |  |  |  |  |
|                   | ECTS 8              | Duration | 1 semester   | Method of grading numerical grade   | Modul level | undergraduate |  |  |  |  |  |
|                   | Courses             |          | V (4) + Ü (2)<br>Module taught in: Ü:  | German or English   |             |               |  |  |  |  |  |
|                   | Method of asso      | essment  | written examination (<br>Language of assessm   | approx. 120 minutes)<br>ent: German and/or English  |             |               |  |  |  |  |  |
| Focus Economics ( | o or 30 ECTS cre    | dits)    |  |   |             |               |  |  |  |  |  |
| 12-EBWL-G-212-    | Organization        |          |  |   |             |               |  |  |  |  |  |
| mo1               | ECTS 5              | Duration | 1 semester   | Method of grading   numerical grade   | Modul level | undergraduate |  |  |  |  |  |
|                   | Courses             |          | V (2) + T (2)  | <u>.</u>  | '           |               |  |  |  |  |  |
|                   | Method of asso      | essment  | written examination (approx. 60 minutes) Language of assessment: German and/or English   |   |             |               |  |  |  |  |  |

| 12-ExtUR-G-212-  | Accounting           |                  |             |  | 1  |  |             |   |  |  |  |  |
|------------------|----------------------|------------------|-------------|--|--|--|-------------|---|--|--|--|--|
| mo1              | ECTS 5               | Duratio          | n           | 1 semester   | Method of grading                        | numerical grade  | Modul level | undergraduate                           |  |  |  |  |
|                  | Courses              |                  | V (2) +     | + T (2)  | •  | •  | ·           |   |  |  |  |  |
|                  | Method of as         | sessment         |             | n examination (app   |  |  |             |   |  |  |  |  |
|                  | ,                    |                  |             | anguage of assessment: German and/or English   |  |  |             |   |  |  |  |  |
| 12-IntUR-G-212-  | Managerial A         |                  |             |  |  |  |             |   |  |  |  |  |
| mo1              | ECTS 5 Duration      |                  |             | 1 semester   | Method of grading                        | numerical grade  | Modul level | undergraduate                           |  |  |  |  |
|                  | Courses              |                  | V (2) +     |  |  |  |             |   |  |  |  |  |
|                  | Method of as         | ssessment        |             | n examination (app<br>age of assessment:   | rox. 60 minutes)<br>: German and/or Engl | lish   |             |   |  |  |  |  |
| 12-Mik1-G-212-   | Microeconon          | nics 1           | •           |  |  |  | ,           |   |  |  |  |  |
| mo1              | ECTS 5               | Duratio          | n           | 1 semester   | Method of grading                        | numerical grade  | Modul level | undergraduate                           |  |  |  |  |
|                  | Courses              |                  | V (2) +     | + T (2)  |  |  | ·           |   |  |  |  |  |
|                  | Method of assessment |                  |             | ritten examination (approx. 6o minutes) anguage of assessment: German and/or English   |  |  |             |   |  |  |  |  |
| 12-Mik2-G-212-   | Microeconon          | Microeconomics 2 |             |  |  |  |             |   |  |  |  |  |
| mo1              | ECTS 5               | Duration         | n           | 1 semester   | Method of grading                        | numerical grade  | Modul level | undergraduate                           |  |  |  |  |
|                  | Courses              | 1                | V (2) +     |  |  | The state of the s |             | and |  |  |  |  |
|                  | Method of as         | sessment         |             | n examination (app   | rox. 60 minutes)                         |  |             | _                                       |  |  |  |  |
|                  |                      |                  |             | Language of assessment: German and/or English  |  |  |             |   |  |  |  |  |
| 12-Mak1-G-212-   | Macroeconomics 1     |                  |             |  |  |  |             |   |  |  |  |  |
| mo1              | ECTS 5               | Duratio          | n           | 1 semester   | Method of grading                        | numerical grade  | Modul level | undergraduate                           |  |  |  |  |
|                  | Courses              |                  | V(2) + T(2) |  |  |  |             |   |  |  |  |  |
|                  | Method of assessment |                  |             | written examination (approx. 6o minutes) Language of assessment: German and/or English |  |  |             |   |  |  |  |  |
| 12-Mak2-G-212-   | Macroeconor          | mics 2           |             |  |  |  |             |   |  |  |  |  |
| mo1              | ECTS 5               | Duratio          | n           | 1 semester   | Method of grading                        | numerical grade  | Modul level | undergraduate                           |  |  |  |  |
|                  | Courses              | ,                | V (2) +     | + T (2)  | •  |  |             |   |  |  |  |  |
|                  | Method of as         | sessment         |             | n examination (app   |  |  |             |   |  |  |  |  |
|                  |                      |                  |             | Language of assessment: German and/or English  |  |  |             |   |  |  |  |  |
| 12-BPL-G-212-m01 |                      |                  |             | tions Management   | 1  | T  |             |   |  |  |  |  |
|                  | ECTS 5 Dura          |                  |             | 1 semester   | Method of grading                        | numerical grade  | Modul level | undergraduate                           |  |  |  |  |
|                  | Courses              |                  | V (2) +     |  |  |  |             |   |  |  |  |  |
|                  | Method of assessment |                  |             | written examination (approx. 60 minutes) Language of assessment: German and/or English |  |  |             |   |  |  |  |  |
|                  |                      |                  |             |  | - Comman and or Engl                     |  |             |   |  |  |  |  |

| 12-I&F-G-212-m01  | Investment and       | d Finance |   |   |   |                 |             |               |  |  |  |
|-------------------|----------------------|-----------|---|---|---|-----------------|-------------|---------------|--|--|--|
|                   | ECTS 5               | Duration  | n   | 1 semester  | Method of grading                                   | numerical grade | Modul level | undergraduate |  |  |  |
|                   | Courses              |           | V (2) -   | V(2) + T(2)   |   |                 |             |               |  |  |  |
|                   | Method of asse       | essment   |   | vritten examination (approx. 60 minutes) .anguage of assessment: German and/or English  |   |                 |             |               |  |  |  |
| 12-Mark-G-212-    | Marketing            |           |   |   |   |                 |             |               |  |  |  |
| mo1               | ECTS 5               | Duration  | 1   | 1 semester  | Method of grading                                   | numerical grade | Modul level | undergraduate |  |  |  |
|                   | Courses              |           | V (2) -   |   |   |                 |             |               |  |  |  |
|                   | Method of asse       | essment   |   | ritten examination (approx. 60 minutes)<br>anguage of assessment: German and/or English |   |                 |             |               |  |  |  |
| 12-WiPo-G-212-    | Public Policy        |           |   |   |   |                 |             |               |  |  |  |
| mo1               | ECTS 5               | Duration  |   | 1 semester  | Method of grading                                   | numerical grade | Modul level | undergraduate |  |  |  |
|                   | Courses              |           |   | V (2) + T (2) Module taught in: German and/or English                                   |   |                 |             |               |  |  |  |
|                   | Method of asse       | essment   | b) por  | tfolio (approx. 20 pa   | oprox. 60 minutes) o<br>ages)<br>German and/or Engl |                 |             |               |  |  |  |
| 12-EWiinf-G-212-  | Business Informatics |           |   |   |   |                 |             |               |  |  |  |
| mo1               | ECTS 5               | Duration  | 1   | 1 semester  | Method of grading                                   | numerical grade | Modul level | undergraduate |  |  |  |
|                   | Courses              |           | V(2) + T(2)   |   |   |                 |             |               |  |  |  |
|                   | Method of asse       | essment   | written examination (approx. 60 minutes) Language of assessment: German and/or English creditable for bonus   |   |   |                 |             |               |  |  |  |
| 12-Ebus-F-212-m01 | E-Business           |           |   |   |   |                 |             |               |  |  |  |
|                   | ECTS 5               | Duration  |   | 1 semester  | Method of grading                                   | numerical grade | Modul level | undergraduate |  |  |  |
|                   | Courses              |           | V (2) -   | + T (2)   |   |                 |             |               |  |  |  |
|                   | Method of asse       | essment   | a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) or c) term paper (approx. 10 pages) and presentation (approx. 10 minutes), weighted 2:1 or d) oral examination in groups of up to 3 candidates (approx. 10 minutes per candidate) Language of assessment: German and/or English |   |   |                 |             |               |  |  |  |

| Key Skills Area (20                            | ECTS credits)                                 |            |  |  |                       |               |  |  |  |
|--|---|------------|--|--|-----------------------|---------------|--|--|--|
| <b>General Key Skills</b> In addition to the m |   |            | dents may also take modul  | es offered by JMU as part of the pool of genera  | transferable skills   | (ASQ).        |  |  |  |
| <b>General Key Skills</b>                      | (subject-specifi                              | ic)        |  |  |                       |               |  |  |  |
| 10-M-Tu-                                       | <b>Exercise tutor</b>                         | or proof-r | eading in Mathematics  |  |                       |               |  |  |  |
| Ko-152-mo1                                     | ECTS 5  | Duration   | 1 semester   | Method of grading (not) successfully comple  | ted Modul level       | undergraduate |  |  |  |
|  | Courses                                       |            | T (o)  |  |                       |               |  |  |  |
|  | Method of ass                                 | essment    |  | Assessment of tutoring activities or correcting work by supervising lecturers or exercise supervisors (1 to 2 teaching units or approx. 5 pieces of correcting work) |                       |               |  |  |  |
|  | Additional Info                               | ormation   | Please direct application t  | o teaching coordinator Mathematics, he/she w   | ill select participar | nts.          |  |  |  |
|  | Referred to in                                |            | § 22 II Nr. 3 f)   |  |                       |               |  |  |  |
| 10-M-VHB1-152-                                 | E-Learning and                                | d Blended  | Learning Mathematics 1   |  |                       |               |  |  |  |
| mo1  | ECTS 2  | Duration   |  | Method of grading (not) successfully comple  | ted   Modul level     | undergraduate |  |  |  |
|  | Courses                                       |            | Ü (2)<br>Course type: eLearning, m   | ostly Virtuelle Hochschule Bayern (vhb)  |                       |               |  |  |  |
|  | Method of ass                                 | essment    | project (web-based, 15 to<br>Assessment offered: Once  |  |                       |               |  |  |  |
| 10-M-VHB2-152-                                 | E-Learning and Blended Learning Mathematics 2 |            |  |  |                       |               |  |  |  |
| mo1  | ECTS 2 Duratio                                |            | 1 semester   | Method of grading (not) successfully comple  | ted Modul level       | undergraduate |  |  |  |
|  | Courses                                       |            | Ü (2)<br>Course type: eLearning, mostly Virtuelle Hochschule Bayern (vhb)  |  |                       |               |  |  |  |
|  | Method of assessment                          |            | project (web-based, 15 to 20 hours) Assessment offered: Once a year, summer semester   |  |                       |               |  |  |  |
| Subject-specific Ke                            | y Skills (15 ECT                              | S credits) |  |  |                       |               |  |  |  |
| Subject-specific Ke                            | y Skills, Compu                               | ılsory Cou | rses (11 ECTS credits)   |  |                       |               |  |  |  |
| 10-M-COM-152-                                  | Computationa                                  | l Mathem   | atics  |  |                       |               |  |  |  |
| mo1  | ECTS 4  | Duration   | 1 semester   | Method of grading (not) successfully comple  | ted Modul level       | undergraduate |  |  |  |
|  | Courses                                       |            | V (1) + Ü (2)  |  |                       |               |  |  |  |
|  | Method of ass                                 | essment    | project in the form of programming exercises (approx. 20 to 25 hours) Assessment offered: Once a year, winter semester Language of assessment: German and/or English |  |                       |               |  |  |  |
|  | Referred to in LPO I                          |            | § 22 II Nr. 3 f)   |  |                       |               |  |  |  |

| 40 M DDC 452 mgs   | Drogra  | mmin~     | cource to |   | nts of Mathamatics                                  | and other subjects   |               |                                    |  |  |  |
|--------------------|---|-----------|-----------|---|---|--|---------------|------------------------------------|--|--|--|
| 10-M-PKG-152-M01   | ECTS  | <u>_</u>  |           |   | I   | and other subjects   | Modul level   | up do gara duata                   |  |  |  |
|                    |   | 3         | Duratio   |   | 1 semester  | Method of grading (not) successfully completed                           | Modul level   | undergraduate                      |  |  |  |
|                    | Course  |           |           | P (2)   |   |  |               |                                    |  |  |  |
|                    | Method  | d of ass  | essment   |   |   | gramming exercises (approx. 20 to 25 hours)<br>e a year, summer semester |               |                                    |  |  |  |
|                    |   |           |           |   |   | e a year, summer semester<br>German and/or English                       |               |                                    |  |  |  |
|                    | Referre   | d to in L | PO I      |   | Nr. 3 f)  | derman ana, or English   |               |                                    |  |  |  |
| 10-M-GBM-152-      | Basic Notions and Methods of Mathematical Reasoning |           |           |   |   |  |               |                                    |  |  |  |
| mo1                | ECTS 2 Duration                                     |           |           |   | 1 semester  | Method of grading (not) successfully completed                           | Modul level   | undergraduate                      |  |  |  |
|                    | Course  | S         |           | V (1) +   | - Ü (1)   |  |               |                                    |  |  |  |
|                    | Method  | d of ass  | essment   | projec  | ct (10 to 15 pages)                                 |  |               |                                    |  |  |  |
|                    |   |           |           | Langu   | age of assessment:                                  | German and/or English  |               |                                    |  |  |  |
|                    | Additional Information                              |           | Additi    | onal information on   | n module duration: block taught prior to the beginn | ing of the lectur  | e period.     |                                    |  |  |  |
|                    | Referred to in LPO I                                |           |           |   | l Nr. 1 h)  |  |               |                                    |  |  |  |
|                    |   |           |           |   | l Nr. 2 f)  |  |               | ,                                  |  |  |  |
| 10-M-ASM-152-      |   |           | Writing   |   | nematics  |  | _             |                                    |  |  |  |
| mo1                | ECTS 2 Duration                                     |           | ,         | 1 semester  | Method of grading (not) successfully completed      | Modul level  | undergraduate |                                    |  |  |  |
|                    | Courses   |           | V (1) +   |   |   |  |               |                                    |  |  |  |
|                    | Method of assessment                                |           |           |   |   |  |               |                                    |  |  |  |
|                    |   |           |           | Language of assessment: German and/or English   |   |  |               |                                    |  |  |  |
| Subject-specific K |   | •         |           |   | •   |  |               |                                    |  |  |  |
| 10-M-SEM2-152-     | Supple  | mentar    | y Semina  | r Math  | ematics   |  |               |                                    |  |  |  |
| mo1                | ECTS  | 4         | Duratio   |   | 1 semester  | Method of grading (not) successfully completed                           | Modul level   | undergraduate                      |  |  |  |
|                    | Course  | S         |           | S (2)   |   |  |               |                                    |  |  |  |
|                    | Method  | d of ass  | essment   | talk (60 to 120 minutes)  |   |  |               |                                    |  |  |  |
|                    |   |           |           |   |   | German and/or English  |               |                                    |  |  |  |
| 10-M-EFM-152-m01   |   |           |           |   | ancial Mathematics                                  |  |               |                                    |  |  |  |
|                    |   | 9         | Duratio   |   | 1 semester  | Method of grading   numerical grade                                      | Modul level   | undergraduate                      |  |  |  |
|                    | Course  |           |           | V (4) -   |   |  |               |                                    |  |  |  |
|                    | Method  |           |           |   |   | pprox. 90 to 180 minutes, usually chosen) or b) ora                      |               | f one candidate each (15 to 30 mi- |  |  |  |
|                    |   |           |           | nutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English |   |  |               |                                    |  |  |  |
|                    |   |           |           | creditable for bonus  |   |  |               |                                    |  |  |  |
| <u> </u>           |   | -         |           |   |   |  |               | <del></del>                        |  |  |  |

| 10-M-TOP-152-m01 | Introdu                                      | ction to  | Topolog  | y   |  |                   |                             |               |               |  |  |  |
|------------------|--|-----------|----------|---|--|-------------------|-----------------------------|---------------|---------------|--|--|--|
|                  | ECTS   | 5         | Duratio  | n   | 1 semester   | Method of grading | (not) successfully complete | d Modul level | undergraduate |  |  |  |
|                  | Course                                       | S         | •        | V (2)   | + Ü (2)  |                   |                             |               |               |  |  |  |
|                  | Method                                       | l of asse | essment  | nutes<br>Asses<br>Langu   | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)  Assessment offered: In the semester in which the course is offered and in the subsequent semester  Language of assessment: German and/or English creditable for bonus |                   |                             |               |               |  |  |  |
| 10-M-GES-152-m01 | Selected Topics in History of Mathematics    |           |          |   |  |                   |                             |               |               |  |  |  |
|                  | ECTS   | 5         | Duratio  | n   | 1 semester   | Method of grading | (not) successfully complete | d Modul level | undergraduate |  |  |  |
|                  | Course                                       | S         | •        | V (2)   | + Ü (2)  |                   |                             |               |               |  |  |  |
|                  | Method of assessment                         |           |          | Asses<br>Langu  | ) talk (45 to 90 minutes) or b) term paper (10 to 15 pages) or c) project (15 to 25 hours) assessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: German and/or English  |                   |                             |               |               |  |  |  |
|                  | Referre                                      |           |          | § 22 l  | 22    Nr. 3 f)   |                   |                             |               |               |  |  |  |
| 10-M-MSC-152-    | Mather                                       | natical ' | Writing  |   |  |                   |                             |               |               |  |  |  |
| mo1              | ECTS   | 5         | Duratio  | n   | 1 semester   | Method of grading | (not) successfully complete | d Modul level | undergraduate |  |  |  |
|                  | Course                                       | S         |          | V (2)   | + Ü (2)  |                   |                             |               |               |  |  |  |
|                  | Method of assessment                         |           |          | Asses   | a) talk (45 to 90 minutes) or b) term paper (10 to 15 pages) or c) project (15 to 25 hours) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English  |                   |                             |               |               |  |  |  |
|                  | Referre                                      | d to in L | .PO I    | § 22 II Nr. 3 f)  |  |                   |                             |               |               |  |  |  |
| 10-M-SCH-152-m01 | School Mathematics from a Higher Perspective |           |          |   |  |                   |                             |               |               |  |  |  |
|                  | ECTS   | 5         | Duratio  | n   | 1 semester   | Method of grading | (not) successfully complete | d Modul level | undergraduate |  |  |  |
|                  | Course                                       | S         |          | V (2)   | V (2) + Ü (2)  |                   |                             |               |               |  |  |  |
|                  |  |           |          | Asses   | a) talk (approx. 45 minutes) or b) term paper (10 to 15 pages) or c) project (15 to 25 hours) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English  |                   |                             |               |               |  |  |  |
|                  | Referred to in LPO I                         |           |          | § 22 l  | § 22    Nr. 1 h)<br>§ 22    Nr. 2 f)<br>§ 22    Nr. 3 f)   |                   |                             |               |               |  |  |  |
| 10-M-PRO-152-mo1 | Prosem                                       | inar Ma   | thematic | :s  |  |                   |                             | ,             |               |  |  |  |
|                  | ECTS   | 4         | Duratio  | n   | 1 semester   | Method of grading | (not) successfully complete | d Modul level | undergraduate |  |  |  |
|                  | Course                                       | S         | •        | S (2)   | •  |                   |                             |               |               |  |  |  |
|                  | Method of assessment                         |           |          | talk (60 to 120 minutes) Assessment offered: In the semester in which the course is offered Language of assessment: German and/or English |  |                   |                             |               |               |  |  |  |

| 10-M-KRY-232-mo1 Mathematical Aspects of Modern Cryptography |                             |  |   |  |                   |                              |             |               |  |
|--|-----------------------------|--|---|--|-------------------|------------------------------|-------------|---------------|--|
|  | ECTS 5 Duration             |  | 1 | 1 semester   | Method of grading | (not) successfully completed | Modul level | undergraduate |  |
|  | Courses                     |  |   | V (3) + Ü (1)  |                   |                              |             |               |  |
|  |                             |  |   | a) written examination (approx. 60 to 120 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English Assessment offered: Only when announced in the semester in which the courses are offered and in the subsequent semester creditable for bonus |                   |                              |             |               |  |
| Thesis (11 ECTS credits)                                     |                             |  |   |  |                   |                              |             |               |  |
| 10-M-BAM-152-  | Bachelor Thesis Mathematics |  |   |  |                   |                              |             |               |  |
| m01  | ECTS 11 Duration            |  | า | 1 semester   | Method of grading | numerical grade              | Modul level | undergraduate |  |
|  | Courses                     |  |   | No courses assigned to module  |                   |                              |             |               |  |
|  | Method of assessment        |  |   | Bachelor's thesis (approx. 275 to 330 hours)   |                   |                              |             |               |  |
|  | other prerequisites         |  |   | The supervisor may make the successful completion of certain modules that are relevant for the respective topic a prerequisite for the assignment of the topic.  |                   |                              |             |               |  |
|  | Additional Information      |  |   | Time to complete: 10 weeks.  |                   |                              |             |               |  |