

# Subdivided Module Catalogue for the Subject

# Chemistry

as a Bachelor's with 1 major with the degree "Bachelor of Science" (180 ECTS credits)

Examination regulations version: 2015 Responsible: Faculty of Chemistry and Pharmacy

JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record 82|032|-|-|H|2015



# **Learning Outcomes**

German contents and learning outcome available but not translated yet.

# Wissenschaftliche Befähigung

- Die Absolvent/innen beherrschen die grundlegenden Kenntnisse der Basis-Wissenschaften, vor allem der Allgemeinen, Anorganischen, Organischen, Physikalischen und Theoretischen Chemie, der Biochemie sowie der Mathematik und Physik. Die Grundlagen hierfür werden in den entsprechenden Vorlesungen und Übungen der verschiedenen Fächer vermittelt und in Klausuren überprüft.
- Die Absolvent/innen können unter Anleitung Experimente durchführen, analysieren und die erhaltenen Ergebnisse darstellen und bewerten. Vermittelt werden diese Fähigkeiten im Rahmen von Laborpraktika während des Studiums. Das Erreichen der Ziele wird durch Kolloquien, die erfolgreiche Versuchsdurchführung und das Verfassen von Protokollen überprüft.
- Die Absolvent/innen setzten die erlernten theoretischen und experimentellen Methoden ein, um unter Anleitung neue Erkenntnisse zu erlangen. Die erlernten theoretischen und experimentellen Methoden werden im Rahmen der Bachelorarbeit angewendet.
- Die Absolvent/innen können sich mit Hilfe von Fachliteratur in neue Fragestellungen und Aufgabengebiete einarbeiten, konkrete experimentelle oder theoretische Aufgabenstellungen verstehen, Lösungswege nachvollziehen und die Ergebnisse interpretieren und bewerten. Sie besitzen die Fähigkeit, eine thematisch und zeitlich eng umgrenzte chemische Fragestellung unter Anleitung mit den erlernten Methoden und unter wissenschaftlich-analytischer Vorgehensweise weitgehend eigenständig zu bearbeiten, die gewonnenen Daten zu analysieren, zusammenzufassen und einem Fachpublikum zu präsentieren. Diese Fähigkeiten werden in Seminaren während des Studiums und vor allem im Rahmen der Vorbereitung und Anfertigung der Bachelorarbeit sowie eines Seminarvortrags vermittelt und überprüft.

# Befähigung zur Aufnahme einer Erwerbstätigkeit

- Die Absolvent/innen besitzen Abstraktionsvermögen, Problemlösungskompetenz und die Fähigkeit, komplexe Zusammenhänge in analytischer Herangehensweise zu strukturieren. Die Grundlagen hierfür werden in Vorlesungen und Übungen der Chemie vermittelt und durch Klausuren überprüft.
- Die Absolvent/innen sind in der Lage, ihr theoretisches Wissen in der Praxis anzuwenden und können mit den erlernten wissenschaftlichen Methoden auch unbekannte Probleme aus unterschiedlichen fachlichen Perspektiven analysieren und bearbeiten. Sie sind es dabei gewohnt, in einem Team aus Kommiliton/innen, Kolleg/innen und/oder Wissenschaftler/innen konstruktiv und zielorientiert zusammenzuarbeiten. Der Praxisbezug ist durch einen hohen Anteil an Laborpraktika - sowohl Kurspraktika, als auch individuelle Forschungspraktika - und nicht zuletzt der Bachelor-Arbeit gegeben, deren erfolgreiche Absolvierung durch Protokolle bzw. die Bachelor-Thesis überprüft wird.
- Die Absolvent/innen können unterschiedliche Aufgaben parallel und unter Zeit- und Erfolgsdruck auch unter schwierigen Rahmenbedingungen erfolgreich bearbeiten. Diese Fähigkeit wird durch die Prüfungsdichte am Ende der Vorlesungszeit erlernt und befähigt die Absolvent/innen auch im stressigen Berufsalltag Aufgaben erfolgreich zu bearbeiten.
- Die Absolvent/innen sind in der Lage, konstruktiv und zielorientiert in einem heterogenen Team zusammenzuarbeiten, unterschiedliche und abweichende Ansichten produktiv zur Zielerreichung zu nutzen und auftretende Konflikte zu lösen. Diese Teamfähigkeit und Konfliktkompetenz erlernen die Studierenden in der Zusammenarbeit während Laborpraktika sowie in Arbeitskreisen während der Anfertigung ihrer Bachelorarbeit.
- Diese solide Wissensbasis und Methodenkompetenz sowie die eingeübte Teamfähigkeit können die Absolvent/innen gewinnbringend in ihrer Berufspraxis einsetzen.

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 2 / 70 |
|--|--|-------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |             |



## Persönlichkeitsentwicklung

- Die Absolvent/innen kennen die Regeln guter wissenschaftlicher Praxis und beachten sie. Die Lehrenden fördern zudem die Selbstverantwortung für den Wissenserwerb sowie ein an wissenschaftlichen Werten orientiertes Denken und Handeln. Dies beinhaltet das Streben nach Erkenntnis und Wahrheit, Eindeutigkeit, Transparenz, Objektivität, Wertefreiheit, überpersönliche Gültigkeit, Überprüfbarkeit, Verlässlichkeit, Offenheit, Selbstreflexion und Redlichkeit sowie Neuigkeit. Insbesondere die Laborarbeit und das Erstellen von Protokollen sowie deren anschließende Korrektur stellt die Vermittlung guter wissenschaftlicher Praxis sicher.
- Die Absolvent/innen lernen, mit in der Forschung unvermeidbaren Rückschlägen umzugehen und ihre Zielsetzungen neu anzupassen.

### Befähigung zum gesellschaftlichen Engagement

• Die Absolvent/innen haben ihr Wissen bezüglich naturwissenschaftlicher Fragen erweitert und erkennen deren wirtschaftliche, rechtliche und gesellschaftliche Implikationen und können begründet Position beziehen. Durch die Behandlung aktueller Forschungsthemen in den Lehrveranstaltungen und den Besuch von Vorlesungen zu Toxikologie und Rechtskunde werden Bezüge zu wirtschaftlichen, rechtlichen und gesellschaftlichen Fragestellungen hergestellt. Im Rahmen der Bachelorarbeit befassen sich die Studierenden ebenfalls mit aktuellen gesellschaftlich und wirtschaftlich relevanten chemischen Fragen.

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 3 / 70 |
|--|--|-------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |             |

# Abbreviations used

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

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

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

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

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

# Conventions

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

# Notes

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

Should the 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:

# ASPO2015

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

# 22-Jul-2015 (2015-34)

# ??-???-2024 (2024-??)

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.

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       |
|--|--|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |

# The subject is divided into

| Abbreviation                      | Module title   | ECTS<br>credits | Method of<br>grading | page     |
|-----------------------------------|--|-----------------|----------------------|----------|
| Compulsory Courses (150           | ECTS credits)  |                 |                      |          |
| Subfield General and In           | organic Chemistry (47 ECTS credits)                                      |                 |                      |          |
| 08-AC1-152-m01                    | Principles of Inorganic Chemistry  | 8               | NUM                  | 9        |
| 08-ACP1-152-m01                   | Inorganic Chemistry 1 (lab)  | 10              | B/NB                 | 13       |
| 08-AS1-152-m01                    | Inorganic Chemistry of the Elements                                      | 6               | NUM                  | 16       |
| 08-ANP-152-m01                    | Analytical Chemistry (lab)   | 6               | B/NB                 | 15       |
| 08-ACP2-152-m01                   | Inorganic Chemistry 2 (lab)  | 5               | B/NB                 | 14       |
| 08-AC-FSE-152-m01                 | Solid State Chemistry, Spectroscopic Methods, Organoelement<br>Chemistry | 12              | NUM                  | 12       |
| Subfield Organic Chemi            | stry (40 ECTS credits)   |                 |                      |          |
| 08-0C1-152-m01                    | Organic Chemistry 1  | 5               | NUM                  | 32       |
| 08-0C2-152-m01                    | Organic Chemistry 2 and analytical methods in organic che-<br>mistry     | 9               | NUM                  | 37       |
| 08-0CP1-152-m01                   | Organic Chemistry - lab 1  | 8               | B/NB                 | 41       |
| 08-0CP2-152-m01                   | Organic Chemistry - advanced laboratory course for students of chemistry | 5               | B/NB                 | 42       |
| 08-0C3+4-152-m01                  | Organic Chemistry 3 & 4  | 13              | NUM                  | 39       |
| Subfield Physical and T           | heoretical Chemistry (40 ECTS credits)                                   |                 |                      |          |
| 08-PC-QMS-152-m01                 | Principles of quantum mechanics and spectroscopy                         | 10              | NUM                  | 45       |
| 08-PC-TKE-152-m01                 | Thermodynamics, Kinetics, Electrochemistry                               | 9               | NUM                  | 48       |
| 08-PCP-152-m01                    | Physical Chemistry (lab)   | 9               | B/NB                 | 44       |
| 08-TC-152-m01                     | Quantum Chemistry  | 3               | NUM                  | 52       |
| 08-PC-SBL-152-m01                 | Symmetry, chemical bonding and light                                     | 9               | NUM                  | 46       |
| Subfield Basics of Natu           | ral Sciences (23 ECTS credits)   |                 |                      |          |
| 08-BC1-152-m01                    | Biochemistry 1   | 5               | NUM                  | 19       |
| 10-M-MCB-152-m01                  | Mathematics for students in Chemistry and Biology                        | 5               | NUM                  | 57       |
| 11-EFNF-152-m01                   | Introduction to Physics for Students of other Disciplines                | 7               | NUM                  | 59       |
| 11-PFNF-152-m01                   | Laboratory Course Physics for Students of other Disciplines              | 3               | B/NB                 | 65       |
| 03-TR-152-m01                     | Toxicology and legal studies   | 3               | NUM                  | 7        |
| Key Skills Area (20 ECTS          | credits)   |                 |                      |          |
|                                   | dules offered as part of the pool of general transferable skills (AS     | Q) of JMU.      |                      |          |
| Subject-specific Key Sk           |  |                 |                      |          |
|                                   | kills, Compulsory Courses (5 ECTS credits)                               |                 |                      |          |
| 08-VP-152-m01                     | Advanced laboratory course   | 5               | B/NB                 | 54       |
|                                   | kills, Compulsory Electives (10 ECTS credits)                            |                 |                      | ·        |
| 08-BC2-152-m01                    | Biochemistry 2   | 5               | NUM                  | 21       |
| 08-BCP-152-m01                    | Practical course of Biochemistry   | 5               | B/NB                 | 23       |
| 08-PS3-152-m01                    | Applied Spectroscopy 3   | 5               | NUM                  | 51       |
| 08-PKC-152-m01                    | Programming and numerical methods  | 5               | B/NB                 | 50       |
| 08-0P-152-m01                     | Advanced chemical practical course                                       | 5               | B/NB                 | 43       |
| 08-GC-242-m01                     | Green and sustainable (organic) chemistry                                | 5               | NUM                  | 24       |
| Thesis (10 ECTS credits)          |  |                 |                      |          |
| chelor's with 1 major Chemistry ( | JMU Würzburg • generated 18-Apr-2025 • exar                              | n.              | pag                  | e 5 / 70 |

| 08-BA-152-m01             | Bachelor Thesis  | 10 | NUM  | 18 |
|---------------------------|--|----|------|----|
|                           | endix DA (170 ECTS credits)  | I  |      | I  |
|                           | rganic Chemistry (35 ECTS credits)                                   |    |      |    |
| 08-AC1-152-m01            | Principles of Inorganic Chemistry                                    | 8  | NUM  | 9  |
| 08-ACP1-152-m01           | Inorganic Chemistry 1 (lab)  | 10 | B/NB | 13 |
| 08-AS1-152-m01            | Inorganic Chemistry of the Elements                                  | 6  | NUM  | 16 |
| 08-ANP-152-m01            | Analytical Chemistry (lab)   | 6  | B/NB | 15 |
| 08-AC-FS-DA-152-m01       | Solid State Chemistry, Spectroscopic Methods (DD)                    | 5  | NUM  | 11 |
| Subfield Organic Chemist  | try (28 ECTS credits)  |    |      |    |
| 08-0C1-152-m01            | Organic Chemistry 1  | 5  | NUM  | 32 |
| 08-0C2-152-m01            | Organic Chemistry 2 and analytical methods in organic che-<br>mistry | 9  | NUM  | 37 |
| 08-0CP1-152-m01           | Organic Chemistry - lab 1  | 8  | B/NB | 41 |
| 08-0C-0C3-DA-152-m01      | Organic Chemistry 3 (DD)   | 6  | NUM  | 40 |
| Subfield Physical and The | eoretical Chemistry (37 ECTS credits)                                | •  |      |    |
| 08-PC-QMS-152-m01         | Principles of quantum mechanics and spectroscopy                     | 10 | NUM  | 45 |
| 08-PC-TKE-152-m01         | Thermodynamics, Kinetics, Electrochemistry                           | 9  | NUM  | 48 |
| 08-PCP-152-m01            | Physical Chemistry (lab)   | 9  | B/NB | 44 |
| 08-TC-152-m01             | Quantum Chemistry  | 3  | NUM  | 52 |
| 08-PC-SBL-DA-152-m01      | Symmetry, chemical bonding and light (DD)                            | 6  | NUM  | 47 |
| Subfield Basics of Natura | l Sciences (20 ECTS credits)   |    |      | _  |
| 08-BC1-152-m01            | Biochemistry 1   | 5  | NUM  | 19 |
| 10-M-MCB-152-m01          | Mathematics for students in Chemistry and Biology                    | 5  | NUM  | 57 |
| 11-EFNF-152-m01           | Introduction to Physics for Students of other Disciplines            | 7  | NUM  | 59 |
| 11-PFNF-152-m01           | Laboratory Course Physics for Students of other Disciplines          | 3  | B/NB | 65 |
| Subfield Competences fro  | om foreign university (50 ECTS credits)                              |    |      |    |
| 08-VPUB1-152-m01          | Qualifications - Partner University 1                                | 25 | B/NB | 55 |
| 08-VPUB2-152-m01          | Qualifications - Partner University 2                                | 25 | NUM  | 56 |
| Thesis (10 ECTS credits)  |  |    |      |    |
| 08-BA-152-m01             | Bachelor Thesis  | 10 | NUM  | 18 |
|                           |  |    |      |    |

| Modul             | e title      |  |                          |                               | Abbreviation           |                 |
|-------------------|--------------|--|--------------------------|-------------------------------|------------------------|-----------------|
| Toxico            | logy an      | d legal studies                                    |                          |                               | 03-TR-152-m01          |                 |
| Modul             | e coord      | inator   |                          | Module offered by             |                        |                 |
| lecture           | er of lect   | ure "Toxikologie und R                             | echtskunde"              | Faculty of Medicine           |                        |                 |
| ECTS              | Metho        | od of grading                                      | Only after succ. con     | npl. of module(s)             |                        |                 |
| 3                 | nume         | rical grade  |                          |                               |                        |                 |
| Durati            | on           | Module level                                       | Other prerequisites      |                               |                        |                 |
| 1 seme            | ester        | undergraduate                                      |                          |                               |                        |                 |
| Conter            | nts          |  |                          |                               |                        |                 |
| Basics<br>toxicol | -            | l regulations for chemis                           | sts (handling and trans  | portation of hazardo          | ous materials), funda  | amentals of     |
| Intend            | ed learı     | ning outcomes                                      |                          |                               |                        |                 |
|                   |              | naster the basics of leg<br>the fundamentals of t  |                          | nists (handling and t         | ransport of hazardo    | us substan-     |
|                   |              | , number of weekly con                             |                          | - if other than Germa         | n)                     |                 |
| V (1) +           |              | ,  |                          |                               | ,                      |                 |
| Metho             | d of ass     | essment (type, scope,<br>on on whether module      |                          |                               | tion offered — if not  | every seme-     |
|                   |              | nation (approx. 90 min                             |                          |                               |                        |                 |
|                   | tion of p    |  |                          |                               |                        |                 |
|                   |              |  |                          |                               |                        |                 |
| Additi            | onal inf     | ormation   |                          |                               |                        |                 |
| accord            | ling to §    | 2 para. 2 sentence 2 A<br>he APOLmCh and No. 5     |                          |                               | er g) and i) and No. I | l 1st letter d) |
| Worklo            | _            |  |                          |                               |                        |                 |
| 90 h              | _            |  |                          |                               |                        |                 |
| -                 | ng cycl      | 9  |                          |                               |                        |                 |
|                   |              |  |                          |                               |                        |                 |
| Referr            | ed to in     | LPO I (examination reg                             | gulations for teaching-o | degree programmes)            |                        |                 |
|                   | Nr. 1 h)     | `  | <u> </u>                 | <u> </u>                      |                        |                 |
|                   | Nr. 2 f)     |  |                          |                               |                        |                 |
|                   | Nr. 3 f)     |  |                          |                               |                        |                 |
|                   | e appea      |  |                          |                               |                        |                 |
|                   |              | gree (1 major) Biochem                             |                          |                               |                        |                 |
|                   |              | gree (1 major) Chemistr                            |                          |                               |                        |                 |
|                   |              | gree (1 major) Food Che                            |                          |                               |                        |                 |
|                   |              | mination for the teachi<br>mination for the teachi |                          |                               | tny (Drimany School)   | (2015)          |
|                   |              | mination for the teachi                            |                          |                               | stry (Phillary School) | (2015)          |
|                   |              | mination for the teachi                            |                          | • -                           |                        |                 |
|                   |              | mination for the teachi                            |                          |                               | nemistry (Middle Sch   | 100l) (2015)    |
|                   |              | mination for the teachi                            | ,                        |                               | ,                      |                 |
| First st          | ate exa      | mination for the teachi                            | ng degree Mittelschule   | Didactics in Chemis           | try (Middle School)    | (2015)          |
| Maste             | r's degre    | ee (1 major) Chemistry                             | (2016)                   |                               |                        |                 |
|                   |              | gree (1 major) Food Che                            | -                        |                               |                        |                 |
|                   |              | gree (1 major) Biochem                             |                          |                               |                        |                 |
| Bache             | lor's de     | gree (1 major) Chemistr                            | y (2017)                 |                               |                        |                 |
| Bachelor's        | s with 1 maj | or Chemistry (2015)                                |                          | urg • generated 18-Apr-2025 • |                        | page 7 / 70     |

#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Master's degree (1 major) Chemistry (2018)

Bachelor's degree (1 major) Food Chemistry (2019)

First state examination for the teaching degree Mittelschule Chemistry (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Chemistry (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Chemistry (Middle School) (2020 (Prüfungsordnungsversion 2015))

Bachelor's degree (1 major) Food Chemistry (2021)

Bachelor's degree (1 major) Biochemistry (2022)

Master's degree (1 major) Chemistry (2024)

Bachelor's degree (1 major) Food Chemistry (2025)

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 8 / 70 |
|--|--|-------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |             |

| Module  | e title  |  |  |   | Abbreviation   |
|---|--|--|--|---|--|
| Princip   | oles of  | Inorganic Chemistry  |  |   | 08-AC1-152-m01   |
| Modul   | e coord  | linator  |  | Module offered by   |  |
| lecture<br>Chemis   |  | ture "Experimentalchemi  | e" (Experimental   | Institute of Inorgani   | ic Chemistry   |
| ECTS  | 1  | od of grading  | Only after succ. con   | pl. of module(s)  |  |
| 8   | 1  | erical grade   |  |   |  |
| Duratio   | on   | Module level   | Other prerequisites  |   |  |
| 1 seme  | ester  | undergraduate  |  |   |  |
| Conten  | nts  | •  |  |   |  |
| rial and  | d partic<br>ition, th  | cle level, metals, acid-bas  | se reactions, the perio  | odic table, chemical  | mphasis is placed on the mate-<br>equilibrium and complexometry.<br>hes the basics of inorganic che-   |
| Intend  | ed lear  | ning outcomes  |  |   |  |
| cient ir<br>actions<br>dents l<br>licatior  | n basic<br>s using<br>know h<br>n.   | models of the structure of<br>typical chemical formula<br>ow the most important q  | of matter and can des<br>language and interp<br>uantitative and qualit | cribe them properly.<br>ret them by identifyir<br>ative analytical meth | prmation from it. He/she is profi-<br>He/she can depict chemical re-<br>ng the type of reaction. The stu-<br>nods work and their areas of app- |
|   |  | , number of weekly conta   | ict hours, language –  | - if other than Germa   | n)   |
| V (4) +   |  |  |  |   |  |
|   |  | <b>sessment</b> (type, scope, la<br>ion on whether module c  |  |   | tion offered — if not every seme-  |
| c) oral<br>d) log (<br>e) pres<br>Langua  | examir<br>(approx<br>sentation<br>age of a   | nation of one candidate en<br>nation in groups of up to<br>k. 20 pages) or<br>on (approx. 30 minutes)<br>assessment: German and  | 3 candidates (approx   | -   | didate) or   |
| Allocat   | tion of  | places   |  |   |  |
|   |  |  |  |   |  |
| accord  | ling to §  | formation<br>§ 2 para. 2 sentence 2 AP<br>nnex 2 to the APOLmCh  | OLmCh in conjunctio  | n with No. I 2nd lette  | r a) of annex 1 to the APOLmCh   |
| Worklo  |  |  |  |   |  |
|   |  |  |  |   |  |
| 240 N   |  |  |  |   |  |
| 240 h<br><b>Teachi</b>  | ng cvcl  | le   |  |   |  |
|   | ng cyc   | le   |  |   |  |
| Teachi  |  | LPOI (examination regu   | llations for teaching-   | degree programmes)  |  |
| Teachi<br><br>Referre   | ed to in<br>Nr. 1 an   |  | llations for teaching-   | degree programmes)  |  |
| <b>Teachi</b><br><br><b>Referre</b><br>§ 42   N<br>§ 62   N   | ed to in<br>Nr. 1 an   | L <b>PO I</b> (examination regunded by the second se | llations for teaching-o  | degree programmes)  |  |
| <b>Teachi</b><br><br>§ 42   N<br>§ 62   N<br><b>Modul</b><br>Bachel<br>Bachel<br>First st<br>First st | ed to in<br>Nr. 1 an<br>Nr. 1<br>e appea<br>lor's de<br>lor's de<br>lor's de<br>lor's de<br>ate exa<br>ate exa | d § 22 II Nr. 1 h)<br>ars in<br>gree (1 major) Biochemis<br>gree (1 major) Chemistry<br>amination for the teaching   | try (2015)<br>(2015)<br>g degree Grundschule<br>g degree Grundschule   | e Chemistry (2015)<br>e Didactics in Chemis                             | stry (Primary School) (2015)   |

First state examination for the teaching degree Gymnasium Chemistry (2015)

First state examination for the teaching degree Sonderpädagogik Didactics in Chemistry (Middle School) (2015) First state examination for the teaching degree Mittelschule Chemistry (2015)

First state examination for the teaching degree Mittelschule Didactics in Chemistry (Middle School) (2015) Bachelor's degree (1 major) Biochemistry (2017)

Bachelor's degree (1 major) Chemistry (2017)

First state examination for the teaching degree Mittelschule Chemistry (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Chemistry (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Chemistry (Middle School) (2020 (Prüfungsordnungsversion 2015))

Bachelor's degree (1 major) Food Chemistry (2021)

Bachelor's degree (1 major) Biochemistry (2022)

Bachelor's degree (1 major) Food Chemistry (2025)

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 10 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |              |

| Module  | e title                               |  |  |                         | Abbreviation  |
|---|---------------------------------------|--|--|-------------------------|---|
| Solid S   | tate Ch                               | nemistry, Spectroscopic I  | Methods (DD)                                 |                         | 08-AC-FS-DA-152-m01   |
| Module  | coord                                 | inator   |  | Module offered by       | <u> </u>  |
|   |                                       | ture "Festkörperchemie"  | (Solid State Che-                            | Institute of Inorgan    | ic Chemistry  |
| mistry)   |                                       | F  |  |                         | ,   |
| ECTS  |                                       | od of grading  | Only after succ. con                         | npl. of module(s)       |   |
| 5   | I                                     | rical grade  |  |                         |   |
| Duratio   |                                       | Module level   | Other prerequisites                          |                         |   |
| 1 semes   |                                       | undergraduate  | <u> </u>                                     |                         |   |
| Content   |                                       |  |  | - for the land line and | l - 1:  |
|   |                                       | equips students with an a cures and properties, spe  |  |                         | d saline compounds. It focuses<br>nical processes.  |
|   |                                       | ning outcomes  |  |                         |   |
| priate n  | nannei                                | r. They are able to system   | ise them and charact                         | terise their structure  | saline compounds in an appro-<br>and reactivity. They can list spec-<br>describe them in an appropriate |
| manner  |                                       |  |  | if a the suthern Course |   |
| V(2) + V  |                                       | , number of weekly conta   | ict nours, language –                        | - If other than Germa   | in)   |
|   |                                       | • • • • • • • • • • • • • • • • • • •  | ·····  |                         |   |
|   |                                       | ion on whether module ca   |  |                         | ation offered — if not every seme-  |
| b) oral e<br>c) oral e<br>d) log (a<br>e) prese | examir<br>examin<br>approx<br>entatio | mination (approx. 90 to 1<br>nation of one candidate e<br>nation in groups of up to 3<br>a. 20 pages) or<br>n (approx. 30 minutes)<br>assessment: German and | ach (20 to 30 minute<br>3 candidates (approx |                         | didate) or  |
| Allocati  | ion of <sub>l</sub>                   | places   |  |                         |   |
|   |                                       |  |  |                         |   |
| Additio   | nal inf                               | ormation   |  |                         |   |
|   |                                       |  |  |                         |   |
| Worklo  | ad                                    |  |  |                         |   |
| 150 h   |                                       |  |  |                         |   |
| Teachir   | ng cycl                               | e  |  |                         |   |
|   |                                       |  |  |                         |   |
| Referre   | d to in                               | LPOI (examination regu   | lations for teaching-                        | degree programmes)      |   |
|   |                                       |  |  |                         |   |
| Module  | e appea                               | ars in   |  |                         |   |
|   |                                       | gree (1 major) Chemistry<br>gree (1 major) Chemistry   | -  |                         |   |
| Datilell  | oi s ue                               | Siee (I major) chemistry   | (201/)                                       |                         |   |

|   | e title  |   |   |   | Abbreviation  |
|---|--|---|---|---|---|
| Solid S   | State Cl   | nemistry, Spectroscopic   | Methods, Organoele                              | ment Chemistry                                | 08-AC-FSE-152-m01   |
| Modul   | e coord  | inator  |   | Module offered by                             |   |
| mistry)   |  | cture "Festkörperchemie<br>Elementorganische Chem<br>)  |   | Institute of Inorgar                          | nic Chemistry   |
| ECTS  | Meth   | od of grading   | Only after succ. con                            | npl. of module(s)                             |   |
| 12  | nume   | rical grade   |   |   |   |
| Duratio   | on   | Module level  | Other prerequisites                             |   |   |
| 2 seme  | ester  | undergraduate   |   |   |   |
| Conter  | nts  |   |   |   |   |
|   |  |   |   |   | aline compounds and organome-<br>eactivity and technical processes.   |
| Intend  | ed lear  | ning outcomes   |   |   |   |
| In addi<br>They ca<br>in an a<br><b>Course</b>  | ition, th<br>an list s<br>ippropr<br><b>es</b> (type | ney are able to develop a<br>spectroscopic methods th<br>iate manner.<br>, number of weekly conta | nd explain principles<br>nat can be used for th | for the synthesis of<br>e structural analysis | rise their structure and reactivity.<br>elementary organic compounds.<br>s of solids and can describe them<br>an) |
| V (2) +   | V (2) +  | V (3) + Ü (1)   |   |   |   |
|   |  | s <b>essment</b> (type, scope, la<br>ion on whether module c                                      |   |   | ation offered — if not every seme-  |
| b) oral   | examir<br>examir                                     | mination (approx. 90 to a<br>nation of one candidate e<br>nation in groups of up to g             | each (20 to 30 minute                           | -   | ididate) or   |
| d) log (<br>e) pres   | sentatio   | x. 20 pages) or<br>on (approx. 30 minutes)<br>ossessment: German and                              | /or English                                     |   |   |
| d) log (<br>e) pres<br>Langua   | sentatio   | on (approx. 30 minutes)<br>assessment: German and   | /or English                                     |   |   |
| d) log (<br>e) pres<br>Langua   | sentationage of a                                    | on (approx. 30 minutes)<br>assessment: German and   | /or English                                     |   |   |
| d) log (<br>e) pres<br>Langua<br>Allocat  | sentation<br>age of a<br><b>tion of</b>              | on (approx. 30 minutes)<br>assessment: German and   | /or English                                     |   |   |
| d) log (<br>e) pres<br>Langua<br>Allocat  | sentation<br>age of a<br><b>tion of</b>              | on (approx. 30 minutes)<br>Issessment: German and<br><b>places</b>                                | /or English                                     |   |   |
| d) log (<br>e) pres<br>Langua<br>Allocat  | sentation<br>age of a<br>tion of p<br>onal inf       | on (approx. 30 minutes)<br>Issessment: German and<br><b>places</b>                                | /or English                                     |   |   |
| d) log (<br>e) pres<br>Langua<br>Allocat<br><br>Additic   | sentation<br>age of a<br>tion of p<br>onal inf       | on (approx. 30 minutes)<br>Issessment: German and<br><b>places</b>                                | /or English                                     |   |   |
| d) log (<br>e) press<br>Langua<br>Allocat<br><br>Additio<br><br>Worklo<br>360 h                         | sentation<br>age of a<br>tion of p<br>onal inf       | on (approx. 30 minutes)<br>Issessment: German and<br>places<br>Formation                          | /or English                                     |   |   |
| d) log (<br>e) press<br>Langua<br>Allocat<br><br>Additio<br><br>Worklo<br>360 h                         | sentation<br>age of a<br>tion of p<br>onal inf       | on (approx. 30 minutes)<br>Issessment: German and<br>places<br>Formation                          | /or English                                     |   |   |
| d) log (<br>e) press<br>Langua<br>Allocat<br><br>Additio<br><br>Worklo<br>360 h<br>Teachi<br>           | sentation<br>age of a<br>tion of<br>onal inf         | on (approx. 30 minutes)<br>Issessment: German and<br>places<br>Formation                          |   | degree programmes                             |   |
| d) log (<br>e) press<br>Langua<br>Allocat<br><br>Additio<br><br>Worklo<br>360 h<br>Teachi<br>           | sentation<br>age of a<br>tion of<br>onal inf         | on (approx. 30 minutes)<br>Issessment: German and<br>places<br>Formation                          |   | degree programmes                             |   |
| d) log (<br>e) press<br>Langua<br>Allocat<br><br>Additio<br><br>360 h<br>Teachi<br><br>Referre          | sentation<br>age of a<br>tion of<br>onal inf         | e<br>LPOI (examination regu   |   | degree programmes                             |   |
| d) log (<br>e) pres<br>Langua<br>Allocat<br><br>Additio<br>360 h<br>Teachi<br><br>Referre<br><br>Modulo | ed to in<br>e appea                                  | e<br>LPOI (examination regu   | lations for teaching-o                          | degree programmes                             |   |

| Inorga  | e title   |   |  |   | Abbreviation   |
|---|---|---|--|---|--|
|   | nic Che   | emistry 1 (lab)   |  |   | 08-ACP1-152-m01  |
| Modul   | e coord   | linator   |  | Module offered by   |  |
| holder  | ofthe   | Chair of Anorganic Chemi  | istrv  | Institute of Inorgan  | ic Chemistry   |
| ECTS  | 1   | od of grading   | Only after succ. con   |   |  |
| 10  |   | successfully completed  |  |   |  |
| Duratio   | on  | Module level  | Other prerequisites  | <b>i</b>  |  |
| 1 seme  | ester   | undergraduate   |  |   |  |
| Conten  | nts   |   |  |   |  |
| lated le<br>course  | ecture(<br>focuse   | s). After a safety briefing,  | the students autono  | mously conduct exp  | they have gained through the re-<br>eriments in the laboratory. The<br>nple substances and analyses of                                   |
| Intend  | ed lear   | ning outcomes   |  |   |  |
| have d<br>cesses  | evelop<br>in an a   | ed the ability to perform appropriate manner, both  | the necessary stoichi<br>in written and oral fo  | iometric calculations<br>orm.   | xperiments to solve them. They<br>and describe the chemical pro-   |
|   |   | , number of weekly conta  | act hours, language –  | – if other than Germa   | an)  |
| P (12) +  | + S (2)   |   |  |   |  |
|   |   | <b>sessment</b> (type, scope, la<br>ion on whether module c   |  |   | ation offered — if not every seme  |
| (63) 01   |   | evamination in groups of  |  |   |  |
| 20 pag<br>nation<br>(2 to 4<br>Langua   | ges) or (<br>talks a<br>randor<br>age of a  | e) presentation (approx.  | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English   | approx. 15 minutes  <br>testate/Nachtestate   | per candidate) or d) log (approx.  |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess   | ges) or<br>talks a<br>randor<br>age of a<br>sment o   | e) presentation (approx.<br>pprox. 15 minutes each,<br>n examinations)<br>assessment: German and<br>offered: Once a year, wint  | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English   | approx. 15 minutes  <br>testate/Nachtestate   | per candidate) or d) log (approx.<br>(pre and post-experiment exami  |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess   | ges) or<br>talks a<br>randor<br>age of a<br>sment o   | e) presentation (approx.<br>pprox. 15 minutes each,<br>n examinations)<br>assessment: German and<br>offered: Once a year, wint  | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English   | approx. 15 minutes  <br>testate/Nachtestate   | per candidate) or d) log (approx.<br>(pre and post-experiment exami  |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess<br>Allocat  | ges) or o<br>talks a<br>randor<br>age of a<br>sment o<br><b>tion of</b>   | e) presentation (approx.<br>pprox. 15 minutes each,<br>n examinations)<br>assessment: German and<br>offered: Once a year, wint  | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English   | approx. 15 minutes  <br>testate/Nachtestate   | per candidate) or d) log (approx.<br>(pre and post-experiment exami  |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess<br>Allocat<br><br>Additic<br>accord   | ges) or of<br>talks a<br>randor<br>age of a<br>sment of<br>tion of<br>onal inf  | e) presentation (approx. <u>a</u> pprox. <u>15</u> minutes each,<br>m examinations)<br>assessment: German and<br>offered: Once a year, wint<br><b>places</b>  | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English<br>er semester  | (approx. 15 minutes  <br>testate/Nachtestate<br>ages each) and asse                             | per candidate) or d) log (approx.<br>(pre and post-experiment exami  |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess<br>Allocat<br><br>Additic<br>accord   | ses) or of<br>talks a<br>randor<br>age of a<br>sment of<br>tion of<br>onal inf<br>ling to s   | e) presentation (approx. a<br>pprox. 15 minutes each,<br>n examinations)<br>assessment: German and<br>offered: Once a year, wint<br><b>places</b><br>formation<br>§ 2 para. 2 sentence 2 AP   | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English<br>er semester  | (approx. 15 minutes  <br>testate/Nachtestate<br>ages each) and asse                             | (pre and post-experiment exami<br>ssment of practical assignments  |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess<br>Allocat<br><br>Additic<br>accord<br>and No<br>Worklo   | ses) or of<br>talks a<br>randor<br>age of a<br>sment of<br>tion of<br>onal inf<br>ling to s   | e) presentation (approx. a<br>pprox. 15 minutes each,<br>n examinations)<br>assessment: German and<br>offered: Once a year, wint<br><b>places</b><br>formation<br>§ 2 para. 2 sentence 2 AP   | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English<br>er semester  | (approx. 15 minutes  <br>testate/Nachtestate<br>ages each) and asse                             | per candidate) or d) log (approx.<br>(pre and post-experiment exami<br>ssment of practical assignments                                   |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess<br>Allocat<br><br>Additic<br>accord<br>and No<br>Worklo<br>300 h  | ses) or of<br>talks a<br>randor<br>age of a<br>sment of<br>tion of<br>bing to so<br>to a of a<br>bad  | e) presentation (approx. 2<br>pprox. 15 minutes each,<br>n examinations)<br>assessment: German and<br>offered: Once a year, wint<br><b>places</b><br>formation<br>§ 2 para. 2 sentence 2 AP<br>nnex 2 to the APOLmCh  | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English<br>er semester  | (approx. 15 minutes  <br>testate/Nachtestate<br>ages each) and asse                             | per candidate) or d) log (approx.<br>(pre and post-experiment exami<br>ssment of practical assignments                                   |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess<br>Allocat<br><br>Additic<br>accord<br>and No<br>Worklo<br>300 h  | ses) or of<br>talks a<br>randor<br>age of a<br>sment of<br>tion of<br>bing to so<br>to a of a<br>bad  | e) presentation (approx. 2<br>pprox. 15 minutes each,<br>n examinations)<br>assessment: German and<br>offered: Once a year, wint<br><b>places</b><br>formation<br>§ 2 para. 2 sentence 2 AP<br>nnex 2 to the APOLmCh  | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English<br>er semester  | (approx. 15 minutes  <br>testate/Nachtestate<br>ages each) and asse                             | per candidate) or d) log (approx.<br>(pre and post-experiment exami<br>ssment of practical assignments                                   |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess<br>Allocat<br><br>Additic<br>accord<br>and No<br>Worklo<br>300 h<br>Teachi<br>  | ses) or of<br>talks a<br>randor<br>age of a<br>sment of<br>tion of<br>bing to so<br>to a of a<br>bad  | e) presentation (approx. 2<br>pprox. 15 minutes each,<br>n examinations)<br>assessment: German and<br>offered: Once a year, wint<br><b>places</b><br>formation<br>§ 2 para. 2 sentence 2 AP<br>nnex 2 to the APOLmCh  | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English<br>er semester<br>OLmCh in conjunctio   | (approx. 15 minutes  <br>testate/Nachtestate<br>ages each) and asses<br>n with No. I 1st letter | per candidate) or d) log (approx.<br>(pre and post-experiment exami<br>ssment of practical assignments<br>r a) of annex 1 to the APOLmCh |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess<br>Allocat<br><br>Additic<br>accord<br>and No<br>Worklo<br>300 h<br>Teachi<br>  | ses) or of<br>talks a<br>randor<br>age of a<br>sment of<br>tion of<br>bing to so<br>to a of a<br>bad  | e) presentation (approx. 2<br>pprox. 15 minutes each,<br>n examinations)<br>assessment: German and<br>offered: Once a year, wint<br><b>places</b><br>formation<br>§ 2 para. 2 sentence 2 AP<br>nnex 2 to the APOLmCh  | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English<br>er semester<br>OLmCh in conjunctio   | (approx. 15 minutes  <br>testate/Nachtestate<br>ages each) and asses<br>n with No. I 1st letter | per candidate) or d) log (approx.<br>(pre and post-experiment exami<br>ssment of practical assignments<br>a) of annex 1 to the APOLmCh   |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess<br>Allocat<br><br>Additic<br>accord<br>and Nc<br>Worklo<br>300 h<br>Teachi<br><br>Referre                               | ses) or of<br>talks a<br>randor<br>age of a<br>sment of<br>tion of<br>onal inf<br>bing to s<br>b. 1 of a<br>bad<br>ng cycl<br>ed to in  | e) presentation (approx. 2<br>pprox. 15 minutes each, i<br>n examinations)<br>assessment: German and<br>offered: Once a year, wint<br><b>places</b><br>formation<br>§ 2 para. 2 sentence 2 AP<br>nnex 2 to the APOLmCh  | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English<br>er semester<br>OLmCh in conjunctio   | (approx. 15 minutes  <br>testate/Nachtestate<br>ages each) and asses<br>n with No. I 1st letter | per candidate) or d) log (approx.<br>(pre and post-experiment exami<br>ssment of practical assignments<br>r a) of annex 1 to the APOLmCh |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess<br>Allocat<br><br>Additic<br>accord<br>and No<br>Worklo<br>300 h<br>Teachi<br><br>Referre                               | ses) or (<br>talks a<br>randor<br>age of a<br>sment of<br>tion of<br>onal inf<br>b, 1 of a<br>oad<br>age of a<br>sment of<br>tion of<br>age of a<br>sment of<br>age | e) presentation (approx. 2<br>pprox. 15 minutes each, 1<br>m examinations)<br>assessment: German and<br>offered: Once a year, wint<br>places<br>formation<br>§ 2 para. 2 sentence 2 AP<br>mnex 2 to the APOLmCh   | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English<br>eer semester<br>OLmCh in conjunctio  | (approx. 15 minutes  <br>testate/Nachtestate<br>ages each) and asses<br>n with No. I 1st letter | per candidate) or d) log (approx.<br>(pre and post-experiment exami<br>ssment of practical assignments<br>r a) of annex 1 to the APOLmCh |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess<br>Allocat<br><br>Additic<br>accord<br>and No<br>Worklo<br>300 h<br>Teachi<br><br>Referre<br>Bachel                     | eed to in<br>eappea   | e) presentation (approx. 2<br>pprox. 15 minutes each, i<br>n examinations)<br>assessment: German and<br>offered: Once a year, wint<br><b>places</b><br>formation<br>§ 2 para. 2 sentence 2 AP<br>nnex 2 to the APOLmCh  | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English<br>eer semester<br>OLmCh in conjunctio<br>ulations for teaching-o<br>(2015)           | (approx. 15 minutes  <br>testate/Nachtestate<br>ages each) and asses<br>n with No. I 1st letter | per candidate) or d) log (approx.<br>(pre and post-experiment exami<br>ssment of practical assignments<br>r a) of annex 1 to the APOLmCh |
| 20 pag<br>nation<br>(2 to 4<br>Langua<br>Assess<br>Allocat<br><br>Additic<br>accord<br>and Nc<br>Worklo<br>300 h<br>Teachi<br><br>Referre<br>Bachel<br>Bachel<br>Bachel | ses) or of<br>talks a<br>randor<br>age of a<br>sment of<br>tion of<br>onal inf<br>bing to §<br>b. 1 of a<br>bad<br>ng cycl<br>ed to in<br>e appee<br>lor's de<br>lor's de   | e) presentation (approx. 2<br>pprox. 15 minutes each,<br>n examinations)<br>assessment: German and<br>offered: Once a year, wint<br><b>places</b><br>formation<br>§ 2 para. 2 sentence 2 AP<br>nnex 2 to the APOLmCh<br>le<br>LPO I (examination regu<br>ars in<br>gree (1 major) Chemistry | f up to 3 candidates (<br>30 minutes)] and Vort<br>log approx. 5 to 10 pa<br>/or English<br>eer semester<br>OLmCh in conjunctio<br>ulations for teaching-(<br>(2015)<br>(2017) | (approx. 15 minutes  <br>testate/Nachtestate<br>ages each) and asses<br>n with No. I 1st letter | per candidate) or d) log (approx.<br>(pre and post-experiment exami<br>ssment of practical assignments<br>r a) of annex 1 to the APOLmCh |

| Module  | e title                                    |   |                        |                                  | Abbreviation  |
|---|--|---|------------------------|----------------------------------|---|
| Inorga  | nic Che                                    | mistry 2 (lab)  |                        |                                  | 08-ACP2-152-m01   |
| Module  | e coord                                    | inator  |                        | Module offered by                |   |
| holder  | holder of the Chair of Anorganic Chemistry |   |                        | Institute of Inorganic Chemistry |   |
| ECTS  |  |   |                        |                                  |   |
| 5   | (not)                                      | successfully completed  | (08-ACP1 or 08-ACP1    | P1-BC) and o8-AC1 and o8-AS1     |   |
| Duratio   | on   | Module level  | Other prerequisites    |                                  |   |
| 1 seme  | ster                                       | undergraduate   |                        |                                  |   |
| Conten  | Its  |   |                        |                                  |   |
| synthe  | ses. Th                                    |   | nandling of organome   | etallic compounds, t             | nd plan and conduct complex<br>heir synthesis and working with<br>tion of products.         |
| Intend  | ed lear                                    | ning outcomes   |                        |                                  |   |
| are abl   | e to de                                    | scribe the technical princ  | iples in oral and writ | ten form using appro             | solve complex problems. They opriate scientific terminology. using advanced lab techniques. |
| Course  | <b>s</b> (type                             | , number of weekly conta  | ict hours, language —  | if other than Germa              | n)  |
| P (12)  |  |   |                        |                                  |   |
|   |  | sessment (type, scope, la<br>ion on whether module c                            |                        |                                  | tion offered — if not every seme-   |
| pages   | each) a                                    | chtestate (pre and post-<br>nd assessment of practions<br>ssessment: German and | cal performance (2 to  |                                  | minutes each, log approx. 5 to 10<br>ons)   |
| Allocat   |  |   |                        |                                  |   |
|   |  |   |                        |                                  |   |
| Additio   | onal inf                                   | ormation  |                        |                                  |   |
|   |  |   |                        |                                  |   |
|   | ad   |   |                        |                                  |   |
| Worklo  |  |   |                        |                                  |   |
|   |  |   |                        |                                  |   |
| 150 h   |  | e   |                        |                                  |   |
|   |  | e   |                        |                                  |   |
| 150 h<br><b>Teachi</b><br>                              | ng cycl                                    |   | lations for teaching-c | legree programmes)               |   |
| 150 h<br><b>Teachi</b><br>                              | ng cycl                                    | e<br>LPOI (examination regu   | lations for teaching-c | legree programmes)               |   |
| 150 h<br>Teachin<br><br>Referre                         | ng cycl<br>ed to in                        | LPOI (examination regu  | lations for teaching-c | legree programmes)               |   |
| 150 h<br>Teachin<br><br>Referre<br><br>Module           | ng cycl<br>ed to in<br>e appea             | LPOI (examination regu  |                        | legree programmes)               |   |
| 150 h<br>Teachin<br><br>Referre<br><br>Module<br>Bachel | ng cycl<br>ed to in<br>e appea<br>or's de  | LPOI (examination regu  | try (2015)             | legree programmes)               |   |

| Analvti   | e title   |   |   |                                       | Abbreviation   |  |
|---|---|---|---|---------------------------------------|--|--|
|   | ical Che  | emistry (lab)   |   |                                       | 08-ANP-152-m01   |  |
| Module  | e coord   | inator  |   | Module offered by                     | <u> </u>   |  |
| holder of the Chair of Anorganic Chemistry  |   |   | strv  | Institute of Inorgan                  | ic Chemistry   |  |
| ECTS  | 1   | od of grading   | Only after succ. con  |                                       |  |  |
| 6   |   | successfully completed  |   |                                       |  |  |
| Duratio   | on  | Module level  | Other prerequisites   | i i i i i i i i i i i i i i i i i i i |  |  |
| 1 seme  | ster  | undergraduate   |   |                                       |  |  |
| Conten  | Its   |   |   |                                       |  |  |
| lated le  | ecture(s  |   | the students autono   | mously conduct exp                    | hey have gained through the re-<br>eriments in the laboratory. These<br>s. |  |
| Intende   | ed lear   | ning outcomes   |   |                                       |  |  |
|   |   | able to use different metl<br>e mixtures.   | nods to analyse unkn  | own substances. In                    | addition, they are able to separa-   |  |
| Course  | <b>s</b> (type  | , number of weekly conta  | ict hours, language –   | - if other than Germa                 | in)  |  |
| P (12) +  | + S (1)   |   |   |                                       |  |  |
| Vortest<br>pages e<br>Langua  | tate/Na<br>each) a<br>age of a  | on on whether module c<br>chtestate (pre and post-<br>nd assessment of practions<br>ssessment: German and<br>ffered: Once a year, sum                 | experiment examinat<br>cal performance (2 to<br>/or English                             | ion talks approx. 15                  | minutes each, log approx. 5 to 10<br>ions)                                 |  |
| Allocat   | ion of <sub>l</sub>   | olaces  |   |                                       |  |  |
| Additic   | onal inf  | ormation  |   |                                       |  |  |
|   |   |   |   |                                       |  |  |
|   | ). 1 of a   | 2 para. 2 sentence 2 AP<br>nnex 2 to the APOLmCh  | OLmCh in conjunctio   | n with No. I 1st letter               | a) of annex 1 to the APOLmCh   |  |
|   |   |   | OLmCh in conjunction  | n with No. I 1st letter               | a) of annex 1 to the APOLmCh   |  |
| and No  |   |   | OLmCh in conjunctio   | n with No. I 1st letter               | a) of annex 1 to the APOLmCh   |  |
| and No<br>Worklo  | ad  | nnex 2 to the APOLmCh   | OLmCh in conjunction  | n with No. I 1st letter               | a) of annex 1 to the APOLmCh   |  |
| and No<br>Worklo<br>180 h   | ad  | nnex 2 to the APOLmCh   | OLmCh in conjunction  | n with No. I 1st letter               | a) of annex 1 to the APOLmCh   |  |
| and No<br>Worklo<br>180 h<br>Teachin  | oad<br>ng cycl  | nnex 2 to the APOLmCh   |   |                                       |  |  |
| and No<br>Worklo<br>180 h<br>Teachin  | oad<br>ng cycl  | nnex 2 to the APOLmCh   |   |                                       |  |  |
| and No<br>Worklo<br>180 h<br>Teachin  | ng cycl<br>ed to in   | nnex 2 to the APOLmCh<br>e<br>LPOI (examination regu  |   |                                       |  |  |
| and No<br>Worklo<br>180 h<br>Teachin<br><br>Referre<br><br>Module                                     | oad<br>ng cycl<br>ed to in<br>e appea   | nnex 2 to the APOLmCh<br>e<br>LPOI (examination regu  | lations for teaching-o  |                                       |  |  |
| and No<br>Worklo<br>180 h<br>Teachin<br><br>Referre<br><br>Bachel<br>Bachel                           | ng cycl<br>ed to in<br>e appea<br>or's de<br>or's de  | nnex 2 to the APOLmCh<br>e<br>LPO I (examination regu<br>ars in<br>gree (1 major) Biochemis<br>gree (1 major) Chemistry                               | lations for teaching-o<br>try (2015)<br>(2015)  |                                       |  |  |
| and No<br>Worklo<br>180 h<br>Teachin<br><br>Referre<br><br>Bachel<br>Bachel<br>Bachel                 | ng cycl<br>ed to in<br>e appea<br>or's de<br>or's de<br>or's de                                   | e<br>LPO I (examination regu<br>ars in<br>gree (1 major) Biochemis<br>gree (1 major) Biochemistry<br>gree (1 major) Biochemistry                      | lations for teaching-0<br>try (2015)<br>(2015)<br>try (2017)                            |                                       |  |  |
| and No<br>Worklo<br>180 h<br>Teachin<br><br>Referre<br>Bachele<br>Bachele<br>Bachele<br>Bachele       | ed to in<br>ed to in<br>e appea<br>or's de<br>or's de<br>or's de<br>or's de<br>or's de            | e<br>LPOI (examination regu<br>ars in<br>gree (1 major) Biochemis<br>gree (1 major) Chemistry<br>gree (1 major) Chemistry<br>gree (1 major) Chemistry | lations for teaching-o<br>try (2015)<br>(2015)<br>try (2017)<br>(2017)                  |                                       |  |  |
| and No<br>Worklo<br>180 h<br>Teachin<br><br>Referre<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel | ed to in<br>ed to in<br>e appea<br>or's de<br>or's de<br>or's de<br>or's de<br>or's de<br>or's de | e<br>LPO I (examination regu<br>ars in<br>gree (1 major) Biochemis<br>gree (1 major) Biochemistry<br>gree (1 major) Biochemistry                      | llations for teaching-o<br>try (2015)<br>(2015)<br>try (2017)<br>(2017)<br>istry (2021) |                                       |  |  |

| Module   | e title  |   |                                      |                        | Abbreviation  |  |  |
|--|--|---|--------------------------------------|------------------------|---|--|--|
| Inorga   | nic Che  | mistry of the Elements  |                                      |                        | 08-AS1-152-m01  |  |  |
| Module   | e coord  | inator  |                                      | Module offered by      |   |  |  |
| lecture  | r of lect  | ture "Chemie der Hauptgr  | ruppenelemen-                        | Institute of Inorgan   | ic Chemistry  |  |  |
| te" (Ch  | · · ·  | of Main-group Elements  |                                      |                        |   |  |  |
| ECTS   |  | od of grading   | Only after succ. compl. of module(s) |                        |   |  |  |
| 6  |  |   |                                      |                        |   |  |  |
| Duratio  |  | Module level  | Other prerequisites                  |                        |   |  |  |
| 1 semester undergraduate   |  |   |                                      |                        |   |  |  |
| Conten   | -  |   |                                      |                        |   |  |  |
|  | This module equips students with an advanced knowledge of the periodic table and selected elements. It focuses on bonding conditions, trends in the periodic table and the description and structure of elements. In additi- |   |                                      |                        |   |  |  |
| on, it ir  | ntroduc  | es students to elementar  | y organic chemistry,                 | coordination chemis    | stry and complex chemistry.   |  |  |
| Intende  | ed learr   | ning outcomes   |                                      |                        |   |  |  |
| reactiv  | ity and  |   | e to identify the coord              | lination of the atoms  | ments in terms of their structure,<br>s. In addition, they have learned |  |  |
| Course   | <b>s</b> (type,  | , number of weekly conta  | ct hours, language —                 | - if other than Germa  | in)   |  |  |
| V (2) +  | V (2)  |   |                                      |                        |   |  |  |
|  |  | s <b>essment</b> (type, scope, la<br>on on whether module ca  |                                      |                        | tion offered — if not every seme-                                       |  |  |
| d) log (<br>e) pres  | approx<br>entatio<br>age of a  | ation in groups of up to 3<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and,<br><b>blaces</b> |                                      |                        |   |  |  |
|  |  |   |                                      |                        |   |  |  |
| Additio  | onal info  | ormation  |                                      |                        |   |  |  |
|  | •  | 2 para. 2 sentence 2 AP<br>nnex 2 to the APOLmCh  | OLmCh in conjunctio                  | n with No. I 2nd lette | er a) of annex 1 to the APOLmCh   |  |  |
| Worklo   | ad   |   |                                      |                        |   |  |  |
| 180 h  |  |   |                                      |                        |   |  |  |
| Teachi   | ng cycl  | e   |                                      |                        |   |  |  |
| Referre  | ed to in   | LPO I (examination regu   | lations for teaching-o               | legree programmes)     |   |  |  |
| § 62   N   |  |   |                                      |                        |   |  |  |
|  | e appea  | irs in  |                                      |                        |   |  |  |
|  |  | gree (1 major) Biochemis  | try (2015)                           |                        |   |  |  |
| Bachelor's degree (1 major) Chemistry (2015)   |  |   |                                      |                        |   |  |  |
| Bachelor's degree (1 major) Mathematics (2015)<br>Bachelor's degree (1 major) Computational Mathematics (2015) |  |   |                                      |                        |   |  |  |
|  |  | gree (1 major) Computation<br>mination for the teaching   |                                      | -                      |   |  |  |
|  |  | gree (1 major) Biochemist   |                                      | Chemistry (2015)       |   |  |  |
| Bachel   | or's de  | gree (1 major) Chemistry<br>es (Bachelor) Chemistry (:  | (2017)                               |                        |   |  |  |
|  |  |   |                                      |                        |   |  |  |

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 16 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |              |

#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Module studies (Bachelor) Orientierungsstudien (2020) Bachelor's degree (1 major) Food Chemistry (2021) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Food Chemistry (2025)

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 17 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |              |

| Module title Abbreviation  |                 |  |                                      |                       |  |  |
|--|-----------------|--|--------------------------------------|-----------------------|--|--|
| Bache  | lor Thes        | is   |                                      | ·                     | 08-BA-152-m01  |  |
| Modul  | e coord         | inator   |                                      | Module offered by     |  |  |
|  |                 | search group offering the                                    | e module                             | Faculty of Chemistr   | y and Pharmacy   |  |
| ECTS   |                 | od of grading  | Dnly after succ. compl. of module(s) |                       | ,  |  |
| 10   | nume            | rical grade  |                                      |                       |  |  |
| Durati   | on              | Module level   | Other prerequisites                  |                       |  |  |
| 1 seme   | ester           | undergraduate  |                                      |                       | l completion of certain modu-<br>opic a prerequisite for the assign- |  |
| Conter   | nts             |  |                                      |                       |  |  |
|  |                 | ives students the opport<br>scientific methods they l        |                                      |                       | problem within a given time frame                                    |  |
| Intend   | ed learı        | ning outcomes  |                                      |                       |  |  |
|  |                 | able to conduct research<br>to present the results of t      |                                      |                       | the principles of good scientific                                    |  |
| Course   | <b>es</b> (type | , number of weekly conta                                     | ict hours, language –                | - if other than Germa | ın)  |  |
| Νο cou   | urses as        | signed to module   |                                      |                       |  |  |
|  |                 | s <b>essment</b> (type, scope, la<br>on on whether module ca |                                      |                       | ition offered — if not every seme-                                   |  |
|  |                 | esis (approx. 40 pages)<br>ssessment: German and             | /or English                          |                       |  |  |
| Allocat  | tion of p       | olaces   |                                      |                       |  |  |
|  |                 |  |                                      |                       |  |  |
| Additio  | onal inf        | ormation   |                                      |                       |  |  |
| Time to  | o compl         | ete: 8 weeks.  |                                      |                       |  |  |
| Worklo   | oad             |  |                                      |                       |  |  |
| 300 h  |                 |  |                                      |                       |  |  |
| Teachi   | ing cycl        | e  |                                      |                       |  |  |
|  |                 |  |                                      |                       |  |  |
| <b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes) |                 |  |                                      |                       |  |  |
|  |                 |  |                                      |                       |  |  |
| Modul  | e appea         | irs in   |                                      |                       |  |  |
|  |                 | gree (1 major) Chemistry                                     | (2015)                               |                       |  |  |
| Bache  | lor's de        | gree (1 major) Chemistry                                     | (2017)                               |                       |  |  |

| Module title Abbreviation  |  |                         |  |                         |                |  |  |
|--|--|-------------------------|--|-------------------------|----------------|--|--|
| Bioche   | emistry 1  |                         |  | 08-BC1-152-m01          |                |  |  |
| Modul  | e coordinator  |                         | Module offered by  |                         |                |  |  |
| holder   | of the Chair of Biochemistry   |                         | Chair of Biochemist  | ry                      |                |  |  |
| ECTS   | Method of grading  | Only after succ. con    | ly after succ. compl. of module(s)                             |                         |                |  |  |
| 5  | numerical grade  |                         |  |                         |                |  |  |
| Durati   |  | Other prerequisites     | Other prerequisites  |                         |                |  |  |
| 1 seme   |  |                         |  |                         |                |  |  |
| Conter   |  |                         |  |                         |                |  |  |
| mistry<br>tertian<br>sis, glu<br>tion, fa<br>discus                              | Comprising lectures and exercises, this module acquaints students with the fundamental principles of bioche-<br>mistry. A particular focus is on the biochemistry of proteins (amino acids, peptide bonds, primary, secondary,<br>tertiary and quaternary structures), catalytic strategies and enzyme kinetics, carbohydrate metabolism (glycoly-<br>sis, gluconeogenesis, citric acid cycle, cellular respiration, photosynthesis), fatty acid metabolism (beta oxida-<br>tion, fatty acid synthesis), nucleotide metabolism, the urea cycle and amino acid metabolism. The module also<br>discusses the structure of the DNA and the central dogma of molecular biology.  |                         |  |                         |                |  |  |
|  | ed learning outcomes   |                         |  |                         |                |  |  |
|  | nts have become familiar with the module. They are able to a   |                         |  |                         | ere discus-    |  |  |
| Course   | es (type, number of weekly co  | ntact hours, language – | - if other than Germa  | n)                      |                |  |  |
| V (2) +  | Ü (1)  |                         |  |                         |                |  |  |
| ster, ir<br>writter  | d of assessment (type, scope<br>formation on whether module<br>examination (approx. 60 to g<br>tion of places  | e can be chosen to earn |  | tion offered — if not   | every seme-    |  |  |
|  |  |                         |  |                         |                |  |  |
| Additi   | onal information   |                         |  |                         |                |  |  |
|  | ling to § 2 para. 2 sentence 2 /<br>o the APOLmCh and No. 3 of a   |                         |  | er e) and No. II 1st le | tter c) of an- |  |  |
| Workle   |  |                         |  |                         |                |  |  |
| 150 h  |  |                         |  |                         |                |  |  |
|  | ng cycle   |                         |  |                         |                |  |  |
|  |  |                         |  |                         |                |  |  |
| Referre  | ed to in LPO I (examination re   | gulations for teaching- | degree programmes)   |                         |                |  |  |
| § 42    <br>§ 62   |  |                         |  |                         |                |  |  |
| Modul  | e appears in   |                         |  |                         |                |  |  |
| Bache<br>Bache<br>Bache<br>First st<br>First st<br>First st<br>First st<br>Bache | Module appears in         Bachelor's degree (1 major) Biochemistry (2015)         Bachelor's degree (1 major) Biology (2015)         Bachelor's degree (1 major) Chemistry (2015)         Bachelor's degree (1 major) Food Chemistry (2015)         Bachelor's degree (1 major) Functional Materials (2015)         First state examination for the teaching degree Grundschule Chemistry (2015)         First state examination for the teaching degree Realschule Chemistry (2015)         First state examination for the teaching degree Gymnasium Chemistry (2015)         First state examination for the teaching degree Mittelschule Chemistry (2015)         First state examination for the teaching degree Mittelschule Chemistry (2015)         Bachelor's degree (1 major) Food Chemistry (2016)         Bachelor's degree (1 major) Food Chemistry (2016)         Bachelor's degree (1 major) Biology (2017) |                         |  |                         |                |  |  |
| Bachelor's   | with 1 major Chemistry (2015)  |                         | urg • generated 18-Apr-2025 •<br>ord Bachelor (180 ECTS) Cherr |                         | page 19 / 70   |  |  |



Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017) Module studies (Bachelor) Chemistry (2019) Bachelor's degree (1 major) Food Chemistry (2019) Module studies (Bachelor) Orientierungsstudien (2020) First state examination for the teaching degree Mittelschule Chemistry (2020 (Prüfungsordnungsversion 2015)) Bachelor's degree (1 major) Biology (2021) Bachelor's degree (1 major) Functional Materials (2021) Bachelor's degree (1 major) Food Chemistry (2022) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Functional Materials (2025)

Bachelor's degree (1 major) Food Chemistry (2025)

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 20 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 | 1            |

|  | e title  |  |  |   | Abbreviation                                     |              |
|--|--|--|--|---|--|--------------|
| Bioche   | emistry 2  |  |  |   | 08-BC2-152-m01                                   |              |
| Modul  | e coordinator  |  |  | Module offered by                                 |  |              |
|  |  |  |  |   |  |              |
|  | of the Chair of E  |  | Chair of Biochemistry Only after succ. compl. of module(s)   |   |  |              |
| ECTS   | Method of gra  | -  | Only after succ. con   | ipi. of module(s)                                 |  |              |
| 5  | · · · · ·  |  | L  |   |  |              |
| Duratio  |  |  | Other prerequisites  |   |  |              |
| 1 seme   |  | raduate  | <u> </u>   |   |  |              |
| Conter   |  |  |  |   |  |              |
| mistry.<br>tional  | A particular foc<br>regulation, prote  | us is on replicat<br>ein targeting, nu   | s module acquaints s<br>tion, DNA repair, trans<br>clear transport and p<br>tal transduction.  | scription, mRNA mat                               | uration, translation a                           | and transla- |
| Intend   | ed learning out  | comes  |  |   |  |              |
|  |  |  | ne fundamental princi<br>scribe the key bioche   |   |  | ere discus-  |
| Course   | <b>es</b> (type, numbe   | r of weekly conta  | act hours, language –  | - if other than Germa                             | n)   |              |
| V (2) +  | Ü (1)  |  |  |   |  |              |
|  |  |  | anguage — if other th<br>an be chosen to earn  |   | tion offered — if not                            | every seme-  |
| writter  | examination (a   | pprox. 60 to 90  | minutes)   |   |  |              |
|  | tion of places   |  |  |   |  |              |
| Allocu   |  |  |  |   |  |              |
|  | onal information   |  |  |   |  |              |
|  |  |  |  |   |  |              |
|  |  |  | ·  |   |  |              |
| Pursua<br>prüfter<br>state-c   | ant to Section 2<br>n Lebensmittelc<br>certified food ch   | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC   | ntence 2 Verordnung<br>nd Lebensmittelchem<br>h) in conjunction wit  | iker (Regulation on t                             | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm  | ant to Section 2<br>n Lebensmittelc<br>certified food ch<br>nCh and No. 3 of   | Subsection 2 Se<br>hemikerinnen ui   | nd Lebensmittelchem<br>Th) in conjunction with   | iker (Regulation on t                             | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b>   | ant to Section 2<br>n Lebensmittelc<br>certified food ch<br>nCh and No. 3 of   | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC   | nd Lebensmittelchem<br>Th) in conjunction with   | iker (Regulation on t                             | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b><br>150 h  | ant to Section 2<br>n Lebensmittelc<br>certified food ch<br>nCh and No. 3 of<br>Dad  | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC   | nd Lebensmittelchem<br>Th) in conjunction with   | iker (Regulation on t                             | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b><br>150 h  | ant to Section 2<br>n Lebensmittelc<br>certified food ch<br>nCh and No. 3 of   | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC   | nd Lebensmittelchem<br>Th) in conjunction with   | iker (Regulation on t                             | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b><br>150 h<br><b>Teachi</b>   | ant to Section 2<br>In Lebensmittelc<br>certified food ch<br>InCh and No. 3 of<br>Dad<br>ng cycle  | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO   | nd Lebensmittelchem<br>Th) in conjunction with   | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br>Worklo<br>150 h<br>Teachi<br><br>Referro<br><br>Modul   | ant to Section 2<br>h Lebensmittelc<br>certified food ch<br>hCh and No. 3 of<br>bad<br>ing cycle<br>ed to in LPO I (e<br>e appears in  | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO   | nd Lebensmittelchem<br>h) in conjunction with<br>LmCh.   | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b><br>150 h<br><b>Teachi</b><br><br><b>Referro</b><br><br><b>Bache</b>   | ant to Section 2<br>h Lebensmittelcl<br>certified food ch<br>hCh and No. 3 of<br>bad<br>ing cycle<br>ed to in LPO I (e<br>e appears in<br>lor's degree (1 m  | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO<br>examination regu   | nd Lebensmittelchem<br>Ch) in conjunction with<br>LmCh.<br>ulations for teaching-o   | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b><br>150 h<br><b>Teachi</b><br><br><b>Referro</b><br><br><b>Modulo</b><br>Bachel<br>Bachel  | ant to Section 2<br>h Lebensmittelcl<br>certified food ch<br>hCh and No. 3 of<br>bad<br>ng cycle<br>ed to in LPO I (e<br>e appears in<br>lor's degree (1 m<br>lor's degree (1 m  | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO<br>examination regu<br>najor) Biochemis<br>najor) Biology (2  | nd Lebensmittelchem<br>h) in conjunction with<br>LmCh.<br>ulations for teaching-<br>stry (2015)<br>015)  | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b><br>150 h<br><b>Teachi</b><br><br><b>Referro</b><br><br><b>Bachel</b><br>Bachel<br>Bachel  | ant to Section 2<br>h Lebensmittelcl<br>certified food ch<br>h Ch and No. 3 of<br>bad<br><b>ng cycle</b><br>ed to in LPO I (effective<br>e appears in<br>lor's degree (1 m<br>lor's degree (1 m<br>lor's degree (1 m)  | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO<br>examination regu<br>najor) Biochemis<br>najor) Biochemis<br>najor) Biology (2<br>najor) Chemistry  | nd Lebensmittelchem<br>ch) in conjunction with<br>LmCh.<br>ulations for teaching-<br>stry (2015)<br>(2015)   | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b><br>150 h<br><b>Teachi</b><br><br><b>Referro</b><br><br>Bachel<br>Bachel<br>Bachel<br>Bachel   | ant to Section 2<br>h Lebensmittelcl<br>certified food chi-<br>hCh and No. 3 of<br>bad<br>ad<br>ag cycle<br>ed to in LPO I (efficient<br>e appears in<br>lor's degree (1 m<br>lor's degree (1 m<br>lor's degree (1 m)<br>lor's degree (1 m)  | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO<br>examination regu<br>najor) Biochemis<br>najor) Biology (2<br>najor) Chemistry<br>najor) Food Cher  | nd Lebensmittelchem<br>ch) in conjunction with<br>LmCh.<br>ulations for teaching-<br>stry (2015)<br>015)<br>(2015)<br>nistry (2015)  | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b><br>150 h<br><b>Teachi</b><br><br><b>Referro</b><br><br><b>Bachel</b><br>Bachel<br>Bachel<br>Bachel<br>Bachel  | ant to Section 2<br>h Lebensmittelc<br>certified food ch<br>hCh and No. 3 of<br>bad<br>mg cycle<br>ed to in LPO I (e<br>e appears in<br>lor's degree (1 m<br>lor's degree (1 m<br>lor's degree (1 m<br>lor's degree (1 m<br>lor's degree (1 m  | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO<br>examination regu<br>najor) Biochemis<br>najor) Biology (2<br>najor) Chemistry<br>najor) Food Chen<br>najor) Food Chen  | nd Lebensmittelchem<br>Ch) in conjunction with<br>LmCh.<br>ulations for teaching-<br>stry (2015)<br>015)<br>(2015)<br>nistry (2015)<br>nistry (2016)   | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Workle</b><br>150 h<br><b>Teachi</b><br><br><b>Referre</b><br><br><b>Module</b><br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel  | ant to Section 2<br>h Lebensmittelcl<br>certified food ch<br>h Ch and No. 3 of<br>bad<br>ng cycle<br>ed to in LPO I (effective<br>e appears in<br>lor's degree (1 m<br>lor's degree (1 m)   | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO<br>examination regu<br>najor) Biochemis<br>najor) Biology (2<br>najor) Biology (2<br>najor) Food Chen<br>najor) Food Chen<br>najor) Food Chen   | nd Lebensmittelchem<br>Th) in conjunction with<br>LmCh.<br>ulations for teaching-<br>stry (2015)<br>(2015)<br>(2015)<br>nistry (2015)<br>nistry (2016)<br>017)   | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b><br>150 h<br><b>Teachi</b><br><br><b>Referro</b><br><br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel   | ant to Section 2<br>h Lebensmittelcl<br>certified food ch<br>h Ch and No. 3 of<br>bad<br>a g cycle<br>ed to in LPO I (effective<br>e appears in<br>lor's degree (1 m<br>lor's degree (1 m)   | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO<br>f Annex 3 of APO<br>examination regu<br>najor) Biochemis<br>najor) Biology (2<br>najor) Food Chen<br>najor) Food Chen<br>najor) Biology (2<br>najor) Biology (2<br>najor) Biochemis  | nd Lebensmittelchem<br>ch) in conjunction with<br>LmCh.<br>ulations for teaching-<br>stry (2015)<br>(2015)<br>(2015)<br>nistry (2016)<br>o17)<br>stry (2017)   | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b><br>150 h<br><b>Teachi</b><br><br><b>Referro</b><br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel   | ant to Section 2<br>h Lebensmittelcl<br>certified food chi-<br>hCh and No. 3 of<br>bad<br>ag cycle<br>ed to in LPO I (efficiency)<br>lor's degree (1 m<br>lor's degree (1 m)  | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO<br>examination regu<br>najor) Biochemis<br>najor) Biology (2<br>najor) Chemistry<br>najor) Food Chen<br>najor) Biology (2<br>najor) Biology (2<br>najor) Biochemis<br>najor) Biochemis  | nd Lebensmittelchem<br>ch) in conjunction with<br>LmCh.<br>ulations for teaching-<br>stry (2015)<br>(2015)<br>(2015)<br>nistry (2015)<br>nistry (2015)<br>otyp<br>(2017)<br>(2017)   | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b><br>150 h<br><b>Teachi</b><br><br><b>Referro</b><br><br><b>Bache</b><br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel   | ant to Section 2<br>h Lebensmittelc<br>certified food chi-<br>h Ch and No. 3 of<br>bad<br>ag cycle<br>ed to in LPO I (efficiency)<br>lor's degree (1 m<br>lor's degree (1 m)<br>lor's degree (1 m)<br>l | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO<br>examination regu<br>najor) Biochemis<br>najor) Biology (2<br>najor) Chemistry<br>najor) Food Chen<br>najor) Biology (2<br>najor) Biology (2<br>najor) Biology (2<br>najor) Biology (2<br>najor) Biology (2<br>najor) Biology (2<br>najor) Biochemis  | nd Lebensmittelchem<br>ch) in conjunction with<br>LmCh.<br>ulations for teaching-<br>stry (2015)<br>015)<br>(2015)<br>nistry (2015)<br>nistry (2015)<br>nistry (2017)<br>(2017)<br>nistry (2019)   | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Workle</b><br>150 h<br><b>Teachi</b><br><br><b>Referre</b><br><br><b>Modul</b><br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel   | ant to Section 2 in<br>Lebensmittelch<br>certified food chronich and No. 3 of<br>Dad<br>ag cycle<br>ed to in LPO I (effective<br>e appears in<br>lor's degree (1 m<br>lor's degree (1 m)   | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO<br>f Annex 3 of APO<br>examination regu<br>najor) Biochemis<br>najor) Biology (2<br>najor) Food Chen<br>najor) Food Chen<br>najor) Food Chen<br>najor) Biology (2<br>najor) Biology (2<br>najor) Biochemis<br>najor) Biology (2   | nd Lebensmittelchem<br>ch) in conjunction with<br>LmCh.<br>ulations for teaching-<br>stry (2015)<br>015)<br>(2015)<br>nistry (2015)<br>nistry (2015)<br>nistry (2016)<br>017)<br>stry (2017)<br>(2017)<br>nistry (2019)<br>021)                  | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b><br>150 h<br><b>Teachi</b><br><br><b>Referro</b><br><br><b>Modul</b><br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel   | ant to Section 2<br>h Lebensmittelcl<br>certified food ch<br>h Ch and No. 3 of<br>bad<br>a g cycle<br>ed to in LPO I (effective<br>e appears in<br>lor's degree (1 m<br>lor's degree (1 m)   | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO<br>f Annex 3 of APO<br>examination regu<br>najor) Biochemis<br>najor) Biology (2<br>najor) Food Chen<br>najor) Biology (2<br>najor) Biology (2 | nd Lebensmittelchem<br>ch) in conjunction with<br>LmCh.<br>ulations for teaching-<br>stry (2015)<br>(2015)<br>(2015)<br>nistry (2015)<br>nistry (2016)<br>017)<br>stry (2017)<br>(2017)<br>(2017)<br>nistry (2019)<br>021)<br>nistry (2021)      | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exar                             | nination of  |
| Pursua<br>prüfter<br>state-c<br>APOLm<br><b>Worklo</b><br>150 h<br><b>Teachi</b><br><br><b>Referro</b><br><br><b>Modul</b><br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel | ant to Section 2<br>h Lebensmittelcl<br>certified food ch<br>h Ch and No. 3 of<br>bad<br>a g cycle<br>ed to in LPO I (effective<br>e appears in<br>lor's degree (1 m<br>lor's degree (1 m)   | Subsection 2 Se<br>hemikerinnen ur<br>emists, APOLmC<br>f Annex 3 of APO<br>f Annex 3 of APO<br>examination regu<br>najor) Biochemis<br>najor) Biology (2<br>najor) Food Chem<br>najor) Food Chem<br>najor) Biology (2<br>najor) Biochemis<br>najor) Biology (2<br>najor) Biochemis<br>najor) Biology (2<br>najor) Biochemis   | nd Lebensmittelchem<br>ch) in conjunction with<br>LmCh.<br>ulations for teaching-<br>stry (2015)<br>015)<br>(2015)<br>nistry (2015)<br>nistry (2015)<br>nistry (2016)<br>017)<br>(2017)<br>nistry (2019)<br>021)<br>nistry (2021)<br>stry (2022) | iker (Regulation on t<br>n No. II 2. Letter e) ar | he training and exam<br>nd No. II 1. Letter c) o | nination of  |



Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Food Chemistry (2025)

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 22 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |              |

| Module   | e title                                      |   |   |   | Abbreviation  |
|--|--|---|---|---|---|
| Practic  | al cour                                      | se of Biochemistry  |   |   | 08-BCP-152-m01  |
| Module   |  | lastar  |   | Modulo offered by                           |   |
|  |  |   |   | Module offered by                           |   |
| holder of the Chair of Biochemistry  |  |   |   | Chair of Biochemist                         | try   |
| ECTS   |  | od of grading<br>successfully completed                               | Only after succ. com<br>08-BC1            | compl. of module(s)                         |   |
| 5  | <u> </u>                                     |   |   |   |   |
| Duratio  |  | Module level  | Other prerequisites                       |   |   |
| 1 semester undergraduate   |  |   |   |   |   |
| Conten   |  |   |   |   |   |
| Practica<br>experin  |  | ises give students the o  | oportunity to learn th                    | e fundamental princ                         | iples of conducting biochemical   |
| Intende  | ed learr                                     | ning outcomes   |   |   |   |
| Studen   | ts have                                      | e become proficient in es   | sential methods in bi                     | ochemistry.                                 |   |
| Course   | <b>s</b> (type.                              | , number of weekly conta  | ct hours, language —                      | if other than Germa                         | in)   |
| P (6)  |  | ,   |   |   |   |
| Method   |  | essment (type, scope, la<br>on on whether module ca                   | 5 5                                       |   | tion offered — if not every seme-   |
| Log (ap  | prox. 3                                      | o pages)<br>ffered: Once a year, sum                                  |   | ,   |   |
| Allocat  |  |   |   |   |   |
| regard<br>Studen<br>ces will<br>subject  | to avail<br>ts of th<br>l be allo<br>t semes | able places.<br>e Bachelor's degree prog<br>ocated according to the n | ramme Chemie (Che<br>umber of subject ser | mistry, 180 ECTS cre<br>nesters, among appl | TS credits): no restrictions with<br>dits): no more than 6 places; pla-<br>licants with the same number of<br>ed and places re-allocated by lot |
| Additio  | nal info                                     | ormation  |   |   |   |
|  |  |   |   |   |   |
| Worklo   | ad   |   |   |   |   |
| 150 h  |  |   |   |   |   |
| Teachi   | ng cycl                                      | 9   |   |   |   |
|  |  |   |   |   |   |
| Referre  | d to in                                      | LPOI (examination regu  | lations for teaching-o                    | legree programmes)                          |   |
|  |  | ,   |   | <u> </u>                                    |   |
| Module   | appea  | irs in  |   |   |   |
| Module appears in<br>Bachelor's degree (1 major) Biochemistry (2015)<br>Bachelor's degree (1 major) Chemistry (2015)<br>Bachelor's degree (1 major) Biochemistry (2017)<br>Bachelor's degree (1 major) Chemistry (2017)<br>Bachelor's degree (1 major) Biochemistry (2022) |  |   |   |   |   |

| Module                                    | Module title Abbreviation |  |   |   |                       |                |  |
|---|---------------------------|--|---|---|-----------------------|----------------|--|
| Green                                     | and sus                   | stainable (organic) chei   | nistry  |   | 08-GC-242-m01         |                |  |
| Modul                                     | e coord                   | inator   |   | Module offered by   |                       |                |  |
| lecture                                   | r of lec                  | ture "Grüne und nachha   | ultige (organische)                             | Institute of Organic  | nic Chemistry         |                |  |
| Chemie                                    |                           |  |   |   | ,                     |                |  |
| ECTS                                      | Metho                     | od of grading  | Only after succ. compl. of module(s)            |   |                       |                |  |
| 5   | nume                      | rical grade  |   | · · · · · · · · · · · · · · · · · · ·                         |                       |                |  |
| Duration Module level Other prerequisites |                           |  |   |   |                       |                |  |
| 1 semester undergraduate                  |                           |  |   |   |                       |                |  |
| Conten                                    | Its                       |  |   |   |                       |                |  |
| be on t<br>enviror                        | he twe<br>nmenta          | rovides an overview of t<br>lve principles of green c<br>l topics. Furthermore, li<br>ones will be discussed | hemistry with example<br>fe cycle assessment a  | es from organic chen  | nistry complemented   | l by current   |  |
| Intend                                    | ed lear                   | ning outcomes  |   |   |                       |                |  |
| damen<br>sessm                            | t to crit<br>ents an      | nderstands the principl<br>ically assess chemical<br>d is aware of sustainab<br>area and analyze this ir     | reactions and process<br>ility aspects beyond c | es. He/She acquired   | basic knowledge in    | life cycle as- |  |
| Course                                    | <b>s</b> (type            | , number of weekly con   | tact hours, language –                          | - if other than Germa   | ın)                   |                |  |
| V (2) +                                   | Ü (1)                     | t in: German or English  |   |   |                       |                |  |
|   |                           | sessment (type, scope,<br>ion on whether module  |   |   | tion offered — if not | every seme-    |  |
| b) writt<br>Langua                        | ten exa<br>age of a       | pprox. approx. 40 hours<br>mination (approx. 60 to<br>ssessment: German an<br>ffered: Once a year, wir       | 90 minutes)<br>d/or English                     |   |                       |                |  |
| Allocat                                   | ion of <sub>l</sub>       | olaces   | _   |   |                       |                |  |
| <br>Additio                               | onal inf                  | ormation   |   |   |                       |                |  |
|   |                           |  |   |   |                       |                |  |
| Worklo                                    | ad                        |  |   |   |                       |                |  |
| 150 h                                     |                           |  |   |   |                       |                |  |
| -   | ng cycl                   | 9  |   |   |                       |                |  |
| Teachi                                    |                           |  | mastar  |   |                       |                |  |
|   |                           | e: Once a year, winter s   |   |   |                       |                |  |
| Referre                                   | ed to in                  | LPOI (examination reg  | ulations for teaching-                          | degree programmes)  |                       |                |  |
|   |                           |  |   |   |                       |                |  |
| Module                                    | e appea                   | ars in   |   |   |                       |                |  |
|   |                           | mination for the teaching  |   |   |                       |                |  |
|   |                           | mination for the teaching  |   |   |                       |                |  |
|   |                           | mination for the teaching  |   |   |                       |                |  |
|   |                           | mination for the teaching  |   |   |                       |                |  |
|   |                           | mination for the teaching  |   |   | y (2009)              |                |  |
|   |                           | mination for the teaching  |   | -   |                       |                |  |
|   |                           | mination for the teachin<br>mination for the teachin   |   |   |                       |                |  |
| Bachelor's                                | with 1 ma                 | jor Chemistry (2015)   |   | urg • generated 18-Apr-2025 •<br>ord Bachelor (180 ECTS) Chen |                       | page 24 / 70   |  |
|   |                           |  |   |   |                       |                |  |

First state examination for the teaching degree Grundschule Catholic Theology (2009) First state examination for the teaching degree Grundschule Mathematics (2009) First state examination for the teaching degree Grundschule Music (2009) First state examination for the teaching degree Grundschule Physics (2009) First state examination for the teaching degree Grundschule Social Science (2009) First state examination for the teaching degree Grundschule Science of Sport (2009) First state examination for the teaching degree Hauptschule English (2009) First state examination for the teaching degree Hauptschule Biology (2009) First state examination for the teaching degree Hauptschule Chemistry (2009) First state examination for the teaching degree Hauptschule Geography (2009) First state examination for the teaching degree Hauptschule Protestant Theology (2009) First state examination for the teaching degree Hauptschule German (2009) First state examination for the teaching degree Hauptschule History (2009) First state examination for the teaching degree Hauptschule Catholic Theology (2009) First state examination for the teaching degree Hauptschule Mathematics (2009) First state examination for the teaching degree Hauptschule Music (2009) First state examination for the teaching degree Hauptschule Physics (2009) First state examination for the teaching degree Hauptschule Social Science (2009) First state examination for the teaching degree Hauptschule Science of Sport (2009) First state examination for the teaching degree Realschule English (2009) First state examination for the teaching degree Realschule Biology (2009) First state examination for the teaching degree Realschule Chemistry (2009) First state examination for the teaching degree Realschule Geography (2009) First state examination for the teaching degree Realschule Protestant Theology (2009) First state examination for the teaching degree Realschule French Studies (2009) First state examination for the teaching degree Realschule German (2009) First state examination for the teaching degree Realschule History (2009) First state examination for the teaching degree Realschule Computer Science (2012) First state examination for the teaching degree Realschule Catholic Theology (2009) First state examination for the teaching degree Realschule Mathematics (2009) First state examination for the teaching degree Realschule Music (2009) First state examination for the teaching degree Realschule Physics (2009) First state examination for the teaching degree Realschule Science of Sport (2009) First state examination for the teaching degree Gymnasium English (2009) First state examination for the teaching degree Gymnasium Biology (2009) First state examination for the teaching degree Gymnasium Chemistry (2009) First state examination for the teaching degree Gymnasium Geography (2009) First state examination for the teaching degree Gymnasium French Studies (2009) First state examination for the teaching degree Gymnasium German (2009) First state examination for the teaching degree Gymnasium History (2009) First state examination for the teaching degree Gymnasium Greek Philology (2009) First state examination for the teaching degree Gymnasium Computer Science (2009) First state examination for the teaching degree Gymnasium Italian Studies (2009) First state examination for the teaching degree Gymnasium Catholic Theology (2009) First state examination for the teaching degree Gymnasium Latin Philology (2009) First state examination for the teaching degree Gymnasium Mathematics (2012) First state examination for the teaching degree Gymnasium Mathematics (2009) First state examination for the teaching degree Gymnasium Music (2009) First state examination for the teaching degree Gymnasium Physics (2009) First state examination for the teaching degree Gymnasium Russian (2009) First state examination for the teaching degree Gymnasium Social Science (2009) First state examination for the teaching degree Gymnasium Spanish Studies (2009) First state examination for the teaching degree Gymnasium Science of Sport (2009) JMU Würzburg • generated 18-Apr-2025 • exam. Bachelor's with 1 major Chemistry (2015)

reg. data record Bachelor (180 ECTS) Chemie - 2015

First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2009) First state examination for the teaching degree Sonderpädagogik Pedagogy of Secondary Education (2009) First state examination for the teaching degree Sonderpädagogik Pedagogy of Primary Education (2009) First state examination for the teaching degree Sonderpädagogik Teaching at the German Mittelschule (2013) First state examination for the teaching degree Mittelschule English (2013) First state examination for the teaching degree Mittelschule Biology (2013) First state examination for the teaching degree Mittelschule Chemistry (2013) First state examination for the teaching degree Mittelschule Geography (2013) First state examination for the teaching degree Mittelschule Protestant Theology (2013) First state examination for the teaching degree Mittelschule German (2013) First state examination for the teaching degree Mittelschule History (2013) First state examination for the teaching degree Mittelschule Catholic Theology (2013) First state examination for the teaching degree Mittelschule Mathematics (2013) First state examination for the teaching degree Mittelschule Physics (2013) First state examination for the teaching degree Mittelschule Social Science (2013) First state examination for the teaching degree Mittelschule Science of Sport (2013) Bachelor's degree (1 major) Chemistry (2015) First state examination for the teaching degree Grundschule English (2015) First state examination for the teaching degree Grundschule Biology (2015) First state examination for the teaching degree Grundschule Chemistry (2015) First state examination for the teaching degree Grundschule Geography (2015) First state examination for the teaching degree Grundschule German (2015) First state examination for the teaching degree Grundschule Catholic Theology (2015) First state examination for the teaching degree Grundschule Mathematics (2015) First state examination for the teaching degree Grundschule Pedagogy of Primary Education (2015) First state examination for the teaching degree Grundschule Physics (2015) First state examination for the teaching degree Grundschule Social Science (2015) First state examination for the teaching degree Grundschule Didactics in English (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in Biology (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in Chemistry (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in Geography (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in German (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in History (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in Catholic Theology (Primary School) (2015) First state examination for the teaching degree Grundschule Art Education in Primary School (2015) First state examination for the teaching degree Grundschule Didactics in Science of Sport (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in Mathematics (Primary School) (2015) First state examination for the teaching degree Grundschule Music Education in Primary School (2015) First state examination for the teaching degree Grundschule Didactics in Physics (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in Social Science (Primary School) (2015) First state examination for the teaching degree Grundschule Science of Sport (2015) First state examination for the teaching degree Realschule English (2015) First state examination for the teaching degree Realschule Biology (2015) First state examination for the teaching degree Realschule Chemistry (2015) First state examination for the teaching degree Realschule Geography (2015) First state examination for the teaching degree Realschule Protestant Theology (2015) First state examination for the teaching degree Realschule French Studies (2015) First state examination for the teaching degree Realschule German (2015) First state examination for the teaching degree Realschule History (2015) First state examination for the teaching degree Realschule Computer Science (2015) First state examination for the teaching degree Realschule Catholic Theology (2015) First state examination for the teaching degree Realschule Mathematics (2015) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. page 26 / 70

reg. data record Bachelor (180 ECTS) Chemie - 2015

First state examination for the teaching degree Realschule Physics (2015) First state examination for the teaching degree Realschule Science of Sport (2015) First state examination for the teaching degree Gymnasium English (2015) First state examination for the teaching degree Gymnasium Biology (2015) First state examination for the teaching degree Gymnasium Chemistry (2015) First state examination for the teaching degree Gymnasium Geography (2015) First state examination for the teaching degree Gymnasium French Studies (2015) First state examination for the teaching degree Gymnasium German (2015) First state examination for the teaching degree Gymnasium History (2015) First state examination for the teaching degree Gymnasium Greek Philology (2015) First state examination for the teaching degree Gymnasium Computer Science (2015) First state examination for the teaching degree Gymnasium Italian Studies (2015) First state examination for the teaching degree Gymnasium Catholic Theology (2015) First state examination for the teaching degree Gymnasium Latin Philology (2015) First state examination for the teaching degree Gymnasium Mathematics (2015) First state examination for the teaching degree Gymnasium Physics (2015) First state examination for the teaching degree Gymnasium Russian (2015) First state examination for the teaching degree Gymnasium Social Science (2015) First state examination for the teaching degree Gymnasium Spanish Studies (2015) First state examination for the teaching degree Gymnasium Science of Sport (2015) First state examination for the teaching degree Sonderpädagogik Pedagogy of Primary Education (2015) First state examination for the teaching degree Sonderpädagogik Didactics in German (Primary School) (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Catholic Theology (Primary School) (2015) First state examination for the teaching degree Sonderpädagogik Art Education in Primary School (2015)

First state examination for the teaching degree Sonderpädagogik Didactics in Science of Sport (Primary School) (2015)

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2015)

First state examination for the teaching degree Sonderpädagogik Music Education in Primary School (2015) First state examination for the teaching degree Sonderpädagogik Didactics in English (Middle School) (2015) First state examination for the teaching degree Sonderpädagogik Ergonomics (Teaching at the German Mittelschule) (2015)

First state examination for the teaching degree Sonderpädagogik Didactics in Biology (Middle School) (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Chemistry (Middle School) (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Geography (Middle School) (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Protestant Theology (Middle School) (2015)

First state examination for the teaching degree Sonderpädagogik Didactics in German (Middle School) (2015) First state examination for the teaching degree Sonderpädagogik Didactics in History (Middle School) (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Catholic Theology (Middle School) (2015)

First state examination for the teaching degree Sonderpädagogik Art Education in Middle School (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Science of Sport (Middle School) (2015)

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2015)

First state examination for the teaching degree Sonderpädagogik Music Education in Middle School (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Physics (Middle School) (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Social Science (Middle School) (2015)

First state examination for the teaching degree Sonderpädagogik Teaching at the German Mittelschule (2015) First state examination for the teaching degree Mittelschule English (2015)

| Bachelor's with 1 major Chemistry (2015)           | JMU Würzburg • generated 18-Apr-2025 • exam. | page 27 / 70 |
|--|--|--------------|
| reg. data record Bachelor (180 ECTS) Chemie - 2015 |  |              |

Subdivided Module Catalogue for the Subject Chemistry Bachelor's with 1 major, 180 ECTS credits

First state examination for the teaching degree Mittelschule Biology (2015) First state examination for the teaching degree Mittelschule Chemistry (2015) First state examination for the teaching degree Mittelschule Geography (2015) First state examination for the teaching degree Mittelschule Protestant Theology (2015) First state examination for the teaching degree Mittelschule German (2015) First state examination for the teaching degree Mittelschule History (2015) First state examination for the teaching degree Mittelschule Catholic Theology (2015) First state examination for the teaching degree Mittelschule Mathematics (2015) First state examination for the teaching degree Mittelschule Physics (2015) First state examination for the teaching degree Mittelschule Social Science (2015) First state examination for the teaching degree Mittelschule Didactics in English (Middle School) (2015) First state examination for the teaching degree Mittelschule Ergonomics (Teaching at the German Mittelschule) (2015)First state examination for the teaching degree Mittelschule Didactics in Biology (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in Chemistry (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in Geography (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in Protestant Theology (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in German (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in History (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in Catholic Theology (Middle School) (2015) First state examination for the teaching degree Mittelschule Art Education in Middle School (2015) First state examination for the teaching degree Mittelschule Didactics in Science of Sport (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2015) First state examination for the teaching degree Mittelschule Music Education in Middle School (2015) First state examination for the teaching degree Mittelschule Didactics in Physics (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in Social Science (Middle School) (2015) First state examination for the teaching degree Mittelschule Science of Sport (2015) First state examination for the teaching degree Mittelschule Teaching at the German Mittelschule (2015) First state examination for the teaching degree Grundschule Protestant Theology (2015) First state examination for the teaching degree Grundschule Music (2015) First state examination for the teaching degree Grundschule Didactics in Protestant Theology (Primary School) (2015) First state examination for the teaching degree Realschule Music (2015) First state examination for the teaching degree Gymnasium Music (2015) First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Protestant Theology (Primary School) (2015) First state examination for the teaching degree Mittelschule Music (2015) First state examination for the teaching degree Gymnasium French Studies (2016) First state examination for the teaching degree Gymnasium Italian Studies (2016) First state examination for the teaching degree Gymnasium Spanish Studies (2016) First state examination for the teaching degree Realschule French Studies (2016) First state examination for the teaching degree Grundschule English (2016) First state examination for the teaching degree Grundschule Didactics in English (Primary School) (2016) First state examination for the teaching degree Realschule English (2016) First state examination for the teaching degree Gymnasium English (2016) First state examination for the teaching degree Mittelschule English (2016) First state examination for the teaching degree Mittelschule Didactics in English (Middle School) (2016) First state examination for the teaching degree Sonderpädagogik Didactics in English (Middle School) (2016) Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017)

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 28 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 | 1            |

First state examination for the teaching degree Gymnasium Greek Philology (2018) First state examination for the teaching degree Grundschule Physics (2018) First state examination for the teaching degree Grundschule Didactics in Physics (Primary School) (2018) First state examination for the teaching degree Realschule Physics (2018) First state examination for the teaching degree Gymnasium Physics (2018) First state examination for the teaching degree Mittelschule Physics (2018) First state examination for the teaching degree Sonderpädagogik Didactics in Physics (Middle School) (2018) First state examination for the teaching degree Mittelschule Didactics in Physics (Middle School) (2018) First state examination for the teaching degree Gymnasium Mathematics (2019) First state examination for the teaching degree Mittelschule Biology (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Sonderpädagogik Didactics in Biology (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Biology (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Chemistry (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Chemistry (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule German (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in German (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule English (2020 (Prüfungsordnungsversion 2016)) First state examination for the teaching degree Mittelschule Didactics in English (Middle School) (2020 (Prüfungsordnungsversion 2016)) First state examination for the teaching degree Mittelschule Protestant Theology (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Protestant Theology (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Geography (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Geography (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule History (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in History (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Catholic Theology (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Catholic Theology (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Mathematics (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Art Education in Middle School (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Science of Sport (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Science of Sport (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Music (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Music Education in Middle School (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Teaching at the German Mittelschule (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Sonderpädagogik Didactics in English (Middle School) (2020 (Prüfungsordnungsversion 2016))

First state examination for the teaching degree Sonderpädagogik Didactics in Chemistry (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Geography (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Protestant Theology (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in German (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in History (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Catholic Theology (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Art Education in Middle School (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Science of Sport (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Music Education in Middle School (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Teaching at the German Mittelschule (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Art Education in Primary School (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Music Education in Primary School (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Science of Sport (Primary School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in German (Primary School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Pedagogy of Primary Education (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Protestant Theology (Primary School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Catholic Theology (Primary School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Grundschule Didactics in Physics (Primary School) (2020) First state examination for the teaching degree Grundschule Physics (2020)

First state examination for the teaching degree Gymnasium Physics (2020)

First state examination for the teaching degree Realschule Physics (2020)

First state examination for the teaching degree Sonderpädagogik Didactics in Physics (Middle School) (2020) First state examination for the teaching degree Mittelschule Didactics in Physics (Middle School) (2020)

First state examination for the teaching degree Mittelschule Physics (2020)

First state examination for the teaching degree Grundschule Political and Social Studies (2020)

First state examination for the teaching degree Grundschule Didactics in Political and Social Studies (Primary School) (2020)

First state examination for the teaching degree Sonderpädagogik MS-Didaktik Career and Economics (2020) First state examination for the teaching degree Sonderpädagogik Didactics in Political and Social Studies (Secondary School) (2020)

First state examination for the teaching degree Mittelschule MS-Didaktik Career and Economics (2020) First state examination for the teaching degree Mittelschule Didactics in Political and Social Studies (Secondary School) (2020)

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 30 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |              |

First state examination for the teaching degree Mittelschule Political and Social Studies (2020) First state examination for the teaching degree Gymnasium Political and Social Studies (2020) First state examination for the teaching degree Grundschule History (2021) First state examination for the teaching degree Gymnasium History (2021) First state examination for the teaching degree Realschule History (2021) First state examination for the teaching degree Mittelschule History (2021) First state examination for the teaching degree Grundschule Pedagogy of Primary Education (2021) First state examination for the teaching degree Gymnasium English (2021) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2021) First state examination for the teaching degree Sonderpädagogik Pedagogy of Primary Education (2021) Bachelor's degree (1 major) Biochemistry (2022) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2022) First state examination for the teaching degree Gymnasium Russian (2023) First state examination for the teaching degree Gymnasium Mathematics (2023) First state examination for the teaching degree Gymnasium English (2023) First state examination for the teaching degree Realschule English (2023) First state examination for the teaching degree Grundschule English (2023) First state examination for the teaching degree Grundschule Didactics in English (Primary School) (2023) First state examination for the teaching degree Mittelschule English (2023) First state examination for the teaching degree Mittelschule Didactics in English (Middle School) (2023) First state examination for the teaching degree Sonderpädagogik Didactics in English (Middle School) (2023) First state examination for the teaching degree Gymnasium Geography (2023) First state examination for the teaching degree Realschule Geography (2023) First state examination for the teaching degree Grundschule Geography (2023) First state examination for the teaching degree Mittelschule Geography (2023) First state examination for the teaching degree Grundschule German (2024) First state examination for the teaching degree Gymnasium German (2024) First state examination for the teaching degree Realschule German (2024) First state examination for the teaching degree Sonderpädagogik Didactics in German (Middle School) (2024) First state examination for the teaching degree Mittelschule Didactics in German (Middle School) (2024) First state examination for the teaching degree Grundschule Didactics in German (Primary School) (2024) First state examination for the teaching degree Sonderpädagogik Didactics in German (Primary School) (2024) First state examination for the teaching degree Mittelschule German (2024) First state examination for the teaching degree Grundschule Music Education in Primary School (2024) First state examination for the teaching degree Sonderpädagogik Music Education in Primary School (2024) First state examination for the teaching degree Mittelschule Music Education in Middle School (2024) First state examination for the teaching degree Sonderpädagogik Music Education in Middle School (2024) First state examination for the teaching degree Gymnasium Latin Philology (2024) First state examination for the teaching degree Gymnasium English (2024) First state examination for the teaching degree Mittelschule MS-Didaktik Career and Economics (2024) First state examination for the teaching degree Sonderpädagogik MS-Didaktik Career and Economics (2024) First state examination for the teaching degree Grundschule History (2024) First state examination for the teaching degree Gymnasium History (2024) First state examination for the teaching degree Realschule History (2024) First state examination for the teaching degree Mittelschule History (2024) First state examination for the teaching degree Mittelschule Didactics in History (Middle School) (2024) First state examination for the teaching degree Sonderpädagogik Didactics in History (Middle School) (2024) First state examination for the teaching degree Grundschule Didactics in History (Primary School) (2024) First state examination for the teaching degree Gymnasium Greek Philology (2024) First state examination for the teaching degree Grundschule Art Education in Primary School (2024) First state examination for the teaching degree Sonderpädagogik Art Education in Primary School (2024) First state examination for the teaching degree Sonderpädagogik Art Education in Middle School (2024) First state examination for the teaching degree Mittelschule Art Education in Middle School (2024) JMU Würzburg • generated 18-Apr-2025 • exam. Bachelor's with 1 major Chemistry (2015) page 31 / 70 reg. data record Bachelor (180 ECTS) Chemie - 2015

| Module title  |  |  | Abbreviation              |   |                         |               |
|---|--|--|---------------------------|---|-------------------------|---------------|
| Organic Chemistry 1   |  |  | 08-0C1-152-m01            |   |                         |               |
| Module coordinator  |  |  |                           | Module offered by   |                         |               |
|   |  |  | a Chamistry               | -   | Chamistry               |               |
| ECTS  | 1  | Professorship of Organi                  |                           | Institute of Organic  | Chemistry               |               |
|   |  | <b>od of grading</b><br>rical grade      | Only after succ. con      | npl. of module(s)   |                         |               |
| 5   |  | -  |                           |   |                         |               |
| Duration 1 seme   |  | Module level<br>undergraduate            | Other prerequisites       |   |                         |               |
| Conter  |  | undergraduate                            |                           |   |                         |               |
|   | -  | rovides students with a                  |                           | lamental principles (   | of organic chemistry    | lt examines   |
|   |  | ituation of carbon and                   |                           |   |                         |               |
|   |  | ounds. The module also                   |                           |   |                         |               |
| dition  | and elir   | nination reactions as w                  | ell as synthesis planni   | ng.   |                         |               |
| Intend  | ed lear  | ning outcomes                            |                           |   |                         |               |
|   |  | w important categories                   |                           |   |                         |               |
|   |  | ire to determine simple                  |                           |   |                         |               |
|   |  | are able to describe and                 |                           |   |                         |               |
| synthe  |  | they can analyse and c                   | ategorise the characte    | ristic reaction condit  | ions and can use the    | em for simple |
|   |  | , number of weekly con                   | tact hours, language –    | - if other than Germa   | ın)                     |               |
| V (3) +   |  | ,  | , , , ,                   |   | ,                       |               |
| Metho   | d of ass   | sessment (type, scope,                   | language — if other th    | an German, examina  | tion offered — if not   | everv seme-   |
|   |  | on on whether module                     |                           |   |                         | ,             |
| a) writt  | en exai  | mination (approx. 90 to                  | 180 minutes) or           |   |                         |               |
|   |  | ation of one candidate                   |                           |   |                         |               |
|   |  | ation in groups of up to                 | o 3 candidates (approx    | . 15 minutes per can  | didate) or              |               |
|   |  | . 20 pages) or<br>n (approx. 30 minutes) |                           |   |                         |               |
|   |  | ssessment: German an                     |                           |   |                         |               |
|   | tion of p  | -  |                           |   |                         |               |
|   |  |  |                           |   |                         |               |
| Additic   | nal inf  | ormation                                 |                           |   |                         |               |
|   | _  |  | <br>POI mCh in conjunctio | n with No. 1 and lette  | er b) of annex 1 to the | APOL mCh      |
| according to § 2 para. 2 sentence 2 APOLmCh in conjunction with No. I 2nd letter b) of annex 1 to the APOLmCh and No. 2 of annex 2 to the APOLmCh |  |  |                           |   |                         |               |
| Worklo  | oad  |  |                           |   |                         |               |
| 150 h   |  |  |                           |   |                         |               |
| Teachi  | ng cycl  | e  |                           |   |                         |               |
| Teaching cycle: every year, summer semester   |  |  |                           |   |                         |               |
| <b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)  |  |  |                           |   |                         |               |
| § 62   Nr. 2  |  |  |                           |   |                         |               |
| Module appears in   |  |  |                           |   |                         |               |
| Bachelor's degree (1 major) Biology (2011)  |  |  |                           |   |                         |               |
| Bachelor's degree (1 major) Chemistry (2010)  |  |  |                           |   |                         |               |
| Bachelor's degree (1 major) Psychology (2010)<br>Bachelor's degree (1 major, 1 minor) Pedagogy (2013)   |  |  |                           |   |                         |               |
|   |  |  |                           |   |                         |               |
|   |  | gree (1 major, 1 minor)                  |                           |   |                         |               |
|   |  | gree (1 major, 1 minor)                  |                           | Culture (2008)  |                         |               |
|   | Bachelor's degree (2 majors) Special Education (2009)         Bachelor's with 1 major Chemistry (2015)         JMU Würzburg • generated 18-Apr-2025 • exam.         page 32 / 70 |  |                           |   |                         |               |
| Bachelor's  | with 1 ma  | or criemistry (2015)                     |                           | urg • generated 18-Apr-2025 •<br>ord Bachelor (180 ECTS) Chem |                         | page 32 / 70  |

page 33 / 70

Magister Theologiae Catholic Theology (2013) Bachelor's degree (2 majors) English and American Studies (2009) Bachelor's degree (2 majors) German Language and Literature (2013) Bachelor's degree (1 major) Biochemistry (2015) Bachelor's degree (1 major) Chemistry (2015) Bachelor's degree (1 major) Geography (2015) Bachelor's degree (1 major) Mathematics (2015) Bachelor's degree (1 major) Musicology (2015) Bachelor's degree (1 major) Physics (2015) Bachelor's degree (1 major) Psychology (2015) Bachelor's degree (1 major) Business Management and Economics (2015) Bachelor's degree (1 major) Nanostructure Technology (2015) Bachelor's degree (1 major) Music Education (2015) Bachelor's degree (1 major) Computational Mathematics (2015) Bachelor's degree (1 major) Political and Social Studies (2015) Bachelor's degree (1 major) Functional Materials (2015) Bachelor's degree (1 major) Academic Speech Therapy (2015) Bachelor's degree (1 major) Indology/South Asian Studies (2015) Bachelor's degree (1 major, 1 minor) Egyptology (2015) Bachelor's degree (1 major, 1 minor) Pedagogy (2015) Bachelor's degree (1 major, 1 minor) History (2015) Bachelor's degree (1 major, 1 minor) Musicology (2015) Bachelor's degree (1 major, 1 minor) Philosophy (2015) Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (1 major, 1 minor) Ancient World (2015) Bachelor's degree (1 major, 1 minor) Philosophy and Religion (2015) Bachelor's degree (1 major, 1 minor) Theological Studies (2015) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2015) Bachelor's degree (1 major, 1 minor) Russian Language and Culture (2015) Bachelor's degree (1 major, 1 minor) German Language and Literature (2015) Bachelor's degree (2 majors) Egyptology (2015) Bachelor's degree (2 majors) Pedagogy (2015) Bachelor's degree (2 majors) Protestant Theology (2015) Bachelor's degree (2 majors) Musicology (2015) Bachelor's degree (2 majors) Philosophy (2015) Bachelor's degree (2 majors) Special Education (2015) Bachelor's degree (2 majors) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (2 majors) Latin Philology (2015) Bachelor's degree (2 majors) Music Education (2015) Bachelor's degree (2 majors) Philosophy and Religion (2015) Bachelor's degree (2 majors) Theological Studies (2015) Bachelor's degree (2 majors) Political and Social Studies (2015) Bachelor's degree (2 majors) Russian Language and Culture (2015) Bachelor's degree (2 majors) Greek Philology (2015) Bachelor's degree (2 majors) European Ethnology (2015) Bachelor's degree (2 majors) Indology/South Asian Studies (2015) First state examination for the teaching degree Gymnasium Chemistry (2015) Bachelor's degree (2 majors) Geography (2015) Bachelor's degree (2 majors) French Studies (2015) Bachelor's degree (2 majors) History (2015) Bachelor's degree (2 majors) Sport Science (Focus on health and Pedagogics in Movement) (2015) Bachelor's degree (2 majors) German Language and Literature (2015) Bachelor's degree (1 major) Mathematical Physics (2016) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (1 major, 1 minor) French Studies (2016) Bachelor's degree (2 majors) French Studies (2016) Bachelor's degree (1 major, 1 minor) Italian Studies (2016) Bachelor's degree (2 majors) Italian Studies (2016) Bachelor's degree (1 major, 1 minor) Spanish Studies (2016) Bachelor's degree (2 majors) Spanish Studies (2016) Bachelor's degree (1 major) Romanic Languages (French/Italian) (2016) Bachelor's degree (1 major) Romanic Languages (French/Spanish) (2016) Bachelor's degree (1 major) Romanic Languages (Italian/Spanish) (2016) Bachelor's degree (1 major) Business Information Systems (2016) Bachelor's degree (1 major) Games Engineering (2016) Bachelor's degree (1 major, 1 minor) English and American Studies (2016) Bachelor's degree (2 majors) English and American Studies (2016) Bachelor's degree (1 major) Media Communication (2016) Bachelor's degree (1 major) Food Chemistry (2016) Bachelor's degree (1 major, 1 minor) Digital Humanities (2016) Bachelor's degree (1 major) Biology (2017) Bachelor's degree (1 major, 1 minor) Geography (2017) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2017) Bachelor's degree (1 major) Aerospace Computer Science (2017) Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017) Bachelor's degree (1 major, 1 minor) Museology and material culture (2017) Bachelor's degree (1 major) Economathematics (2017) Bachelor's degree (1 major) Games Engineering (2017) Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Media Communication (2018) Bachelor's degree (1 major) Biomedicine (2018) Bachelor's degree (1 major) Human-Computer Systems (2018) Bachelor's degree (2 majors) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Digital Humanities (2018) Bachelor's degree (2 majors) Digital Humanities (2018) Bachelor's degree (1 major) Computer Science (2019) Bachelor's degree (1 major, 1 minor) English and American Studies (2019) Bachelor's degree (1 major) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (2 majors) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Management and Economics (2019) Bachelor's degree (1 major) Modern China (2019) Module studies (Bachelor) Orientierungsstudien (2020) Bachelor's degree (1 major) Biomedicine (2020) Bachelor's degree (1 major) Pedagogy (2020) Bachelor's degree (1 major) Political and Social Studies (2020) Bachelor's degree (1 major) Business Information Systems (2020) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2020) Bachelor's degree (2 majors) European Ethnology (2020) Bachelor's degree (2 majors) Political and Social Studies (2020) Bachelor's degree (2 majors) Special Education (2020) Bachelor's degree (1 major) Physics (2020) Bachelor's degree (1 major) Nanostructure Technology (2020) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (1 major) Mathematical Physics (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major, 1 minor) Museology and material culture (2020) Bachelor's degree (1 major, 1 minor) Pedagogy (2020) Bachelor's degree (2 majors) Pedagogy (2020) Bachelor's degree (1 major) Psychology (2020) Bachelor's degree (1 major) Biology (2021) Magister Theologiae Catholic Theology (2021) Bachelor's degree (2 majors) History (2021) Bachelor's degree (1 major, 1 minor) History (2021) Bachelor's degree (1 major) Media Communication (2021) Bachelor's degree (2 majors) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) English and American Studies (2021) Bachelor's degree (2 majors) English and American Studies (2021) Bachelor's degree (1 major) Functional Materials (2021) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2021) Bachelor's degree (1 major) Food Chemistry (2021) Bachelor's degree (1 major) Quantum Technology (2021) Bachelor's degree (2 majors) Special Education (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Economathematics (2021) Bachelor's degree (1 major) Business Management and Economics (2021) Bachelor's degree (1 major) Human-Computer Systems (2022) Bachelor's degree (1 major, 1 minor) Museology and material culture (2022) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Economathematics (2022) Bachelor's degree (1 major) Mathematical Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (2 majors) Ancient Near Eastern Archaeology (2022) Bachelor's degree (1 major, 1 minor) Ancient World (2022) Bachelor's degree (2 majors) Ancient Near Eastern Studies (2022) Bachelor's degree (1 major) Franco-German studies: language, culture, digital competence (2022) Bachelor's degree (1 major) European Law (2023) Bachelor's degree (1 major, 1 minor) English and American Studies (2023) Bachelor's degree (2 majors) English and American Studies (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Economathematics (2023) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) Special Education (2023) Bachelor's degree (1 major) Business Management and Economics (2023) Bachelor's degree (1 major) Geography (2023) Bachelor's degree (2 majors) Geography (2023) Bachelor's degree (1 major, 1 minor) Geography (2023) Bachelor's degree (2 majors) European Ethnology/Empiric Cultural Studies (2023) Bachelor's degree (1 major) Mathematical Physics (2024) Bachelor's degree (2 majors) German Language and Literature (2024) Bachelor's degree (1 major, 1 minor) German Language and Literature (2024) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. page 35 / 70 reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (1 major) Music Education (2024) Bachelor's degree (2 majors) Music Education (2024) Bachelor's degree (1 major, 1 minor) Music Education (2024) Bachelor's degree (1 major) Indology/South Asian Studies (2024) Bachelor's degree (2 majors) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Ancient World (2024) Bachelor's degree (2 majors) Digital Humanities (2024) Bachelor's degree (1 major, 1 minor) Digital Humanities (2024) Bachelor's degree (1 major) Midwifery (2024) Bachelor's degree (2 majors) Greek Philology (2024) Bachelor's degree (2 majors) Latin Philology (2024) Bachelor's degree (1 major) Business Information Systems (2024) Bachelor's degree (1 major) Economathematics (2024) Bachelor's degree (1 major) Business Management and Economics (2024) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) Bachelor's degree (1 major) Human-Computer-Interaction (2024) Bachelor's degree (2 majors) Art Education (2024) Bachelor's degree (1 major) Digital Business & Data Science (2024) Bachelor's degree (1 major) Classics (2024) Bachelor's degree (1 major) Diversity, Ethics and Religions (2024) Bachelor's degree (1 major) Functional Materials (2025) Bachelor's degree (1 major) (2025) Bachelor's degree (1 major) Food Chemistry (2025) Bachelor's degree (1 major, 1 minor) European Ethnology/Empiric Cultural Studies (2025) Bachelor's degree (1 major) Pedagogy (2025) Bachelor's degree (2 majors) Pedagogy (2025) Bachelor's degree (1 major) Economathematics (2025) Bachelor's degree (1 major) Academic Speech Therapy (2025) Bachelor's degree (1 major, 1 minor) Pedagogy (2025) Bachelor's degree (1 major) Games Engineering (2025)

| Module title  |  |  |   | Abbreviation  |                               |
|---|--|--|---|---|-------------------------------|
| Organic Che   | mistry 2 and analytical r  | nethods in organic che   | emistry   | 08-0C2-152-m01  |                               |
| Module coor   | dinator  |  | Module offered by   |   |                               |
| holder of the Chair of Physically Organi                                  |  | uie Chamieter  |   | Chamistan   |                               |
|   |  |  | Institute of Organic  | Chemistry   |                               |
| i   | hod of grading   | Only after succ. cor   | npl. of module(s)   |   |                               |
| ·   | erical grade   |  |   |   |                               |
| Duration  | Module level   | Other prerequisites  | <b>i</b>  |   |                               |
| 1 semester  | undergraduate  |  |   |   |                               |
| Contents  |  |  |   |   |                               |
| the example<br>on reactions<br>well as rearr                              | introduces students to t<br>of carbonyl compounds,<br>to complex reaction med<br>angement. In addition, it<br>ectrometry and NMR spec          | it extends the studen<br>chanisms. The course a<br>introduces students to                            | ts' knowledge of sub<br>also focuses on oxid                        | stitution, elimination<br>ation and reduction                       | n and additi-<br>reactions as |
|   | rning outcomes   |  |   |   |                               |
| bonyl compo<br>they can pla<br>unknown rea<br>to draw cono                | ve become familiar with to<br>bunds. They are able to d<br>n and formulate multi-sta<br>actions. Students are abl<br>clusions regarding the mo | escribe specific reaction<br>age syntheses with cor<br>e to describe importan<br>plecular structure. | ons of carbonyls and<br>nplex reaction mech<br>It spectroscopic met | aromatics. For that<br>anisms and can tran<br>hods, to evaluate a s | purpose,<br>sfer them to      |
|   | e, number of weekly con  | tact nours, language –   | – If other than Germa   | in)   |                               |
| V (3) + Ü (1)   |  |  |   |   |                               |
|   | <b>ssessment</b> (type, scope,<br>ation on whether module  |  |   | ition offered — if not  | every seme-                   |
| <ul><li>c) oral exam</li><li>d) log (appro</li><li>e) presentat</li></ul> | ination of one candidate<br>ination in groups of up to<br>ox. 20 pages) or<br>ion (approx. 30 minutes)<br>assessment: German an                | 9 3 candidates (approx   | -   | didate) or  |                               |
| Allocation o  | fplaces  |  |   |   |                               |
|   |  |  |   |   |                               |
| Additional in   | nformation   |  |   |   |                               |
|   |  |  |   |   |                               |
| Workload  |  | _  |   |   |                               |
|   |  |  |   |   |                               |
| 270 h   |  |  |   |   |                               |
| Teaching cy   | LIE  |  |   |   |                               |
|   |  |  |   |   |                               |
| Referred to i   | n LPO I (examination reg   | gulations for teaching-  | degree programmes)  |   |                               |
|   |  |  |   |   |                               |
| Module app  |  |  |   |   |                               |
|   | egree (1 major) Biochem  |  |   |   |                               |
|   | egree (1 major) Chemistr   |  |   |   |                               |
|   | egree (1 major) Mathema  |  | )   |   |                               |
|   | egree (1 major) Computa  |  | 015)  |   |                               |
|   | egree (1 major) Biochem  | •  |   |   |                               |
|   | egree (1 major) Chemistr<br>egree (1 major) Function   |  |   |   |                               |
|   | najor Chemistry (2015)   |  | urg • generated 18-Apr-2025   | • exam.   | page 37 / 70                  |
|   |  |  | ord Bachelor (180 ECTS) Chen  |   | 1 3. 51 1 3                   |



Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Functional Materials (2025)

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 38 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |              |

| Module title                                      |  |   |                        | Abbreviation          |                                   |
|---|--|---|------------------------|-----------------------|-----------------------------------|
| Organi  | c Chem   | iistry 3 & 4  |                        |                       | 08-0C3+4-152-m01                  |
| Modul   | e coord  | inator  |                        | Module offered by     |                                   |
| holder  | of the l   | Professorship of Organic                              | Chemistry              | Institute of Organic  | Chemistry                         |
| ECTS  | Meth   | od of grading   | Only after succ. con   | npl. of module(s)     |                                   |
| 13  | nume   | rical grade   |                        |                       |                                   |
| Duratio   | on   | Module level  | Other prerequisites    |                       |                                   |
| 2 seme  | ester  | undergraduate   |                        |                       |                                   |
| Conter  | nts  |   |                        |                       |                                   |
| radical<br>tallic c                               | This module focuses on polar rearrangements, olefination reactions, pericyclic reactions, carbenes, nitriles and radicals. It discusses the fundamental principles of stereoselective synthesis, asymmetric catalysis, organome-tallic chemistry and retrosynthesis. The module also explores heterocyclic compounds, dyes, naturally occurring substances, biopolymers and protecting group techniques.   |   |                        |                       |                                   |
| Intend  | ed lear  | ning outcomes   |                        |                       |                                   |
| asymm<br>thetic a<br>and sy<br>and se<br>tes, fat | Students are able to formulate olefination reactions. They are able to develop stereoselective syntheses and asymmetric catalyses. Students are able to describe organometallic reactions. They are able to conduct retrosynthetic analyses of molecules. They are able to name important heteroaromatics and to formulate their reactions and syntheses. They are able to characterise and categorise dyes. Students are able to describe the structure and selective synthesis of proteins. In addition, they are able to describe the structure of the DNA, carbohydrates, fats, terpenes and steroids. |   |                        |                       |                                   |
|   |  | , number of weekly conta                              | ct nours, language –   | - If other than Germa | n)                                |
|   |  | $V(2) + \ddot{U}(2) + S(1)$                           |                        |                       |                                   |
|   |  | sessment (type, scope, la<br>ion on whether module ca |                        |                       | tion offered — if not every seme- |
| b) oral<br>c) oral<br>d) log<br>e) pres           | <ul> <li>a) written examination (approx. 90 to 180 minutes) or</li> <li>b) oral examination of one candidate each (20 to 30 minutes) or</li> <li>c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or</li> <li>d) log (approx. 20 pages) or</li> <li>e) presentation (approx. 30 minutes)</li> <li>Language of assessment: German and/or English</li> </ul>   |   |                        |                       |                                   |
| Allocat   | tion of <sub>l</sub>   | olaces  |                        |                       |                                   |
|   |  |   |                        |                       |                                   |
| Additio   | onal inf   | ormation  |                        |                       |                                   |
|   |  |   |                        |                       |                                   |
| Worklo  | ad   |   |                        |                       |                                   |
| 390 h   |  |   |                        |                       |                                   |
| Teachi  | Teaching cycle   |   |                        |                       |                                   |
|   |  |   |                        |                       |                                   |
| Referre   | ed to in   | LPOI (examination regu                                | lations for teaching-o | degree programmes)    |                                   |
|   |  |   |                        |                       |                                   |
| Modul   | e appea  | ars in  |                        |                       |                                   |
|   |  | gree (1 major) Chemistry                              |                        |                       |                                   |
| Bachel  | or's de  | gree (1 major) Chemistry                              | (2017)                 |                       |                                   |
|   |  |   |                        |                       |                                   |

| Module title Abbreviation                       |                                       |   |  | Abbreviation         |  |
|---|---------------------------------------|---|--|----------------------|--|
| Organic Chemistry 3 (DD)                        |                                       |   |  |                      | 08-0C-0C3-DA-152-m01   |
| Module coordinator                              |                                       |   |  | Module offered by    | · · · · · · · · · · · · · · · · · · ·                              |
| holder o  | of the F                              | Professorship of Organic  | Chemistry                                    | Institute of Organic | Chemistry  |
|   |                                       | od of grading   | Only after succ. com                         | pl. of module(s)     |  |
| 6   | nume                                  | rical grade   |  |                      |  |
| Duratio   |                                       | Module level  | Other prerequisites                          |                      |  |
| 1 semes   | ster                                  | undergraduate   |  |                      |  |
| Content   | ts                                    |   |  |                      |  |
| radicals  | s. It dis                             |   |  |                      | eactions, carbenes, nitriles and symmetric catalysis, organome-    |
| Intende   | d learr                               | ning outcomes   |  |                      |  |
| asymme  | etric ca                              |   |  |                      | tereoselective syntheses and<br>They are able to conduct retrosyn- |
| Courses   | <b>s</b> (type,                       | , number of weekly conta  | ct hours, language —                         | if other than Germa  | in)  |
| V (2) + Ü                                       | Ü (2)                                 |   |  |                      |  |
|   |                                       | <b>essment</b> (type, scope, la<br>on on whether module ca  |  |                      | tion offered — if not every seme-                                  |
| b) oral e<br>c) oral e<br>d) log (a<br>e) prese | examin<br>examin<br>approx<br>entatio | nination (approx. 90 to 1<br>ation of one candidate e<br>ation in groups of up to 3<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and, | ach (20 to 30 minute)<br>candidates (approx. |                      | didate) or   |
| Allocati  | ion of p                              | olaces  |  |                      |  |
|   |                                       |   |  |                      |  |
| Additio   | nal info                              | ormation  |  |                      |  |
|   |                                       |   |  |                      |  |
| Workloa   | ad                                    |   |  |                      |  |
| 180 h   |                                       |   |  |                      |  |
| Teachin   | ig cycle                              | 9   |  |                      |  |
|   |                                       |   |  |                      |  |
| Referre   | d to in                               | LPOI (examination regu  | lations for teaching-c                       | legree programmes)   |  |
|   |                                       |   | 5  |                      |  |
| Module  | appea                                 | rs in   |  |                      |  |
| Bachelo   | or's deg                              | gree (1 major) Chemistry<br>gree (1 major) Chemistry  |  |                      |  |
|   | (                                     |   |  |                      |  |

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 40 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |              |

| Module coordinator         Module offered by           holder of the Chair of Organic Chemistry II         Institute of Organic Chemistry           ECTS         Method of grading         Only after succ. compl. of module(s)           8         (not) successfully completed         08-0C1 and 08-ACP1           Duration         Module level         Other prerequisites           1 semester         undergraduate            Contents             This module gives students the opportunity to apply in practice the knowledge they have gained through the related lecture(s). After a safety briefing, the students autonomously conduct experiments in the laboratory. In addition to those experiments, students will be expected to take oral tests and write labe reports to demonstrate their knowledge. The course focuses on the safe handling of hazardous substances, simple experimental unit operations of organic chemistry. Simple to multi-level syntheses and the analysis of the products.           Intended learning outcomes         Students know how to safely handle hazardous substances. They are able to connect the theoretical aspects covered in the lecture with practical experiments in the laboratory.           Courses (type, number of weekly contact hours, language — if other than German)         P           P (ta)   | Module title Abbreviation                   |  |   |   |   | Abbreviation   |
|---|---|--|---|---|---|--|
| holder of the Chair of Organic Chemistry II       Institute of Organic Chemistry         ECTS       Method of grading       Only after succ. compl. of module(s)         8       (not) successfully completed       08-OC1 and 08-ACP1         Duration       Module level       Other prerequisites         1 semester       undergraduate          Contents        Contents         This module gives students the opportunity to apply in practice the knowledge they have gained through the related lecture(s). After a safety briefing, the students autonomously conduct experiments in the laboratory. In addition to those experiments, students will be expected to take oral tests and write lab reports to demonstrate their knowledge. The course focuses on the safe handling of hazardous substances, simple experimental unit operations of organic chemistry, simple to multi-level syntheses and the analysis of the products.         Intended learning outcomes       Students know how to safely handle hazardous substances. They are able to conduct simple experimental operations of organic chemistry. They are able to analyse the yield and purity of the products and identify possible error sources. They are able to connect the theoretical aspects covered in the lecture with practical experiments in the laboratory.         Courses (type, number of weekly contact hours, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)         Vortestact/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practica | Organi                                      | Organic Chemistry - lab 1                |   |   |   | 08-0CP1-152-m01  |
| ECTS       Method of grading       Only after succ. compl. of module(s)         8       [not) successfully completed       o8-OC1 and o8-ACP1         Duration       Module level       Other prerequisites         1 semester       undergraduate  | Module                                      | e coord                                  | inator  |   | Module offered by   | <u> </u>   |
| 8       (not) ⇒uccessfully completed       08-0C1 and 08-ACP1         Duration       Module level       0-         Contents           Contents           Contents           This module gives students the opport inty to apply in practice the knowledge they have gained through the replated lecture(s). After a safety briefing, the students autonomously conduct experiments in the laboratory. In addition to those experiments, students will be expected to take oral tests and write laber persts to demonstrate their knowledge. The course focuses on the safe handling of hazardous substances, simple experimental operations organic chemistry, simple to multi-level syntheses and the analysis of the products.         Intendel learing outcomes       Students know how to safely handle hazardous substances. They are able to conduct simple experimental operations or organic chemistry. They are able to analyse the yield and purity of the products and identify possible error sources. They are able to connect the theoretical aspects covered in the lecture with practical experiments in the laboratory. They are able to connect the theoretical aspects covered in the lecture with practical experiments in the weekly contact hours, language - if other than German)         P (ta)  | holder                                      | of the (                                 | Chair of Organic Chemist  | y II  | Institute of Organic  | Chemistry  |
| Duration         Module level         Other prerequisites           1 semester         undergraduate  | ECTS  | Metho                                    | od of grading   | Only after succ. com  | pl. of module(s)  |  |
| 1 semester       undergraduate  | 8   | (not) s                                  | successfully completed  | 08-OC1 and 08-ACP   | 1   |  |
| Contents This module gives students the opportunity to apply in practice the knowledge they have gained through the re-<br>lated lecture(s). After a safety briefing, the students autonomously conduct experiments in the laboratory. In ad-<br>dition to those experiments, students will be expected to take oral tests and write lab reports to demonstrate<br>their knowledge. The course focuses on the safe handling of hazardous substances, simple experimental unit<br>operations of organic chemistry, simple to multi-level syntheses and the analysis of the products.<br>Intended learning outcomes Students know how to safely handle hazardous substances. They are able to conduct simple experimental ope-<br>rations of organic chemistry. They are able to analyse the yield and purity of the products and identify possible<br>error sources. They are able to connect the theoretical aspects covered in the lecture with practical experiments<br>in the laboratory. Courses (type, number of weekly contact hours, language — if other than German) P (14) Method of assessment (type, scope, language — if other than German, examination offered — if not every seme-<br>ster, information on whether module can be chosen to earn a bonus) Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10<br>pages each) and assessment of practical performance (2 to 4 random examinations)<br>Language of assessment: German and/or English Allocation of places   | Duratio                                     | on                                       |   | Other prerequisites   |   |  |
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| rations of organic chemistry. They are able to analyse the yield and purity of the products and identify possible<br>error sources. They are able to connect the theoretical aspects covered in the lecture with practical experiments<br>in the laboratory.<br><b>Courses</b> (type, number of weekly contact hours, language — if other than German)<br>P (14)<br><b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every seme-<br>ster, information on whether module can be chosen to earn a bonus)<br>Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10<br>pages each) and assessment of practical performance (2 to 4 random examinations)<br>Language of assessment: German and/or English<br><b>Allocation of places</b><br><br><b>Additional information</b><br><br><b>Workload</b><br>240 h<br><b>Teaching cycle</b><br><br><b>Referred to in LPO 1</b> (examination regulations for teaching-degree programmes)<br><br><b>Module appears in</b>   |   |  |   |   | They are able to a  | nduat aimpla avparimental area   |
| P (14) Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical performance (2 to 4 random examinations) Language of assessment: German and/or English Allocation of places Additional information Workload 240 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in  | rations<br>error so<br>in the l             | of orga<br>ources.<br>aborate            | anic chemistry. They are a<br>They are able to connect<br>ory.  | able to analyse the yie<br>the theoretical aspec                        | eld and purity of the<br>cts covered in the lea                     | products and identify possible<br>cture with practical experiments                                     |
| Method of assessment (type, scope, language — if other than German, examination offered — if not every seme-<br>ster, information on whether module can be chosen to earn a bonus)<br>Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10<br>pages each) and assessment of practical performance (2 to 4 random examinations)<br>Language of assessment: German and/or English<br>Allocation of places<br>   |   | s (type                                  | , number of weekly conta  | ict nours, language –   |   |  |
| ster, information on whether module can be chosen to earn a bonus) Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical performance (2 to 4 random examinations) Language of assessment: German and/or English Allocation of places Additional information Workload 240 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in  |   |  | (t  | ······  | <u> </u>  | tion of 6 and 1 if and a surrow of a surrow of 6   |
| pages each) and assessment of practical performance (2 to 4 random examinations)<br>Language of assessment: German and/or English Allocation of places Additional information Workload 240 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in   |   |  |   |   |   | tion offered — If not every seme-  |
| Additional information Workload 240 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in  | pages                                       | each) a                                  | nd assessment of praction   | al performance (2 to  |   |  |
| Workload 240 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in   | Allocat                                     | ion of p                                 | olaces  |   |   |  |
| Workload 240 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in   |   |  |   |   |   |  |
| 240 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in  | Additio                                     | nal inf                                  | ormation  |   |   |  |
| 240 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in  |   |  |   |   |   |  |
| Teaching cycle<br><br>Referred to in LPO I (examination regulations for teaching-degree programmes)<br><br>Module appears in  | Worklo                                      | ad                                       |   |   |   |  |
| <br>Referred to in LPO I (examination regulations for teaching-degree programmes)<br><br>Module appears in  | 240 h                                       |  |   |   |   |  |
|   | Teaching cycle                              |  |   |   |   |  |
|   |   |  |   |   |   |  |
|   | Referre                                     | ed to in                                 | LPOI (examination regu  | lations for teaching-c  | legree programmes)  |  |
|   |   |  |   |   |   |  |
| Bachelor's degree (1 major) Chemistry (2015)  | Module                                      | e appea                                  | ars in  |   |   |  |
|   | Bachel                                      | or's de                                  | gree (1 major) Chemistry  | (2015)  |   |  |

| Module   | Module title Abbreviation                    |  |  |                     |  |
|--|--|--|--|---------------------|--|
| Organic Chemistry - advanced laboratory course for stude                             |  |  | ory course for studen                        | ts of chemistry     | 08-0CP2-152-m01  |
| Modula   | Module coordinator                           |  |  | Module offered by   | <u> </u>   |
| holder of the Chair of Organic Chemistry II  |  | v II   | Institute of Organic                         | <br>Chemistry       |  |
| ECTS   |  | od of grading  | Only after succ. com                         |                     | Chemistry  |
| 5  |  | successfully completed   | 08-0C2 and (08-0Cl                           |                     |  |
| Duratio  |  | Module level   | Other prerequisites                          | ,                   |  |
| 1 seme   |  | undergraduate  |  |                     |  |
| Conten   | ts   |  |  |                     |  |
| dous si  | ubstan                                       |  | ng and synthesis tec                         |                     | s by working with special hazar-<br>extensive purification methods     |
| Intende  | ed lear                                      | ning outcomes  |  |                     |  |
|  | ex syntł                                     |  |  |                     | nces. They are able to perform<br>to use specialist literature to plan |
| Course   | <b>s</b> (type                               | , number of weekly conta   | ct hours, language —                         | if other than Germa | an)  |
| P (11)   |  |  |  |                     |  |
| Vortest<br>pages e   | ate/Na<br>each) a                            | on on whether module ca<br>chtestate (pre and post-e<br>nd assessment of practic<br>ssessment: German and, | experiment examinati<br>al performance (2 to | on talks approx. 15 | minutes each, log approx. 5 to 10<br>ions)                             |
| Allocat  |  |  |  |                     |  |
|  |  |  |  |                     |  |
| Additio  | nal inf                                      | ormation   |  |                     |  |
|  |  |  |  |                     |  |
| Worklo   | ad   |  |  |                     |  |
| 150 h  |  |  |  |                     |  |
| Teachi   | ng cvcl                                      | e  |  |                     |  |
| <u></u>  |  |  |  |                     |  |
| <b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes) |  |  |  |                     |  |
|  |  |  |  |                     |  |
| Module   | e appea                                      | irs in   |  |                     |  |
|  |  | gree (1 major) Biochemis   | try (2015)                                   |                     |  |
|  | Bachelor's degree (1 major) Chemistry (2015) |  |  |                     |  |
|  |  | gree (1 major) Biochemis   |  |                     |  |
| Bachelor's degree (1 major) Chemistry (2017)   |  |  |  |                     |  |
|  |  | gree (1 major) Chemistry<br>gree (1 major) Biochemis   |  |                     |  |

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 42 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |              |

| Module title Abbreviation       |                             |  |                        |                       |                                   |
|---------------------------------|-----------------------------|--|------------------------|-----------------------|-----------------------------------|
| Advanc                          | ed che                      | mical practical course   |                        |                       | 08-0P-152-m01                     |
| Module                          | Module coordinator          |  |                        | Module offered by     | <u> </u>                          |
| head o                          | f the re                    | search group offering the  | module                 | Faculty of Chemistr   | y and Pharmacy                    |
| ECTS                            | ·                           | od of grading  | Only after succ. con   | npl. of module(s)     |                                   |
| 5                               | (not)                       | successfully completed   |                        |                       |                                   |
| Duratio                         |                             | Module level   | Other prerequisites    |                       |                                   |
| 1 seme                          | ster                        | undergraduate  |                        |                       |                                   |
| Conten                          | ts                          |  |                        |                       |                                   |
|                                 | -                           | ives students the opport<br>ne in question.  | unity to explore a res | earch topic and app   | ly the methods commonly used      |
| Intende                         | ed lear                     | ning outcomes  |                        |                       |                                   |
| Studen<br>oral pre              |                             |  | research topic and p   | resent the results of | their work in a written report or |
| Course                          | <b>s</b> (type              | , number of weekly conta   | ct hours, language –   | - if other than Germa | n)                                |
| P (10)                          | _                           |  |                        |                       |                                   |
| ster, in<br>a) talk<br>b) log ( | format<br>(approx<br>approx | x. 15 minutes) or<br>10 to 20 pages)<br>2 sessment: German and                     | an be chosen to earn   |                       | tion offered — if not every seme- |
| Allocat                         | . –                         | ·  |                        |                       |                                   |
|                                 |                             |  |                        |                       |                                   |
| Additio                         | nal inf                     | ormation   |                        |                       |                                   |
| Additio<br>20 days              |                             | ormation on module dura  | tion: block placeme    | nt / block taught pra | ctical course with a duration of  |
| Worklo                          |                             |  |                        |                       |                                   |
| 150 h                           |                             |  |                        |                       |                                   |
| Teachi                          | ng cycl                     | e  |                        |                       |                                   |
|                                 |                             |  |                        |                       |                                   |
| Referre                         | ed to in                    | LPOI (examination regu   | lations for teaching-  | degree programmes)    |                                   |
|                                 |                             |  | -                      |                       |                                   |
| Module                          | e appea                     | ars in   |                        |                       |                                   |
| Bachel<br>Bachel                | or's de<br>or's de          | gree (1 major) Chemistry<br>gree (1 major) Chemistry<br>es (Bachelor) Chemistry (: | (2017)                 |                       |                                   |

| Module title  |   |  |  |                       | Abbreviation   |
|---|---|--|--|-----------------------|--|
| Physic  | al Cher   | nistry (lab)   |  |                       | 08-PCP-152-m01   |
| Modul   | e coord   | linator  |  | Module offered by     | <u> </u>   |
| lecture<br>mie"   | er of lec   | ture "Thermodynamik, Ki  | netik, Elektroche-                       | Institute of Physica  | l and Theoretical Chemistry  |
| ECTS  | Meth  | od of grading  | Only after succ. con                     | npl. of module(s)     |  |
| 9   | (not)   | successfully completed   | o8-PC-QMS or o8-P                        | C-TKE                 |  |
| Durati  | on  | Module level   | Other prerequisites                      | ;                     |  |
| 1 seme  | ester   | undergraduate  |  |                       |  |
| Conter  | nts   |  |  |                       |  |
| dition<br>their k   | to thos<br>nowled   | e experiments, students  |  |                       | eriments in the laboratory. In ad-<br>ite lab reports to demonstrate |
|   |   | able to connect the theor<br>practical laboratory expe                         |  |                       | tics, electrochemistry and spec-<br>ulting measurements.             |
| Course  | <b>es</b> (type   | , number of weekly conta   | act hours, language –                    | - if other than Germa | in)  |
| P (6)   |   |  |  |                       |  |
| ster, in  | nformat   | ion on whether module c  | an be chosen to earn                     |                       | tion offered — if not every seme-                                    |
|   | tate/Na   | abtactata (nra and nact  |  |                       |  |
|   | each) a   | active (pre and post-<br>and assessment of practions<br>assessment: German and | cal performance (2 to                    |                       |  |
| Langua  | each) a   | and assessment of practions and assessment: German and                         | cal performance (2 to                    |                       |  |
| Langua  | each) a<br>age of a   | and assessment of practions and assessment: German and                         | cal performance (2 to                    |                       |  |
| Langua<br>Allocat   | each) a<br>age of a<br><b>tion of</b>                         | and assessment of practions and assessment: German and                         | cal performance (2 to                    |                       |  |
| Langua<br>Allocat   | each) a<br>age of a<br><b>tion of</b>                         | and assessment of practionssessment: German and places                         | cal performance (2 to                    |                       |  |
| Langua<br>Allocat   | each) a<br>age of a<br>tion of<br>onal inf                    | and assessment of practionssessment: German and places                         | cal performance (2 to                    |                       |  |
| Langua<br>Allocat<br><br>Additio  | each) a<br>age of a<br>tion of<br>onal inf                    | and assessment of practionssessment: German and places                         | cal performance (2 to                    |                       |  |
| Langua<br>Allocat<br><br>Additio<br><br>Worklo<br>270 h                                       | each) a<br>age of a<br>tion of<br>onal inf                    | and assessment of practic<br>assessment: German and<br>places<br>formation     | cal performance (2 to                    |                       |  |
| Langua<br>Allocat<br><br>Additio<br><br>Worklo<br>270 h                                       | each) a<br>age of a<br>tion of<br>onal inf                    | and assessment of practic<br>assessment: German and<br>places<br>formation     | cal performance (2 to                    |                       |  |
| Langua<br>Allocat<br><br>Additio<br><br>270 h<br>Teachi<br>                                   | each) a<br>age of a<br>tion of<br>onal inf<br>oad             | and assessment of practic<br>assessment: German and<br>places<br>formation     | cal performance (2 to<br>/or English     | 4 random examinat     |  |
| Langua<br>Allocat<br><br>Additio<br><br>270 h<br>Teachi<br>                                   | each) a<br>age of a<br>tion of<br>onal inf<br>oad             | ind assessment of practic<br>issessment: German and<br>places<br>formation     | cal performance (2 to<br>/or English     | 4 random examinat     | ions)  |
| Langua<br>Allocat<br><br>Additio<br><br>270 h<br>Teachi<br><br>Referro<br>                    | each) a<br>age of a<br>tion of<br>onal inf<br>oad             | e<br>LPOI (examination regu  | cal performance (2 to<br>/or English     | 4 random examinat     | ions)  |
| Langua<br>Allocat<br><br>Additio<br><br>Worklo<br>270 h<br>Teachi<br><br>Referro<br><br>Modul | each) a<br>age of a<br>tion of<br>onal inf<br>oad<br>ing cycl | e<br>LPOI (examination regu  | cal performance (2 to<br>/or English<br> | 4 random examinat     | ions)  |

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.<br>reg. data record Bachelor (180 ECTS) Chemie - 2015 | page 44 / 70 |  |
|--|--|--------------|--|
|--|--|--------------|--|

| Module title  |  |  |   |   | Abbreviation   |
|---|--|--|---|---|--|
| Princi  | Principles of quantum mechanics and spectroscopy |  |   |   | 08-PC-QMS-152-m01  |
| Modul   | Module coordinator                               |  |   | Module offered by                         |  |
| lecture   | er of lec  | ture "Grundlagen der   | Quantenmechanik and                                       |   | al and Theoretical Chemistry   |
| Spekti  | roskopi  | e" (Principles of Quar   |   |   |  |
| -   | roscopy  |  | Only offer avec as  |   |  |
| ECTS<br>10  |  | od of grading<br>erical grade  | Only after succ. con                                      | npt. of module(s)                         |  |
| Durati  |  | Module level   | Other prerequisites                                       |   |  |
| 1 seme  |  | undergraduate  |   | •   |  |
| Conte   |  |  |   |   |  |
| the mo<br>UV-VIS  | odule fo<br>5 spectr<br>, differe                | ocuses on vibrational<br>oscopy. In addition, t  | spectroscopy, angular m<br>he module discusses lin        | omentum quantisat<br>ear operators, eiger | id rotor. As regards spectroscopy<br>tion, microwave spectroscopy an<br>avalue problems, matrix represen<br>athematical bases of the topics li |
| Intend  | led lear   | ning outcomes  |   |   |  |
| to des  | cribe di   |  |   |   | nem to molecules. They are able<br>to apply the mathematical bases of  |
| Course  | <b>es</b> (type                                  | e, number of weekly co   | ontact hours, language –                                  | - if other than Germ                      | an)  |
| V (4) +   | · Ü (2) +  | V (2)  |   |   |  |
|   |  |  | e, language — if other th<br>le can be chosen to earn     |   | ation offered — if not every seme  |
| <ul> <li>b) oral</li> <li>c) oral</li> <li>d) log</li> <li>e) pres</li> <li>Langus</li> </ul> | l examin<br>examin<br>(approx<br>sentatio        | nation in groups of up<br>k. 20 pages) or<br>on (approx. 30 minute<br>assessment: German | te each (20 to 30 minute<br>to 3 candidates (approx<br>s) | -   | ndidate) or  |
| Alloca  | tion of  | places   |   |   |  |
|   |  |  |   |   |  |
| Additi  | onal inf   | formation  |   |   |  |
|   |  |  |   |   |  |
| Workl   | oad  |  |   |   |  |
| 300 h   |  |  |   |   |  |
| Teachi  | ing cyc  | le   |   |   |  |
|   |  |  |   |   |  |
| Referr  | ed to in   | LPOI (examination  | regulations for teaching-                                 | degree programmes                         | )  |
|   |  |  |   |   |  |
| Modul   | le appe  | ars in   |   |   |  |
| mouut   |  |  |   |   |  |
|   | lor's de   | gree (1 major) Chemis  | stry (2015)   |   |  |

| Summe  | e title  |   | Abbreviation                                    |  |   |
|--|--|---|---|--|---|
| Symme  | etry, ch   | emical bonding and ligh   | t   |  | 08-PC-SBL-152-m01   |
| Module   | <u>a coord</u>   | inator  |   | Module offered by                          |   |
|  | Module coordinator   |   |   |  |   |
| lecture<br>Licht"  | lecturer of lecture "Symmetrie, chemische Bindung ar<br>Licht"   |   |   | Institute of Physica                       | l and Theoretical Chemistry   |
| ECTS   |  | od of grading   | Only after succ. cor                            | npl. of module(s)                          |   |
| 9 numerical grade  |  |   |   |  |   |
| Duratio  | on   | Module level  | Other prerequisites                             | 6  |   |
| 2 seme   | ester  | undergraduate   |   |  |   |
| Conten   | nts  |   |   |  |   |
| tions, p<br>qualita  | point gr<br>tive M(  | oups, character tables a<br>D theory and gives an int   | nd selection rules. Th<br>roduction to the fund | ne module deals with<br>amentals of comput | on group theory, symmetry opera<br>a the chemical bond based on the<br>ational chemistry. It also gives<br>cal bonding and light in detail. |
| Intende  | ed lear  | ning outcomes   |   |  |   |
|  |  | able to analyse the symmes of a particular molecu   |   |  | conclusions about the spectros-   |
|  | •  | , number of weekly conta  | · · ·   | •  | n)  |
|  |  | V (2) + Ü (2)   |   | n other than oenne                         |   |
|  |  |   |   | C  |   |
|  |  | ion on whether module c   |   |  | tion offered — if not every seme-   |
| c) oral  |  | ation in groups of up to  | each (20 to 30 minute<br>3 candidates (approx   | -  | didate) or  |
| c) oral<br>d) log (<br>e) pres<br>Langua   | (approx<br>entatio<br>age of a   | ation in groups of up to<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and   | 3 candidates (approx                            | -  | didate) or  |
| c) oral<br>d) log (<br>e) pres   | (approx<br>entatio<br>age of a   | ation in groups of up to<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and   | 3 candidates (approx                            | -  | didate) or  |
| c) oral (<br>d) log (<br>e) pres<br>Langua<br>Allocat  | (approx<br>entatio<br>age of a<br>t <b>ion of j</b>  | ation in groups of up to g<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br><b>blaces</b>  | 3 candidates (approx                            | -  | didate) or  |
| c) oral (<br>d) log (<br>e) pres<br>Langua<br>Allocat  | (approx<br>entatio<br>age of a<br>t <b>ion of j</b>  | ation in groups of up to<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and   | 3 candidates (approx                            | -  | didate) or  |
| c) oral (<br>d) log (<br>e) pres<br>Langua<br>Allocat  | (approx<br>entatio<br>age of a<br>t <b>ion of j</b>  | ation in groups of up to g<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br><b>blaces</b>  | 3 candidates (approx                            | -  | didate) or  |
| c) oral (<br>d) log (<br>e) pres<br>Langua<br>Allocat  | (approx<br>entatio<br>age of a<br>tion of p  | ation in groups of up to g<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br><b>blaces</b>  | 3 candidates (approx                            | -  | didate) or  |
| c) oral (<br>d) log (<br>e) pres-<br>Langua<br>Allocat<br><br>Additio  | (approx<br>entatio<br>age of a<br>tion of p  | ation in groups of up to g<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br><b>blaces</b>  | 3 candidates (approx                            | -  | didate) or  |
| c) oral (<br>d) log (<br>e) pres<br>Langua<br>Allocat<br><br>Additio<br><br>Worklo<br>270 h  | (approx<br>eentatio<br>age of a<br>tion of p<br>onal inf   | ation in groups of up to<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br><b>places</b><br>ormation  | 3 candidates (approx                            | -  | didate) or  |
| c) oral d<br>d) log (<br>e) pres<br>Langua<br>Allocat<br><br>Additio<br><br>Worklo   | (approx<br>eentatio<br>age of a<br>tion of p<br>onal inf   | ation in groups of up to<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br><b>places</b><br>ormation  | 3 candidates (approx                            | -  | didate) or  |
| c) oral d<br>d) log (<br>e) press<br>Langua<br>Allocat<br><br>Morklo<br>270 h<br>Teachin<br>   | (approx<br>eentatio<br>age of a<br>tion of p<br>onal inf<br>pad  | ation in groups of up to<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br><b>places</b><br>ormation  | 3 candidates (approx<br>/or English             | . 15 minutes per can                       |   |
| c) oral d<br>d) log (<br>e) press<br>Langua<br>Allocat<br><br>Morklo<br>270 h<br>Teachin<br>   | (approx<br>eentatio<br>age of a<br>tion of p<br>onal inf<br>pad  | ation in groups of up to<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br>places<br>ormation   | 3 candidates (approx<br>/or English             | . 15 minutes per can                       |   |
| c) oral d<br>d) log (<br>e) pres<br>Langua<br>Allocat<br><br>Worklo<br>270 h<br>Teachin<br><br>Referre   | (approx<br>eentatio<br>age of a<br>tion of p<br>onal inf<br>oad<br>ng cycl<br>ed to in   | ation in groups of up to<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br>places<br>ormation<br>e<br>LPOI (examination regu  | 3 candidates (approx<br>/or English             | . 15 minutes per can                       |   |
| c) oral d<br>d) log (<br>e) pres<br>Langua<br>Allocat<br><br>Additio<br>270 h<br>Teachin<br><br>Referre<br><br>Module  | (approx<br>entatio<br>age of a<br>tion of p<br>onal inf<br>oad<br>ng cycl<br>ed to in<br>e appea   | ation in groups of up to<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br>olaces<br>ormation<br>e<br>LPO I (examination regu   | 3 candidates (approx<br>/or English<br>         | . 15 minutes per can                       |   |
| c) oral d<br>d) log (<br>e) press<br>Langua<br>Allocat<br><br>Worklo<br>270 h<br>Teachin<br><br>Referre<br><br>Bachel  | (approx<br>entatio<br>age of a<br>tion of p<br>onal inf<br>onal inf<br>oad<br>ng cycl<br>ed to in<br>e appea<br>or's de                                  | ation in groups of up to<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br>places<br>ormation<br>e<br>LPO I (examination regu<br>ars in<br>gree (1 major) Biochemis   | 3 candidates (approx<br>/or English<br>         | . 15 minutes per can                       |   |
| c) oral d<br>d) log (<br>e) pres<br>Langua<br>Allocat<br><br>Morklo<br>270 h<br>Teachin<br><br>Referre<br><br>Bachel<br>Bachel   | (approx<br>eentatio<br>age of a<br>tion of p<br>onal inf<br>onal inf<br>oad<br>ng cycl<br>ed to in<br>e appea<br>or's de<br>or's de                      | ation in groups of up to g<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br>places<br>ormation<br>e<br>LPO I (examination regunation regunation<br>gree (1 major) Biochemis<br>gree (1 major) Chemistry  | 3 candidates (approx<br>/or English<br>         | . 15 minutes per can                       |   |
| c) oral d<br>d) log (<br>e) pres<br>Langua<br>Allocat<br><br>Additio<br>270 h<br>Teachin<br><br>Referre<br>Bachel<br>Bachel<br>Bachel                                  | (approx<br>eentatio<br>age of a<br>tion of p<br>onal inf<br>oad<br>ng cycl<br>ed to in<br>e appea<br>or's de<br>or's de<br>or's de                       | ation in groups of up to g<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br>olaces<br>ormation<br>e<br>LPO I (examination regu<br>ars in<br>gree (1 major) Biochemis<br>gree (1 major) Chemistry<br>gree (1 major) Mathemat                              | 3 candidates (approx<br>/or English<br>         | degree programmes)                         |   |
| c) oral d<br>d) log (<br>e) pres<br>Langua<br>Allocat<br><br>Additio<br><br>270 h<br>Teachin<br><br>Referre<br><br>Bachel<br>Bachel<br>Bachel<br>Bachel                | (approx<br>entatio<br>age of a<br>tion of p<br>onal inf<br>oad<br>ng cycl<br>ed to in<br>e appea<br>or's de<br>or's de<br>or's de                        | ation in groups of up to<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br>olaces<br>ormation<br>e<br>LPO I (examination regu<br>ars in<br>gree (1 major) Biochemis<br>gree (1 major) Mathemat<br>gree (1 major) Computati                                | 3 candidates (approx<br>/or English<br>         | degree programmes)                         |   |
| c) oral d<br>d) log (<br>e) press<br>Langua<br>Allocat<br><br>Worklo<br>270 h<br>Teachin<br><br>Referre<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel              | (approx<br>entatio<br>age of a<br>tion of p<br>onal inf<br>onal inf<br>oad<br>ad<br>ad<br>ad<br>ad<br>ad<br>ad<br>ad<br>ad<br>ad<br>ad<br>ad<br>ad<br>a  | ation in groups of up to g<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br>places<br>ormation<br>e<br>LPO I (examination regu<br>ars in<br>gree (1 major) Biochemis<br>gree (1 major) Computati<br>gree (1 major) Computati<br>gree (1 major) Biochemis | 3 candidates (approx<br>/or English<br>         | degree programmes)                         |   |
| c) oral d<br>d) log (<br>e) pres<br>Langua<br>Allocat<br><br>Worklo<br>270 h<br>Teachin<br><br>Referre<br><br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel<br>Bachel | (approx<br>eentatio<br>age of a<br>tion of p<br>onal inf<br>oad<br>ng cycl<br>ed to in<br>e appea<br>or's de<br>or's de<br>or's de<br>or's de<br>or's de | ation in groups of up to<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and<br>olaces<br>ormation<br>e<br>LPO I (examination regu<br>ars in<br>gree (1 major) Biochemis<br>gree (1 major) Mathemat<br>gree (1 major) Computati                                | 3 candidates (approx<br>/or English<br>         | degree programmes)                         |   |

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 46 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |              |

| Module titl   | e  |   |                       | Abbreviation  |  |  |
|---|--|---|-----------------------|---|--|--|
| Symmetry,   | chemical bonding and ligh  | nt (DD)                                       |                       | 08-PC-SBL-DA-152-m01  |  |  |
| Module co   | ordinator  |   | Module offered by     |   |  |  |
| lecturer of lecture "Symmetrie, chemische Bindung and<br>Licht"                               |  |   | Institute of Physica  | l and Theoretical Chemistry   |  |  |
| ECTS Me   | thod of grading  | Only after succ. con                          | npl. of module(s)     |   |  |  |
| 6 nu  | nerical grade  |   |                       |   |  |  |
| Duration  | Module level   | Other prerequisites                           | i                     |   |  |  |
| 1 semester  | undergraduate  |   |                       |   |  |  |
| Contents  |  |   |                       |   |  |  |
| tions, poin   |  | and selection rules. Th                       | e module deals with   | on group theory, symmetry opera-<br>the chemical bond based on the ational chemistry. |  |  |
| Intended le   | arning outcomes  |   |                       |   |  |  |
|   | re able to analyse the symr<br>erties of a particular molect   |   |                       | conclusions about the spectros-   |  |  |
| Courses (ty   | pe, number of weekly cont  | act hours, language –                         | - if other than Germa | in)   |  |  |
| V (3) + Ü (2  | )  |   |                       |   |  |  |
|   | assessment (type, scope, l<br>ation on whether module o  |   |                       | tion offered — if not every seme-   |  |  |
| <ul><li>b) oral example</li><li>c) oral example</li><li>d) log (apple) presentation</li></ul> | xamination (approx. 90 to<br>nination of one candidate<br>nination in groups of up to<br>rox. 20 pages) or<br>tion (approx. 30 minutes)<br>of assessment: German and | each (20 to 30 minute<br>3 candidates (approx | -                     | didate) or  |  |  |
| Allocation  | of places  |   |                       |   |  |  |
|   |  |   |                       |   |  |  |
| Additional  | information  |   |                       |   |  |  |
|   |  |   |                       |   |  |  |
| Workload  |  |   |                       |   |  |  |
| 180 h   |  |   |                       |   |  |  |
| Teaching c  | ycle   |   |                       |   |  |  |
|   |  |   |                       |   |  |  |
| Referred to   | <b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)   |   |                       |   |  |  |
|   |  |   |                       |   |  |  |
| Module ap   | pears in   |   |                       |   |  |  |
| Bachelor's  | degree (1 major) Chemistry   |   |                       |   |  |  |
| Bachelor's degree (1 major) Chemistry (2017)  |  |   |                       |   |  |  |

| Modul  | Module title Abbreviation   |   |                                      |                       |                       |             |  |
|--|---|---|--------------------------------------|-----------------------|-----------------------|-------------|--|
| Therm  | odynam  | nics, Kinetics, Electroche  | mistry                               |                       | 08-PC-TKE-152-m01     | _           |  |
| Modul  | e coord   | inator  |                                      | Module offered by     |                       |             |  |
|  |   | ture "Thermodynamik, Ki   | netik Elektroche-                    |                       | l and Theoretical Ch  | omistry     |  |
| mie"   | r   | · ·   |                                      |                       |                       | ennstry     |  |
| ECTS   |   | od of grading   | Only after succ. compl. of module(s) |                       |                       |             |  |
| 9  | ·   | rical grade   |                                      |                       |                       |             |  |
| Duratio  |   | Module level  | Other prerequisites                  |                       |                       |             |  |
| 1 seme   | ster  | undergraduate   |                                      |                       |                       |             |  |
| Contents                                       |   |   |                                      |                       |                       |             |  |
| chemio<br>dynam                                | al equi<br>ic proce   | ntroduces students to the<br>libria, ideal and real gass<br>esses, it discusses the fu                    | ses/solutions/mixed                  | phases and electroc   |                       |             |  |
| Intend   | ed learı  | ning outcomes   |                                      |                       |                       |             |  |
| solutio  | ns, gas   | able to explain the laws o<br>es, mixed phases and ele<br>actions.  |                                      |                       |                       |             |  |
| Course   | <b>Courses</b> (type, number of weekly contact hours, language — if other than German)                                  |   |                                      |                       |                       |             |  |
| V (4) +  | Ü (2)   |   |                                      |                       |                       |             |  |
|  |   | s <b>essment</b> (type, scope, la<br>on on whether module ca  |                                      |                       | tion offered — if not | every seme- |  |
| d) log (<br>e) pres<br>Langua                  | (approx<br>entatio  | ation in groups of up to 3<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and,<br>bonus |                                      | . 15 minutes per cano | iluale) oi            |             |  |
| Allocat  | ion of p  | olaces  |                                      |                       |                       |             |  |
|  |   |   |                                      |                       |                       |             |  |
| Additio  | onal inf  | ormation  |                                      |                       |                       |             |  |
|  |   |   |                                      |                       |                       |             |  |
| Worklo   | ad  |   |                                      |                       |                       |             |  |
| 270 h  |   |   |                                      |                       |                       |             |  |
|  | ng cycl   | e   |                                      |                       |                       |             |  |
|  |   |   |                                      |                       |                       |             |  |
| Referre  | ed to in  | LPOI (examination regu  | lations for teaching-o               | degree programmes)    |                       |             |  |
| §6211  | Vr. 1   |   |                                      |                       |                       |             |  |
| Modul  | Module appears in   |   |                                      |                       |                       |             |  |
| Bachel   | or's de   | gree (1 major) Biochemis  | try (2015)                           |                       |                       |             |  |
| Bachelor's degree (1 major) Chemistry (2015)   |   |   |                                      |                       |                       |             |  |
| Bachelor's degree (1 major) Mathematics (2015) |   |   |                                      |                       |                       |             |  |
|  | Bachelor's degree (1 major) Computational Mathematics (2015)<br>Bachelor's degree (1 major) Functional Materials (2015) |   |                                      |                       |                       |             |  |
|  |   |   | -                                    | Chomistry (2015)      |                       |             |  |
| Bachel   | or's de   | mination for the teaching<br>gree (1 major) Biochemist  | try (2017)                           | Chemisuy (2015)       |                       |             |  |
| Bachel   | or's de   | gree (1 major) Chemistry  | (2017)                               |                       |                       |             |  |
| inchalar's with a major Chamistry (2015)       |   |   |                                      |                       |                       |             |  |

#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor's degree (1 major) Functional Materials (2021) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Functional Materials (2025)

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 49 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |              |

| Modul                         | Module title Abbreviation                    |  |                        |                       |                                    |  |
|-------------------------------|--|--|------------------------|-----------------------|------------------------------------|--|
| Progra                        | mming  | and numerical methods  |                        |                       | 08-PKC-152-m01                     |  |
| Module                        | e coord                                      | inator   |                        | Module offered by     |                                    |  |
| lecture                       | r of lec                                     | ture "Programmierkurs fü   | r Chemiker"            | Institute of Physica  | l and Theoretical Chemistry        |  |
| ECTS                          | Metho  | od of grading  | Only after succ. com   | pl. of module(s)      |                                    |  |
| 5                             | (not) s                                      | successfully completed   |                        |                       |                                    |  |
| Duratio                       | on   | Module level   | Other prerequisites    |                       |                                    |  |
| 1 seme                        | ster   | undergraduate  |                        |                       |                                    |  |
| Conten                        | ts   |  |                        |                       |                                    |  |
|                               |  | rovides an introduction t<br>d to problems in chemist  |                        | of a programming lar  | nguage and discusses how they      |  |
| Intend                        | ed lear                                      | ning outcomes  |                        |                       |                                    |  |
| Studer<br>chemis              |  | able to describe the fund  | amentals of the prog   | ramming language a    | nd to apply them to problems in    |  |
| Course                        | <b>s</b> (type                               | , number of weekly conta   | ct hours, language —   | · if other than Germa | an)                                |  |
| S (2) +                       | Ü (2)  |  |                        |                       |                                    |  |
|                               |  | <b>sessment</b> (type, scope, la<br>ion on whether module ca   |                        |                       | ation offered — if not every seme- |  |
| d) log (<br>e) pres<br>Langua | approx<br>entatio<br>ige of a                | ation in groups of up to 3<br>. 20 pages) or<br>n (approx. 30 minutes)<br>ssessment: German and,<br>ffered: Once a year, sum | or English             |                       |                                    |  |
| Allocat                       | ion of <b>j</b>                              | olaces   |                        |                       |                                    |  |
|                               |  |  |                        |                       |                                    |  |
| Additio                       | onal inf                                     | ormation   |                        |                       |                                    |  |
|                               |  |  |                        |                       |                                    |  |
| Worklo                        | ad   |  |                        |                       |                                    |  |
| 150 h                         |  |  |                        |                       |                                    |  |
| Teachi                        | ng cycl                                      | e  |                        |                       |                                    |  |
|                               |  |  |                        |                       |                                    |  |
| Referre                       | ed to in                                     | LPOI (examination regu   | lations for teaching-o | legree programmes)    |                                    |  |
|                               |  |  |                        |                       |                                    |  |
| Modul                         | e appea                                      | ars in   |                        |                       |                                    |  |
|                               | Bachelor's degree (1 major) Chemistry (2015) |  |                        |                       |                                    |  |
| Bachel                        | or's de                                      | gree (1 major) Functional  | Materials (2015)       |                       |                                    |  |
|                               |  | gree (1 major) Chemistry   |                        |                       |                                    |  |
|                               |  | gree (1 major) Functional  |                        |                       |                                    |  |
| Bachel                        | or's de                                      | gree (1 major) Functional  | Materials (2025)       |                       |                                    |  |

| Module tit  | le   |                        | Abbreviation          |   |  |  |  |
|---|--|------------------------|-----------------------|---|--|--|--|
| Applied Sp  | pectroscopy 3  |                        |                       | 08-PS3-152-m01  |  |  |  |
| Module co   | ordinator  |                        | Module offered by     |   |  |  |  |
| lecturer of lecture "Praktische Spektroskopie 3"  |  |                        |                       | l and Theoretical Chemistry                                       |  |  |  |
|   | ethod of grading   | Only after succ. com   |                       |   |  |  |  |
|   | imerical grade   |                        |                       |   |  |  |  |
| Duration  | Module level   | Other prerequisites    |                       |   |  |  |  |
| 1 semeste   | r undergraduate  |                        |                       |   |  |  |  |
| Contents  |  |                        |                       |   |  |  |  |
| practice ar   |  | aphs. We will record   |                       | e of spectroscopic methods in<br>fluorescence and vibration spec- |  |  |  |
| Intended l  | earning outcomes   |                        |                       |   |  |  |  |
|   | are able to work with differen<br>rror discussions.      | t spectrometers and    | to interpret the resu | lting spectra. They are able to                                   |  |  |  |
| Courses (t  | ype, number of weekly conta                              | ct hours, language —   | · if other than Germa | ın)   |  |  |  |
| V (3)   |  |                        |                       |   |  |  |  |
| Method of assessment (type, scope, language — if other than German, examination offered — if not every seme-<br>ster, information on whether module can be chosen to earn a bonus)<br>a) written examination (approx. 90 to 180 minutes) or<br>b) oral examination of one candidate each (20 to 30 minutes) or<br>c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or<br>d) log (approx. 20 pages) or |  |                        |                       |   |  |  |  |
| Language  | ation (approx. 30 minutes)<br>of assessment: German and/ | or English             |                       |   |  |  |  |
| Allocation  | of places  |                        |                       |   |  |  |  |
|   |  |                        |                       |   |  |  |  |
| Additional  | information  |                        |                       |   |  |  |  |
|   |  |                        |                       |   |  |  |  |
| Workload  |  |                        |                       |   |  |  |  |
| 150 h   |  |                        |                       |   |  |  |  |
| Teaching o  | cycle  |                        |                       |   |  |  |  |
|   |  |                        |                       |   |  |  |  |
| Referred to   | o in LPO I (examination regu                             | lations for teaching-o | legree programmes)    |   |  |  |  |
|   |  |                        |                       |   |  |  |  |
| Module ap   | Module appears in  |                        |                       |   |  |  |  |
| Bachelor's degree (1 major) Chemistry (2015)<br>Bachelor's degree (1 major) Functional Materials (2015)<br>Master's degree (1 major) Functional Materials (2016)<br>Bachelor's degree (1 major) Chemistry (2017)<br>Bachelor's degree (1 major) Functional Materials (2021)<br>Bachelor's degree (1 major) Functional Materials (2021)  |  |                        |                       |   |  |  |  |
| Bachelor's  | degree (1 major) Functional                              | Materials (2025)       |                       |   |  |  |  |

| Module title   |   |   |  | Abbreviation   |  |  |
|--|---|---|--|--|--|--|
| Quantum C  | Quantum Chemistry 08-TC-152-m01   |   |  |  |  |  |
| Module coordinator   |   |   | Module offered by  |  |  |  |
| lecturer of lecture "Quantenchemie"  |   |   | Institute of Physical  | l and Theoretical Chemistry  |  |  |
| ECTS Me  | thod of grading   | Only after succ. com  | pl. of module(s)   |  |  |  |
| 3 nu   | merical grade   |   |  |  |  |  |
| Duration   | Module level  | Other prerequisites   |  |  |  |  |
| 1 semester   | undergraduate   |   |  |  |  |  |
| Contents   |   |   |  |  |  |  |
| spin, the Pa   |   | inants, the Hartree-Fo  | ock method, correlati  | antum chemistry. It focuses on<br>ion energy, configuration interac-<br>dels of H2+. |  |  |
| Intended le  | earning outcomes  |   |  |  |  |  |
| Students a   | re able to describe excited s   | tates of molecules w  | ith the help of key co   | oncepts and models.  |  |  |
| Courses (ty  | pe, number of weekly conta  | ct hours, language –  | · if other than Germa  | n)   |  |  |
| V (2) + Ü (1)  | )   |   |  |  |  |  |
|  | <b>assessment</b> (type, scope, la<br>nation on whether module ca   | 5 5   |  | tion offered — if not every seme-  |  |  |
| b) oral exar<br>c) oral exar<br>d) log (app<br>e) presenta                                   | examination (approx. 90 to 1<br>mination of one candidate ex<br>nination in groups of up to 3<br>rox. 20 pages) or<br>ation (approx. 30 minutes)<br>of assessment: German and/  | ach (20 to 30 minute<br>3 candidates (approx.   | -  | didate) or   |  |  |
| Allocation   |   |   |  |  |  |  |
|  |   |   |  |  |  |  |
| Additional   | information   |   |  |  |  |  |
| Additionat   | intornation   |   |  |  |  |  |
| Workload   |   |   |  |  |  |  |
|  |   |   |  |  |  |  |
| 90 h   |   |   |  |  |  |  |
| Teaching c   | ycle  |   |  |  |  |  |
|  |   |   |  |  |  |  |
|  | in LPO I (examination regu  | lations for teaching-o  | legree programmes)   |  |  |  |
| § 22    Nr. 1<br>§ 22    Nr. 2<br>§ 22    Nr. 3  | 2 f)  |   |  |  |  |  |
| Module appears in  |   |   |  |  |  |  |
| Bachelor's degree (1 major) Chemistry (2015)   |   |   |  |  |  |  |
| Bachelor's<br>Bachelor's<br>Bachelor's<br>First state of<br>First state of<br>First state of | degree (1 major) Mathemati<br>degree (1 major) Computatio<br>degree (1 major) Functional<br>examination for the teaching<br>examination for the teaching<br>examination for the teaching<br>examination for the teaching<br>aching degree Gymnasium N | cs (2015)<br>onal Mathematics (20<br>Materials (2015)<br>g degree Grundschule<br>g degree Realschule C<br>g degree Gymnasium<br>g degree Mittelschule | chemistry (2015)<br>Chemistry (2015)<br>Chemistry (2015)<br>Chemistry (2015) | ork Bavaria (ENB) (2016)   |  |  |

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 52 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |              |

#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) First state examination for the teaching degree Mittelschule Chemistry (2020 (Prüfungsordnungsversion 2015)) Bachelor's degree (1 major) Functional Materials (2021) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Mathematics (2023) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025) Bachelor's degree (1 major) Functional Materials (2025)

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 53 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |              |

| Module title Abbreviation |                      |   |                        |                       |                                   |
|---------------------------|----------------------|---|------------------------|-----------------------|-----------------------------------|
| Advand                    | ced lab              | oratory course  |                        |                       | 08-VP-152-m01                     |
| Modul                     | e coord              | inator  |                        | Module offered by     |                                   |
|                           |                      | search group offering the                             | e module               | Faculty of Chemistr   | v and Pharmacy                    |
| ECTS                      | 1                    | od of grading   | Only after succ. con   | · · ·                 | y and i namacy                    |
| 5                         |                      | successfully completed                                |                        |                       |                                   |
| Duratio                   | on                   | Module level  | Other prerequisites    |                       |                                   |
| 1 seme                    | ester                | undergraduate   |                        |                       |                                   |
| Conten                    | nts                  |   |                        |                       |                                   |
|                           |                      | vives students the opport<br>ne in question.          | unity to explore a res | earch topic and app   | ly the methods commonly used      |
| Intend                    | ed lear              | ning outcomes   |                        |                       |                                   |
| Studen<br>oral pre        |                      | · · ·   | research topic and p   | resent the results of | their work in a written report or |
| Course                    | <b>es</b> (type      | , number of weekly conta                              | ict hours, language –  | - if other than Germa | n)                                |
| P (10)                    |                      |   |                        |                       |                                   |
|                           |                      | sessment (type, scope, la<br>ion on whether module ca |                        |                       | tion offered — if not every seme- |
|                           |                      | 15 minutes)<br>Issessment: German and                 | /or English            |                       |                                   |
| Allocat                   | tion of <sub>l</sub> | places  |                        |                       |                                   |
|                           |                      |   |                        |                       |                                   |
| Additic                   | onal inf             | ormation  |                        |                       |                                   |
| Additic<br>20 day         |                      | ormation on module dura                               | ation: block placemer  | nt / block taught pra | ctical course with a duration of  |
| Worklo                    |                      |   |                        |                       |                                   |
| 150 h                     |                      |   |                        |                       |                                   |
| Teachi                    | ng cycl              | e   |                        |                       |                                   |
|                           |                      |   | -                      |                       |                                   |
| Referre                   | ed to in             | LPOI (examination regu                                | lations for teaching-  | degree programmes)    |                                   |
|                           |                      |   |                        |                       |                                   |
|                           | e annea              | •   |                        |                       |                                   |
| Module                    | c uppci              | ars in  |                        |                       |                                   |
|                           |                      | a <b>rs in</b><br>gree (1 major) Chemistry            | (2015)                 |                       |                                   |

| Modul           | Module title Abbreviation  |  |                        |                        |                                    |  |
|-----------------|--|--|------------------------|------------------------|------------------------------------|--|
| Qualifi         | cations  | - Partner University 1                                       |                        |                        | 08-VPUB1-152-m01                   |  |
| Modul           | e coord  | inator   |                        | Module offered by      |                                    |  |
| progra          | mme co   | oordinator of the exchang                                    | e programme            | Faculty of Chemistr    | y and Pharmacy                     |  |
| ECTS            | Metho  | od of grading  | Only after succ. con   | npl. of module(s)      | · · · · ·                          |  |
| 25              | (not) s  | successfully completed                                       |                        |                        |                                    |  |
| Durati          | on   | Module level   | Other prerequisites    |                        |                                    |  |
| 2 seme          | ester  | undergraduate  | Please consult with    | course advisory serv   | vice in advance.                   |  |
| Conter          | nts  |  |                        |                        |                                    |  |
| This m          | odule d  | liscusses topics from the                                    | curriculum of the par  | rtner university abroa | ad.                                |  |
| Intend          | ed lear  | ning outcomes  |                        |                        |                                    |  |
| Studer<br>sity. | nts have   | e developed the knowled                                      | ge and skills taught i | n the courses attend   | led by them at the partner univer- |  |
| Course          | es (type   | , number of weekly conta                                     | ct hours, language –   | - if other than Germa  | ın)                                |  |
|                 |  | signed to module<br>pecified by partner unive                | ersity abroad          |                        |                                    |  |
|                 |  | <b>sessment</b> (type, scope, la<br>ion on whether module ca |                        |                        | tion offered — if not every seme-  |  |
|                 |  | as specified by partner u ssessment: German and,             |                        | at partner university  | abroad                             |  |
| Allocat         | tion of p  | olaces   |                        |                        |                                    |  |
|                 |  |  |                        |                        |                                    |  |
| Additio         | onal inf   | ormation   |                        |                        |                                    |  |
|                 |  |  |                        |                        |                                    |  |
| Worklo          | bad  |  |                        |                        |                                    |  |
| 750 h           |  |  |                        |                        |                                    |  |
| Teachi          | ng cycl  | e  |                        |                        |                                    |  |
|                 |  |  |                        |                        |                                    |  |
| Referre         | <b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes) |  |                        |                        |                                    |  |
|                 |  |  |                        |                        |                                    |  |
| Modul           | Module appears in  |  |                        |                        |                                    |  |
|                 |  | gree (1 major) Chemistry                                     | (2015)                 |                        |                                    |  |
| Bachel          | lor's de   | gree (1 major) Chemistry                                     | (2017)                 |                        |                                    |  |

| Module   | e title   |  |                        |                                   | Abbreviation                       |  |
|--|---|--|------------------------|-----------------------------------|------------------------------------|--|
| Qualifications - Partner University 2 08-VPUB2-152-mo1 |   |  |                        | 08-VPUB2-152-m01                  |                                    |  |
| Module coordinator Module offered by                   |   |  |                        |                                   |                                    |  |
| progra   | programme coordinator of the exchange prog                                    |  | e programme            | Faculty of Chemistry and Pharmacy |                                    |  |
|  |   | Only after succ. com   |                        |                                   |                                    |  |
| 25   | nume  | rical grade  |                        |                                   |                                    |  |
| Duratio  | on  | Module level   | Other prerequisites    |                                   |                                    |  |
| 2 seme   | emester undergraduate Please consult with course advisory service in advance. |  |                        | vice in advance.                  |                                    |  |
| Conten   | ts  |  |                        |                                   |                                    |  |
| This m   | odule c   | liscusses topics from the                                    | curriculum of the par  | rtner university abroa            | ad.                                |  |
| Intend   | ed lear   | ning outcomes  | ,                      |                                   |                                    |  |
| Studen<br>sity.  | nts have  | e developed the knowled                                      | ge and skills taught i | n the courses attend              | led by them at the partner univer- |  |
| Course   | <b>s</b> (type  | , number of weekly conta                                     | ct hours, language —   | if other than Germa               | in)                                |  |
| No cou   | rses as   | signed to module   |                        |                                   |                                    |  |
|  |   | <b>sessment</b> (type, scope, la<br>ion on whether module ca |                        |                                   | tion offered — if not every seme-  |  |
|  |   | as specified by partner u<br>ssessment: German and,          |                        | at partner university             | r abroad                           |  |
| Allocat  | ion of <sub>l</sub>   | places   |                        |                                   |                                    |  |
|  |   |  |                        |                                   |                                    |  |
| Additio  | onal inf  | ormation   |                        |                                   |                                    |  |
|  |   |  |                        |                                   |                                    |  |
| Worklo   | ad  |  |                        |                                   |                                    |  |
| 750 h  |   |  |                        |                                   |                                    |  |
| Teachi   | ng cycl   | e  |                        |                                   |                                    |  |
|  |   |  |                        |                                   |                                    |  |
| Referre  | ed to in  | LPO I (examination regu                                      | lations for teaching-o | legree programmes)                |                                    |  |
|  |   |  |                        |                                   |                                    |  |
| Module   | e appea   | ars in   |                        |                                   |                                    |  |
|  |   | gree (1 major) Chemistry                                     | (2015)                 |                                   |                                    |  |
| Bachel   | or's de   | gree (1 major) Chemistry                                     | (2017)                 |                                   |                                    |  |

| Module  | e title   |                                 |                               | Abbreviation         |              |
|---|---|---------------------------------|-------------------------------|----------------------|--------------|
| Mather  | natics for students in Chemis   | stry and Biology                |                               | 10-M-MCB-152-m01     |              |
|   |   |                                 |                               |                      |              |
|   | e coordinator   |                                 | Module offered by             |                      |              |
| Dean o  | f Studies Mathematik (Mathe   |                                 | Institute of Mathem           | natics               |              |
| ECTS  | Method of grading   | Only after succ. con            | npl. of module(s)             |                      |              |
| 5   | numerical grade   |                                 |                               |                      |              |
| Duration         Module level         Other prerequisites |   |                                 |                               |                      |              |
| 1 seme  | ster undergraduate  |                                 |                               |                      |              |
| Conten  | ts  |                                 |                               |                      |              |
| of funct  | nal relations, differentiation<br>tions in several variables, po<br>s in statistics.            |                                 |                               |                      |              |
| Intende   | ed learning outcomes  |                                 |                               |                      |              |
| apply b   | dent is able to recognise and<br>pasic mathematical methods                                     | to them and interpret th        | e results.                    |                      | il problems, |
|   | <b>s</b> (type, number of weekly co   | ntact hours, language –         | - if other than Germa         | n)                   |              |
| V (3) +   | Ü (2)   |                                 |                               |                      |              |
| ster, in  | d of assessment (type, scope<br>formation on whether module                                     | e can be chosen to earn         | a bonus)                      |                      | every seme-  |
|   | examination (approx. 90 to 1  | 20 minutes) and writter         | n exercises (approx.          | 25)                  |              |
| Allocat   | ion of places   |                                 |                               |                      |              |
|   |   |                                 |                               |                      |              |
| Additio   | onal information  |                                 |                               |                      |              |
| prüften<br>state-ce                                       | nt to Section 2 Subsection 2<br>Lebensmittelchemikerinnen<br>ertified food chemists, APOLr      | und Lebensmittelchem            | iker (Regulation on t         | he training and exan | nination of  |
| Worklo  | ad  |                                 |                               |                      |              |
| 150 h   |   |                                 |                               |                      |              |
| Teachi  | ng cycle  |                                 |                               |                      |              |
|   |   |                                 |                               |                      |              |
| Referre   | ed to in LPO I (examination re  | gulations for teaching-         | degree programmes)            |                      |              |
|   |   |                                 |                               |                      |              |
| Module  | e appears in  |                                 |                               |                      |              |
|   | or's degree (1 major) Biochen   | nistry (2015)                   |                               |                      |              |
|   | or's degree (1 major) Biology   |                                 |                               |                      |              |
|   | or's degree (1 major) Chemist   |                                 |                               |                      |              |
| Bachelor's degree (1 major) Food Chemistry (2015)         |   |                                 |                               |                      |              |
| Bachelor's degree (1 major) Food Chemistry (2016)         |   |                                 |                               |                      |              |
|   | or's degree (1 major) Biology   |                                 |                               |                      |              |
|   | or's degree (1 major, 1 minor)  | -                               |                               |                      |              |
|   | or's degree (1 major, 1 minor)  | -                               | 10r, 2018)                    |                      |              |
|   | or's degree (2 majors) Digital  |                                 |                               |                      |              |
| June a hal  | or's degree (1 major) Food Ch   |                                 |                               |                      |              |
|   |   |                                 |                               |                      |              |
| Bachel  | or's degree (1 major) Biology   |                                 |                               |                      |              |
| Bachel<br>Bachel  | or's degree (1 major) Biology<br>or's degree (1 major) Food Ch                                  | emistry (2021)                  |                               |                      |              |
| Bachel<br>Bachel<br>Bachel                                | or's degree (1 major) Biology<br>or's degree (1 major) Food Ch<br>or's degree (1 major) Biology | emistry (2021)<br>(2022)        |                               |                      |              |
| Bachele<br>Bachele<br>Bachele<br>exchan                   | or's degree (1 major) Biology<br>or's degree (1 major) Food Ch                                  | emistry (2021)<br>(2022)<br>23) | ırg • generated 18-Apr-2025 • | oyam                 | page 57 / 70 |



Bachelor's degree (1 major) Food Chemistry (2025)

| Bachelor's with 1 major Chemistry (2015) | JMU Würzburg • generated 18-Apr-2025 • exam.       | page 58 / 70 |
|--|--|--------------|
|  | reg. data record Bachelor (180 ECTS) Chemie - 2015 |              |

| Module             | title   |                        |   | Abbreviation             |               |
|--------------------|---|------------------------|---|--------------------------|---------------|
| Introdu            | iction to Physics for Students                                    | of other Disciplines   |   | 11-EFNF-152-m01          |               |
| Module coordinator |   |                        | Madula affared by   |                          |               |
|                    |   |                        | Module offered by   |                          |               |
|                    | ing Director of the Institute of                                  |                        | Faculty of Physics a  | and Astronomy            |               |
| ECTS               | Method of grading   | Only after succ. co    | mpl. of module(s)   |                          |               |
| 7                  | numerical grade   |                        |   |                          |               |
| Duratio            |   | Other prerequisite     | S   |                          |               |
| 2 seme             |   |                        |   |                          |               |
| Conten             |   |                        |   |                          |               |
| Fundan<br>physics  | nentals of mechanics, vibratio                                    | on theory, thermodyna  | mics, optics, science   | of electricity, atomic   | c and nuclear |
| Intende            | ed learning outcomes  |                        |   |                          |               |
|                    | dents are able to identify fund<br>n physics. They are able to ap |                        |   | -                        |               |
| Course             | <b>s</b> (type, number of weekly cor                              | tact hours, language   | — if other than Germa   | an)                      |               |
| V (4) +            | V (3)   |                        |   |                          |               |
| Method             | d of assessment (type, scope, formation on whether module         |                        |   | ition offered — if not   | every seme-   |
|                    | examination (60 to 120 minu                                       |                        | ,   |                          |               |
|                    | ion of places   |                        |   |                          |               |
| Allocat            |   |                        |   |                          |               |
| • • • • • • •      |   |                        |   |                          |               |
|                    | nal information   |                        |   |                          | 1) (          |
| nex 1 to           | ing to § 2 para. 2 sentence 2 A<br>the APOLmCh and No. 4 of a     |                        |   | er d) and No. I 1st lett | er d) of an-  |
| Worklo             | ad  |                        |   |                          |               |
| 210 h              |   |                        |   |                          |               |
| Teachi             | ng cycle  |                        |   |                          |               |
|                    |   |                        |   |                          |               |
| Referre            | d to in LPO I (examination re                                     | gulations for teaching | -degree programmes)   | 1                        |               |
|                    | ·   |                        |   |                          |               |
| Module             | e appears in  |                        |   |                          |               |
|                    | or's degree (1 major) Biology (                                   |                        |   |                          |               |
|                    | or's degree (1 major) Chemist                                     |                        |   |                          |               |
|                    | or's degree (1 major) Psycholo                                    |                        |   |                          |               |
|                    | or's degree (1 major, 1 minor)                                    |                        |   |                          |               |
|                    | or's degree (1 major, 1 minor)                                    |                        | udies (2013)  |                          |               |
| Bachel             | or's degree (1 major, 1 minor)                                    | Russian Language and   | d Culture (2008)  |                          |               |
| Bachel             | or's degree (2 majors) Special                                    | Education (2009)       |   |                          |               |
| -                  | er Theologiae Catholic Theolo                                     |                        |   |                          |               |
|                    | ate examination for the teachi                                    |                        |   |                          |               |
|                    | ate examination for the teachi                                    |                        |   |                          |               |
|                    | ate examination for the teachi                                    | ,                      |   |                          |               |
|                    | ate examination for the teachi                                    |                        |   |                          |               |
|                    | ate examination for the teaching                                  | ,                      |   | 9)                       |               |
|                    | ate examination for the teaching                                  |                        | -   |                          |               |
|                    | ate examination for the teachi<br>ate examination for the teachi  | ,                      | • •   | 00)                      |               |
|                    |   |                        |   | •                        | page == /     |
| Dachelors          | with 1 major Chemistry (2015)                                     |                        | ourg • generated 18-Apr-2025<br>cord Bachelor (180 ECTS) Chen |                          | page 59 / 70  |

First state examination for the teaching degree Gymnasium Computer Science (2009) First state examination for the teaching degree Gymnasium Italian Studies (2009) First state examination for the teaching degree Gymnasium Catholic Theology (2009) First state examination for the teaching degree Gymnasium Latin Philology (2009) First state examination for the teaching degree Gymnasium Mathematics (2012) First state examination for the teaching degree Gymnasium Mathematics (2009) First state examination for the teaching degree Gymnasium Music (2009) First state examination for the teaching degree Gymnasium Physics (2009) First state examination for the teaching degree Gymnasium Russian (2009) First state examination for the teaching degree Gymnasium Social Science (2009) First state examination for the teaching degree Gymnasium Spanish Studies (2009) First state examination for the teaching degree Gymnasium Science of Sport (2009) First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2009) Bachelor's degree (2 majors) English and American Studies (2009) Bachelor's degree (2 majors) German Language and Literature (2013) Bachelor's degree (1 major) Biochemistry (2015) Bachelor's degree (1 major) Chemistry (2015) Bachelor's degree (1 major) Geography (2015) Bachelor's degree (1 major) Computer Science (2015) Bachelor's degree (1 major) Food Chemistry (2015) Bachelor's degree (1 major) Mathematics (2015) Bachelor's degree (1 major) Musicology (2015) Bachelor's degree (1 major) Physics (2015) Bachelor's degree (1 major) Psychology (2015) Bachelor's degree (1 major) Business Management and Economics (2015) Bachelor's degree (1 major) Nanostructure Technology (2015) Bachelor's degree (1 major) Biomedicine (2015) Bachelor's degree (1 major) Music Education (2015) Bachelor's degree (1 major) Computational Mathematics (2015) Bachelor's degree (1 major) Political and Social Studies (2015) Bachelor's degree (1 major) Functional Materials (2015) Bachelor's degree (1 major) Academic Speech Therapy (2015) Bachelor's degree (1 major) Indology/South Asian Studies (2015) Bachelor's degree (1 major, 1 minor) Egyptology (2015) Bachelor's degree (1 major, 1 minor) Pedagogy (2015) Bachelor's degree (1 major, 1 minor) History (2015) Bachelor's degree (1 major, 1 minor) Musicology (2015) Bachelor's degree (1 major, 1 minor) Philosophy (2015) Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (1 major, 1 minor) Ancient World (2015) Bachelor's degree (1 major, 1 minor) Philosophy and Religion (2015) Bachelor's degree (1 major, 1 minor) Theological Studies (2015) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2015) Bachelor's degree (1 major, 1 minor) Russian Language and Culture (2015) Bachelor's degree (1 major, 1 minor) German Language and Literature (2015) Bachelor's degree (2 majors) Egyptology (2015) Bachelor's degree (2 majors) Pedagogy (2015) Bachelor's degree (2 majors) Protestant Theology (2015) Bachelor's degree (2 majors) Musicology (2015) Bachelor's degree (2 majors) Philosophy (2015) Bachelor's degree (2 majors) Special Education (2015) Bachelor's degree (2 majors) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (2 majors) Latin Philology (2015) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. page 60 / 70 reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (2 majors) Music Education (2015) Bachelor's degree (2 majors) Philosophy and Religion (2015) Bachelor's degree (2 majors) Theological Studies (2015) Bachelor's degree (2 majors) Political and Social Studies (2015) Bachelor's degree (2 majors) Russian Language and Culture (2015) Bachelor's degree (2 majors) Greek Philology (2015) Bachelor's degree (2 majors) European Ethnology (2015) Bachelor's degree (2 majors) Indology/South Asian Studies (2015) First state examination for the teaching degree Gymnasium English (2015) First state examination for the teaching degree Gymnasium Biology (2015) First state examination for the teaching degree Gymnasium Chemistry (2015) First state examination for the teaching degree Gymnasium Geography (2015) First state examination for the teaching degree Gymnasium French Studies (2015) First state examination for the teaching degree Gymnasium German (2015) First state examination for the teaching degree Gymnasium History (2015) First state examination for the teaching degree Gymnasium Greek Philology (2015) First state examination for the teaching degree Gymnasium Computer Science (2015) First state examination for the teaching degree Gymnasium Italian Studies (2015) First state examination for the teaching degree Gymnasium Catholic Theology (2015) First state examination for the teaching degree Gymnasium Latin Philology (2015) First state examination for the teaching degree Gymnasium Mathematics (2015) First state examination for the teaching degree Gymnasium Physics (2015) First state examination for the teaching degree Gymnasium Russian (2015) First state examination for the teaching degree Gymnasium Social Science (2015) First state examination for the teaching degree Gymnasium Spanish Studies (2015) First state examination for the teaching degree Gymnasium Science of Sport (2015) Bachelor's degree (2 majors) Geography (2015) Bachelor's degree (2 majors) French Studies (2015) Bachelor's degree (2 majors) History (2015) Bachelor's degree (2 majors) Sport Science (Focus on health and Pedagogics in Movement) (2015) Bachelor's degree (2 majors) German Language and Literature (2015) Bachelor's degree (1 major) Mathematical Physics (2016) First state examination for the teaching degree Gymnasium Music (2015) First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2015) Bachelor's degree (1 major, 1 minor) French Studies (2016) Bachelor's degree (2 majors) French Studies (2016) Bachelor's degree (1 major, 1 minor) Italian Studies (2016) Bachelor's degree (2 majors) Italian Studies (2016) Bachelor's degree (1 major, 1 minor) Spanish Studies (2016) Bachelor's degree (2 majors) Spanish Studies (2016) Bachelor's degree (1 major) Romanic Languages (French/Italian) (2016) Bachelor's degree (1 major) Romanic Languages (French/Spanish) (2016) Bachelor's degree (1 major) Romanic Languages (Italian/Spanish) (2016) Bachelor's degree (1 major) Business Information Systems (2016) First state examination for the teaching degree Gymnasium French Studies (2016) First state examination for the teaching degree Gymnasium Italian Studies (2016) First state examination for the teaching degree Gymnasium Spanish Studies (2016) Bachelor's degree (1 major) Games Engineering (2016) Bachelor's degree (1 major, 1 minor) English and American Studies (2016) Bachelor's degree (2 majors) English and American Studies (2016) First state examination for the teaching degree Gymnasium English (2016) Bachelor's degree (1 major) Media Communication (2016) Bachelor's degree (1 major) Food Chemistry (2016) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. page 61 / 70

reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (1 major, 1 minor) Digital Humanities (2016) Bachelor's degree (1 major) Biology (2017) Bachelor's degree (1 major, 1 minor) Geography (2017) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2017) Bachelor's degree (1 major) Aerospace Computer Science (2017) Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017) Bachelor's degree (1 major, 1 minor) Museology and material culture (2017) Bachelor's degree (1 major) Economathematics (2017) Bachelor's degree (1 major) Games Engineering (2017) Bachelor's degree (1 major) Computer Science (2017) First state examination for the teaching degree Gymnasium Greek Philology (2018) Bachelor's degree (1 major) Media Communication (2018) Bachelor's degree (1 major) Biomedicine (2018) Bachelor's degree (1 major) Human-Computer Systems (2018) Bachelor's degree (2 majors) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Digital Humanities (2018) Bachelor's degree (2 majors) Digital Humanities (2018) First state examination for the teaching degree Gymnasium Physics (2018) Bachelor's degree (1 major) Computer Science (2019) First state examination for the teaching degree Gymnasium Mathematics (2019) Bachelor's degree (1 major, 1 minor) English and American Studies (2019) Bachelor's degree (1 major) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (2 majors) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Management and Economics (2019) Bachelor's degree (1 major) Modern China (2019) Bachelor's degree (1 major) Food Chemistry (2019) Bachelor's degree (1 major) Biomedicine (2020) Bachelor's degree (1 major) Pedagogy (2020) Bachelor's degree (1 major) Political and Social Studies (2020) Bachelor's degree (1 major) Business Information Systems (2020) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2020) Bachelor's degree (2 majors) European Ethnology (2020) Bachelor's degree (2 majors) Political and Social Studies (2020) Bachelor's degree (2 majors) Special Education (2020) Bachelor's degree (1 major) Physics (2020) Bachelor's degree (1 major) Nanostructure Technology (2020) Bachelor's degree (1 major) Mathematical Physics (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major, 1 minor) Museology and material culture (2020) First state examination for the teaching degree Gymnasium Physics (2020) Bachelor's degree (1 major, 1 minor) Pedagogy (2020) Bachelor's degree (2 majors) Pedagogy (2020) First state examination for the teaching degree Gymnasium Political and Social Studies (2020) Bachelor's degree (1 major) Psychology (2020) Bachelor's degree (1 major) Biology (2021) Magister Theologiae Catholic Theology (2021) Bachelor's degree (2 majors) History (2021) Bachelor's degree (1 major, 1 minor) History (2021) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record Bachelor (180 ECTS) Chemie - 2015

First state examination for the teaching degree Gymnasium History (2021) Bachelor's degree (1 major) Media Communication (2021) Bachelor's degree (2 majors) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) English and American Studies (2021) Bachelor's degree (2 majors) English and American Studies (2021) First state examination for the teaching degree Gymnasium English (2021) Bachelor's degree (1 major) Functional Materials (2021) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2021) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2021) Bachelor's degree (1 major) Food Chemistry (2021) Bachelor's degree (1 major) Quantum Technology (2021) Bachelor's degree (2 majors) Special Education (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Economathematics (2021) Bachelor's degree (1 major) Business Management and Economics (2021) Bachelor's degree (1 major) Human-Computer Systems (2022) Bachelor's degree (1 major, 1 minor) Museology and material culture (2022) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Economathematics (2022) Bachelor's degree (1 major) Mathematical Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2022) Bachelor's degree (2 majors) Ancient Near Eastern Archaeology (2022) Bachelor's degree (1 major, 1 minor) Ancient World (2022) Bachelor's degree (2 majors) Ancient Near Eastern Studies (2022) Bachelor's degree (1 major) Franco-German studies: language, culture, digital competence (2022) First state examination for the teaching degree Gymnasium Russian (2023) First state examination for the teaching degree Gymnasium Mathematics (2023) First state examination for the teaching degree Gymnasium English (2023) First state examination for the teaching degree Gymnasium Geography (2023) Bachelor's degree (1 major) European Law (2023) Bachelor's degree (1 major, 1 minor) English and American Studies (2023) Bachelor's degree (2 majors) English and American Studies (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Economathematics (2023) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) Special Education (2023) Bachelor's degree (1 major) Business Management and Economics (2023) Bachelor's degree (1 major) Geography (2023) Bachelor's degree (2 majors) Geography (2023) Bachelor's degree (1 major, 1 minor) Geography (2023) Bachelor's degree (2 majors) European Ethnology/Empiric Cultural Studies (2023) First state examination for the teaching degree Gymnasium German (2024) Bachelor's degree (1 major) Mathematical Physics (2024) Bachelor's degree (2 majors) German Language and Literature (2024) Bachelor's degree (1 major, 1 minor) German Language and Literature (2024) Bachelor's degree (1 major) Music Education (2024) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. page 63 / 70 reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (2 majors) Music Education (2024) Bachelor's degree (1 major, 1 minor) Music Education (2024) Bachelor's degree (1 major) Indology/South Asian Studies (2024) Bachelor's degree (2 majors) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Ancient World (2024) Bachelor's degree (2 majors) Digital Humanities (2024) Bachelor's degree (1 major, 1 minor) Digital Humanities (2024) Bachelor's degree (1 major) Midwifery (2024) Bachelor's degree (2 majors) Greek Philology (2024) Bachelor's degree (2 majors) Latin Philology (2024) First state examination for the teaching degree Gymnasium Latin Philology (2024) Bachelor's degree (1 major) Business Information Systems (2024) Bachelor's degree (1 major) Economathematics (2024) Bachelor's degree (1 major) Business Management and Economics (2024) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) First state examination for the teaching degree Gymnasium English (2024) First state examination for the teaching degree Gymnasium History (2024) First state examination for the teaching degree Gymnasium Greek Philology (2024) Bachelor's degree (1 major) Human-Computer-Interaction (2024) Bachelor's degree (2 majors) Art Education (2024) Bachelor's degree (1 major) Digital Business & Data Science (2024) Bachelor's degree (1 major) Classics (2024) Bachelor's degree (1 major) Diversity, Ethics and Religions (2024) Bachelor's degree (1 major) Functional Materials (2025) Bachelor's degree (1 major) (2025) Bachelor's degree (1 major) Food Chemistry (2025) Bachelor's degree (1 major, 1 minor) European Ethnology/Empiric Cultural Studies (2025) Bachelor's degree (1 major) Pedagogy (2025) Bachelor's degree (2 majors) Pedagogy (2025) Bachelor's degree (1 major) Economathematics (2025) Bachelor's degree (1 major) Academic Speech Therapy (2025) Bachelor's degree (1 major, 1 minor) Pedagogy (2025) Bachelor's degree (1 major) Games Engineering (2025)

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| Module coordinator Module offered by   |  |  |   |  |                            |
|  |  |  | Faculty of Physics a  | nd Astronomy   |                            |
| ECTS   | Method of grading  | Only after succ. con   | · · · · ·   | na Astronomy   |                            |
| 3  | (not) successfully completed   |  |   |  |                            |
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| Course   | <b>s</b> (type, number of weekly cont  | act hours, language –  | if other than Germa   | n)   |                            |
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| Each ex<br>ments   | o minutes).<br>xperiment comprises preparatio<br>can each be repeated once.  | on, performance and e  | evaluation. Test as w   | ell as performance o   | of experi-                 |
| Allocat  | ion of places  |  |   |  |                            |
| Only as  | s part of pool of general transfe  | rable skills (ASQ): 10   | olaces (lottery)  |  |                            |
| Additio  | onal information   |  |   |  |                            |
|  | ing to § 2 para. 2 sentence 2 AF<br>o the APOLmCh and No. 4 of an  | -  |   | r d) and No. I 1st lett  | er d) of an-               |
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| Deferme  | ed to in LPO I (examination regu   | utations for teaching-o  | legree programmes)  |  |                            |
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| <br><b>Module</b><br>Bachele<br>Bachele  | or's degree (1 major) Biology (2<br>or's degree (1 major) Chemistry  | (2010)   |   |  |                            |
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First state examination for the teaching degree Gymnasium Chemistry (2009) First state examination for the teaching degree Gymnasium Geography (2009) First state examination for the teaching degree Gymnasium French Studies (2009) First state examination for the teaching degree Gymnasium German (2009) First state examination for the teaching degree Gymnasium History (2009) First state examination for the teaching degree Gymnasium Greek Philology (2009) First state examination for the teaching degree Gymnasium Computer Science (2009) First state examination for the teaching degree Gymnasium Italian Studies (2009) First state examination for the teaching degree Gymnasium Catholic Theology (2009) First state examination for the teaching degree Gymnasium Latin Philology (2009) First state examination for the teaching degree Gymnasium Mathematics (2012) First state examination for the teaching degree Gymnasium Mathematics (2009) First state examination for the teaching degree Gymnasium Music (2009) First state examination for the teaching degree Gymnasium Physics (2009) First state examination for the teaching degree Gymnasium Russian (2009) First state examination for the teaching degree Gymnasium Social Science (2009) First state examination for the teaching degree Gymnasium Spanish Studies (2009) First state examination for the teaching degree Gymnasium Science of Sport (2009) First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2009) Bachelor's degree (2 majors) English and American Studies (2009) Bachelor's degree (2 majors) German Language and Literature (2013) Bachelor's degree (1 major) Biochemistry (2015) Bachelor's degree (1 major) Chemistry (2015) Bachelor's degree (1 major) Geography (2015) Bachelor's degree (1 major) Computer Science (2015) Bachelor's degree (1 major) Food Chemistry (2015) Bachelor's degree (1 major) Mathematics (2015) Bachelor's degree (1 major) Musicology (2015) Bachelor's degree (1 major) Physics (2015) Bachelor's degree (1 major) Psychology (2015) Bachelor's degree (1 major) Business Management and Economics (2015) Bachelor's degree (1 major) Nanostructure Technology (2015) Bachelor's degree (1 major) Biomedicine (2015) Bachelor's degree (1 major) Music Education (2015) Bachelor's degree (1 major) Computational Mathematics (2015) Bachelor's degree (1 major) Political and Social Studies (2015) Bachelor's degree (1 major) Functional Materials (2015) Bachelor's degree (1 major) Academic Speech Therapy (2015) Bachelor's degree (1 major) Indology/South Asian Studies (2015) Bachelor's degree (1 major, 1 minor) Egyptology (2015) Bachelor's degree (1 major, 1 minor) Pedagogy (2015) Bachelor's degree (1 major, 1 minor) History (2015) Bachelor's degree (1 major, 1 minor) Musicology (2015) Bachelor's degree (1 major, 1 minor) Philosophy (2015) Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (1 major, 1 minor) Ancient World (2015) Bachelor's degree (1 major, 1 minor) Philosophy and Religion (2015) Bachelor's degree (1 major, 1 minor) Theological Studies (2015) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2015) Bachelor's degree (1 major, 1 minor) Russian Language and Culture (2015) Bachelor's degree (1 major, 1 minor) German Language and Literature (2015) Bachelor's degree (2 majors) Egyptology (2015) Bachelor's degree (2 majors) Pedagogy (2015) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. page 66 / 70 reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (2 majors) Protestant Theology (2015) Bachelor's degree (2 majors) Musicology (2015) Bachelor's degree (2 majors) Philosophy (2015) Bachelor's degree (2 majors) Special Education (2015) Bachelor's degree (2 majors) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (2 majors) Latin Philology (2015) Bachelor's degree (2 majors) Music Education (2015) Bachelor's degree (2 majors) Philosophy and Religion (2015) Bachelor's degree (2 majors) Theological Studies (2015) Bachelor's degree (2 majors) Political and Social Studies (2015) Bachelor's degree (2 majors) Russian Language and Culture (2015) Bachelor's degree (2 majors) Greek Philology (2015) Bachelor's degree (2 majors) European Ethnology (2015) Bachelor's degree (2 majors) Indology/South Asian Studies (2015) First state examination for the teaching degree Gymnasium English (2015) First state examination for the teaching degree Gymnasium Biology (2015) First state examination for the teaching degree Gymnasium Chemistry (2015) First state examination for the teaching degree Gymnasium Geography (2015) First state examination for the teaching degree Gymnasium French Studies (2015) First state examination for the teaching degree Gymnasium German (2015) First state examination for the teaching degree Gymnasium History (2015) First state examination for the teaching degree Gymnasium Greek Philology (2015) First state examination for the teaching degree Gymnasium Computer Science (2015) First state examination for the teaching degree Gymnasium Italian Studies (2015) First state examination for the teaching degree Gymnasium Catholic Theology (2015) First state examination for the teaching degree Gymnasium Latin Philology (2015) First state examination for the teaching degree Gymnasium Mathematics (2015) First state examination for the teaching degree Gymnasium Physics (2015) First state examination for the teaching degree Gymnasium Russian (2015) First state examination for the teaching degree Gymnasium Social Science (2015) First state examination for the teaching degree Gymnasium Spanish Studies (2015) First state examination for the teaching degree Gymnasium Science of Sport (2015) Bachelor's degree (2 majors) Geography (2015) Bachelor's degree (2 majors) French Studies (2015) Bachelor's degree (2 majors) History (2015) Bachelor's degree (2 majors) Sport Science (Focus on health and Pedagogics in Movement) (2015) Bachelor's degree (2 majors) German Language and Literature (2015) Bachelor's degree (1 major) Mathematical Physics (2016) First state examination for the teaching degree Gymnasium Music (2015) First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2015) Bachelor's degree (1 major, 1 minor) French Studies (2016) Bachelor's degree (2 majors) French Studies (2016) Bachelor's degree (1 major, 1 minor) Italian Studies (2016) Bachelor's degree (2 majors) Italian Studies (2016) Bachelor's degree (1 major, 1 minor) Spanish Studies (2016) Bachelor's degree (2 majors) Spanish Studies (2016) Bachelor's degree (1 major) Romanic Languages (French/Italian) (2016) Bachelor's degree (1 major) Romanic Languages (French/Spanish) (2016) Bachelor's degree (1 major) Romanic Languages (Italian/Spanish) (2016) Bachelor's degree (1 major) Business Information Systems (2016) First state examination for the teaching degree Gymnasium French Studies (2016) First state examination for the teaching degree Gymnasium Italian Studies (2016) First state examination for the teaching degree Gymnasium Spanish Studies (2016) JMU Würzburg • generated 18-Apr-2025 • exam. Bachelor's with 1 major Chemistry (2015) page 67 / 70 reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (1 major) Games Engineering (2016) Bachelor's degree (1 major, 1 minor) English and American Studies (2016) Bachelor's degree (2 majors) English and American Studies (2016) First state examination for the teaching degree Gymnasium English (2016) Bachelor's degree (1 major) Media Communication (2016) Bachelor's degree (1 major) Food Chemistry (2016) Bachelor's degree (1 major, 1 minor) Digital Humanities (2016) Bachelor's degree (1 major) Biology (2017) Bachelor's degree (1 major, 1 minor) Geography (2017) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2017) Bachelor's degree (1 major) Aerospace Computer Science (2017) Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017) Bachelor's degree (1 major, 1 minor) Museology and material culture (2017) Bachelor's degree (1 major) Economathematics (2017) Bachelor's degree (1 major) Games Engineering (2017) Bachelor's degree (1 major) Computer Science (2017) First state examination for the teaching degree Gymnasium Greek Philology (2018) Bachelor's degree (1 major) Media Communication (2018) Bachelor's degree (1 major) Biomedicine (2018) Bachelor's degree (1 major) Human-Computer Systems (2018) Bachelor's degree (2 majors) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Digital Humanities (2018) Bachelor's degree (2 majors) Digital Humanities (2018) First state examination for the teaching degree Gymnasium Physics (2018) Bachelor's degree (1 major) Computer Science (2019) First state examination for the teaching degree Gymnasium Mathematics (2019) Bachelor's degree (1 major, 1 minor) English and American Studies (2019) Bachelor's degree (1 major) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (2 majors) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Management and Economics (2019) Bachelor's degree (1 major) Modern China (2019) Bachelor's degree (1 major) Food Chemistry (2019) Module studies (Bachelor) Orientierungsstudien (2020) Bachelor's degree (1 major) Biomedicine (2020) Bachelor's degree (1 major) Pedagogy (2020) Bachelor's degree (1 major) Political and Social Studies (2020) Bachelor's degree (1 major) Business Information Systems (2020) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2020) Bachelor's degree (2 majors) European Ethnology (2020) Bachelor's degree (2 majors) Political and Social Studies (2020) Bachelor's degree (2 majors) Special Education (2020) Bachelor's degree (1 major) Physics (2020) Bachelor's degree (1 major) Nanostructure Technology (2020) Bachelor's degree (1 major) Mathematical Physics (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major, 1 minor) Museology and material culture (2020) First state examination for the teaching degree Gymnasium Physics (2020) Bachelor's degree (1 major, 1 minor) Pedagogy (2020) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam.

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 JMU Würzburg • generated 18-Apr-2025 • exam.
 page 68 / 70

 reg. data record Bachelor (180 ECTS) Chemie - 2015
 Page 68 / 70

Bachelor's degree (2 majors) Pedagogy (2020) First state examination for the teaching degree Gymnasium Political and Social Studies (2020) Bachelor's degree (1 major) Psychology (2020) Bachelor's degree (1 major) Biology (2021) Magister Theologiae Catholic Theology (2021) Bachelor's degree (2 majors) History (2021) Bachelor's degree (1 major, 1 minor) History (2021) First state examination for the teaching degree Gymnasium History (2021) Bachelor's degree (1 major) Media Communication (2021) Bachelor's degree (2 majors) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) English and American Studies (2021) Bachelor's degree (2 majors) English and American Studies (2021) First state examination for the teaching degree Gymnasium English (2021) Bachelor's degree (1 major) Functional Materials (2021) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2021) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2021) Bachelor's degree (1 major) Food Chemistry (2021) Bachelor's degree (1 major) Quantum Technology (2021) Bachelor's degree (2 majors) Special Education (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Economathematics (2021) Bachelor's degree (1 major) Business Management and Economics (2021) Bachelor's degree (1 major) Human-Computer Systems (2022) Bachelor's degree (1 major, 1 minor) Museology and material culture (2022) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Economathematics (2022) Bachelor's degree (1 major) Mathematical Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2022) Bachelor's degree (2 majors) Ancient Near Eastern Archaeology (2022) Bachelor's degree (1 major, 1 minor) Ancient World (2022) Bachelor's degree (2 majors) Ancient Near Eastern Studies (2022) Bachelor's degree (1 major) Franco-German studies: language, culture, digital competence (2022) First state examination for the teaching degree Gymnasium Russian (2023) First state examination for the teaching degree Gymnasium Mathematics (2023) First state examination for the teaching degree Gymnasium English (2023) First state examination for the teaching degree Gymnasium Geography (2023) Bachelor's degree (1 major) European Law (2023) Bachelor's degree (1 major, 1 minor) English and American Studies (2023) Bachelor's degree (2 majors) English and American Studies (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Economathematics (2023) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) Special Education (2023) Bachelor's degree (1 major) Business Management and Economics (2023) Bachelor's degree (1 major) Geography (2023) Bachelor's degree (2 majors) Geography (2023) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (1 major, 1 minor) Geography (2023) Bachelor's degree (2 majors) European Ethnology/Empiric Cultural Studies (2023) First state examination for the teaching degree Gymnasium German (2024) Bachelor's degree (1 major) Mathematical Physics (2024) Bachelor's degree (2 majors) German Language and Literature (2024) Bachelor's degree (1 major, 1 minor) German Language and Literature (2024) Bachelor's degree (1 major) Music Education (2024) Bachelor's degree (2 majors) Music Education (2024) Bachelor's degree (1 major, 1 minor) Music Education (2024) Bachelor's degree (1 major) Indology/South Asian Studies (2024) Bachelor's degree (2 majors) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Ancient World (2024) Bachelor's degree (2 majors) Digital Humanities (2024) Bachelor's degree (1 major, 1 minor) Digital Humanities (2024) Bachelor's degree (1 major) Midwifery (2024) Bachelor's degree (2 majors) Greek Philology (2024) Bachelor's degree (2 majors) Latin Philology (2024) First state examination for the teaching degree Gymnasium Latin Philology (2024) Bachelor's degree (1 major) Business Information Systems (2024) Bachelor's degree (1 major) Economathematics (2024) Bachelor's degree (1 major) Business Management and Economics (2024) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) First state examination for the teaching degree Gymnasium English (2024) First state examination for the teaching degree Gymnasium History (2024) First state examination for the teaching degree Gymnasium Greek Philology (2024) Bachelor's degree (1 major) Human-Computer-Interaction (2024) Bachelor's degree (2 majors) Art Education (2024) Bachelor's degree (1 major) Digital Business & Data Science (2024) Bachelor's degree (1 major) Classics (2024) Bachelor's degree (1 major) Diversity, Ethics and Religions (2024) Bachelor's degree (1 major) Functional Materials (2025) Bachelor's degree (1 major) (2025) Bachelor's degree (1 major) Food Chemistry (2025) Bachelor's degree (1 major, 1 minor) European Ethnology/Empiric Cultural Studies (2025) Bachelor's degree (1 major) Pedagogy (2025) Bachelor's degree (2 majors) Pedagogy (2025) Bachelor's degree (1 major) Economathematics (2025) Bachelor's degree (1 major) Academic Speech Therapy (2025) Bachelor's degree (1 major, 1 minor) Pedagogy (2025) Bachelor's degree (1 major) Games Engineering (2025)