Subdivided Module Catalogue
for the Subject

FOKUS Chemistry
as a Master’s with 1 major
with the degree "Master of Science"
(120 ECTS credits)

Examination regulations version: 2013
Responsible: Faculty of Chemistry and Pharmacy
Course of Studies - Contents and Objectives

The Master's program in FOKUS Chemistry is offered by the Faculty of Chemistry and Pharmacy of the JMU as a fundamentally-oriented course with the degree of "Master of Science" (M.Sc.), in the context of a consecutive Bachelor's and Master's degree program. The Master's course prepares students for scientific as well as doctoral work in chemistry and the eventual award of the degree Dr. rer. nat. The aim of the training is to provide students with in-depth knowledge of scientific work in the research and application of chemistry and the associated basic concepts. Through the education and training of analytical thinking, students should acquire the ability to independently apply the basic knowledge obtained earlier in their Bachelor studies and to transfer it to, and later familiarize themselves with, a wide variety of new tasks.

Through the thesis, students should show that they are able to deal with an experimental or theoretical task in a thematically-limited extent using known methods and from a scientific point of view. The Master's examination intends to determine whether the candidate or the candidate has an overview of the relationships in chemistry, and has the ability to apply the learned scientific methods. It allows the acquisition of an internationally comparable degree in the field of chemistry and provides a professional qualification to prepare for future work in research and development.
### Abbreviations used

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

Term: SS = summer semester, WS = winter semester

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

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

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

### Conventions

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:

ASPO2009

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

10-Jul-2013 (2013-82)

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.
The subject is divided into

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Module title: Advanced discussion of hot topics in contemporary chemical research

Abbreviation: 08-FOM-HOT-132-m01

Module coordinator: degree programme coordinator FOKUS Chemie (Chemistry)
Module offered by: Faculty of Chemistry and Pharmacy

ECTS: 5
Method of grading: Only after succ. compl. of module(s)

Duration: 2 semester
Module level: graduate
Other prerequisites: --

Contents:
German contents available but not translated yet.

Das Modul bietet die Möglichkeit, sich in ein aktuelles relevantes Themengebiet vertieft einzuarbeiten, es aufzuarbeiten und im Rahmen eines Vortrages zielgruppengerecht zu präsentieren sowie zu diskutieren.

Intended learning outcomes:
German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, sich in hochaktuelle Themengebiete einzuarbeiten, Informationen zu sammeln und relevante Literatur zu recherchieren sowie diese zielgruppengerecht aufzuarbeiten und zu präsentieren.

Courses (type, number of weekly contact hours, language — if other than German):
S (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus):
talk (approx. 15 minutes) with discussion (approx. 15 minutes)
Language of assessment: German, English

Allocation of places:
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Additional information:
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Referred to in LPO I (examination regulations for teaching-degree programmes):
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Module title | Latest topics of current chemical research
---|---
Abbreviation | 08-FOM-TOP-132-m01

Module coordinator | degree programme coordinator FOKUS Chemie (Chemistry)
Module offered by | Faculty of Chemistry and Pharmacy

ECTS | 5
Method of grading | Only after succ. compl. of module(s)
(not) successfully completed | --

Duration | 1 semester
Module level | graduate
Other prerequisites | --

Contents
German contents available but not translated yet.
Das Modul bietet die Möglichkeit, sich in ein aktuelles Themengebiet aus dem Bereich der jüngeren chemischen Forschung vertieft einzuarbeiten, es aufzuarbeiten und im Rahmen eines Vortrages zielgruppengerecht zu präsentieren sowie zu diskutieren.

Intended learning outcomes
German intended learning outcomes available but not translated yet.
Die Studierenden sind in der Lage, wissenschaftliche Publikationen zu lesen, zu verstehen sowie zielgruppengerecht aufzuarbeiten und zu präsentieren.

Courses (type, number of weekly contact hours, language — if other than German)
S (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)
talk (approx. 15 minutes) with discussion (approx. 15 minutes)
Language of assessment: German, English

Allocation of places
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Additional information
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Referred to in LPO I (examination regulations for teaching-degree programmes)
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<td>1 semester</td>
<td>graduate</td>
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**Contents**

German contents available but not translated yet.

Das Modul behandelt spezifische Themen der Anorganischen Chemie anhand dreier ausgewählter, forschungsorientierter Veranstaltungen.

**Intended learning outcomes**

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, ausgewählte forschungsorientierte Themen der Anorganischen Chemie zu erklären und zu analysieren. Er/Sie kann die Inhalte unterschiedlicher Veranstaltungen in einen größeren Zusammenhang stellen.

**Courses**

(type, number of weekly contact hours, language — if other than German)

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

**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

oral examination of one candidate each (approx. 45 minutes)

Language of assessment: German, English

**Allocation of places**

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**Additional information**

Additional information on module duration: 1 to 2 semesters.

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

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**Contents**

German contents available but not translated yet.

Das Modul vertieft spezielle Synthese- und Analysemethoden der anorganischen Chemie. Im Schwerpunkt steht das Arbeiten unter Inertgas, Reinigungsmethoden, Spektrenanalyse sowie Kristallographie. Die Studierenden arbeiten selbständig im Labor, halten ihre Forschungsergebnisse in einem Praktikumsbericht fest und präsentieren diese in einem Vortrag.

**Intended learning outcomes**

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, anspruchsvolle anorganische Synthese- und Analysemethoden experimentell durchzuführen sowie die erhaltenen Ergebnisse auszuwerten. Er/Sie kann Forschungsergebnisse in einem wissenschaftlichen Bericht formulieren und in einem Vortrag präsentieren.

**Courses** (type, number of weekly contact hours, language — if other than German)

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

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Research lab course in two 4-week blocks: a) 2 pieces of practical work with 2 lab reports (approx. 20 pages each) and b) 2 talks with discussion (approx. 15 minutes each). Research lab course in one 8-week block: c) one piece of practical work with lab report (approx. 40 pages) and d) talk with discussion (approx. 30 minutes)

Language of assessment: German, English

**Allocation of places**

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**Additional information**

Additional information on module duration: block lab course: two 4-week blocks or one 8-week block.

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

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**Contents**

German contents available but not translated yet.

Das Modul behandelt spezifische Themen der Organischen Chemie anhand dreier ausgewählter, forschungsorientierter Veranstaltungen.

**Intended learning outcomes**

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, ausgewählte forschungsorientierte Themen der Organischen Chemie zu erklären und zu analysieren. Er/Sie kann die Inhalte unterschiedlicher Veranstaltungen in einen größeren Zusammenhang stellen.

**Courses**

(type, number of weekly contact hours, language — if other than German)

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

**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

oral examination of one candidate each (approx. 45 minutes)
Language of assessment: German, English

**Allocation of places**

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**Additional information**

Additional information on module duration: 1 to 2 semesters.

**Referred to in LPO I**

(examination regulations for teaching-degree programmes)

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Module title | Abbreviation
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Research oriented practical course in organic chemistry | 08-OCFM2-132-m01

Module coordinator | Module offered by
focus point coordinator "Organic Chemistry" | Institute of Organic Chemistry

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Contents

The module deepens special synthesis and analysis methods in the field of Organic Chemistry. The students work independently in the laboratory, record their research results in a report and present them in a scientific talk.

Intended learning outcomes

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, anspruchsvolle organische Synthese- und Analysemethoden experimentell durchzuführen sowie die erhaltenen Ergebnisse auszuwerten. Er/Sie kann Forschungsergebnisse in einem wissenschaftlichen Bericht formulieren und in einem Vortrag präsentieren.

Courses (type, number of weekly contact hours, language — if other than German)

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

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Research lab course in two 4-week blocks: a) 2 pieces of practical work with 2 lab reports (approx. 20 pages each) and b) 2 talks with discussion (approx. 15 minutes each). Research lab course in one 8-week block: c) one piece of practical work with lab report (approx. 40 pages) and d) talk with discussion (approx. 30 minutes)

Language of assessment: German, English

Allocation of places

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Additional information

Additional information on module duration: block lab course: two 4-week blocks or one 8-week block.

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

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Module title: Research oriented physical chemistry
Abbreviation: 08-PCFM1-132-m01

Module coordinator: focus point coordinator "Physical Chemistry"
Module offered by: Institute of Physical and Theoretical Chemistry

ECTS: 12
Method of grading: numerical grade
Only after succ. compl. of module(s)

Duration: 1 semester
Module level: graduate
Other prerequisites:

Contents

German contents available but not translated yet.

Das Modul behandelt spezifische Themen der Physikalischen Chemie anhand dreier ausgewählter, forschungsorientierter Veranstaltungen.

Intended learning outcomes

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, ausgewählte forschungsorientierte Themen der Physikalischen Chemie zu erklären und zu analysieren. Er/Sie kann die Inhalte unterschiedlicher Veranstaltungen in einen größeren Zusammenhang stellen.

Courses (type, number of weekly contact hours, language — if other than German)
S + S + S (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)
oral examination of one candidate each (approx. 45 minutes)
Language of assessment: German, English

Allocation of places

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Additional information

Additional information on module duration: 1 to 2 semesters.

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

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# Module Catalogue for the Subject

## FOKUS Chemistry

### Master's with 1 major, 120 ECTS credits

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### Contents

German contents available but not translated yet.

Das Modul vertieft spezielle Arbeitstechniken und Methoden der Physikalischen Chemie. Die Studierenden arbeiten selbständig im Labor, halten ihre Forschungsergebnisse in einem Praktikumsbericht fest und präsentieren diese in einem Vortrag.

### Intended learning outcomes

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, anspruchsvolle physikalisch-chemische Arbeitstechniken anzuwenden sowie die erhaltenen Ergebnisse auszuwerten. Er/Sie kann Forschungsergebnisse in einem wissenschaftlichen Bericht formulieren und in einem Vortrag präsentieren.

### Courses

(type, number of weekly contact hours, language — if other than German)

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

### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Research lab course in two 4-week blocks: a) 2 pieces of practical work with 2 lab reports (approx. 20 pages each) and b) 2 talks with discussion (approx. 15 minutes each). Research lab course in one 8-week block: c) one piece of practical work with lab report (approx. 40 pages) and d) talk with discussion (approx. 30 minutes)

Language of assessment: German, English

### Allocation of places

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### Additional information

Additional information on module duration: block lab course: two 4-week blocks or one 8-week block.

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

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**Contents**

German contents available but not translated yet.

Das Modul behandelt spezifische Themen der Biochemie anhand dreier ausgewählter, forschungsorientierter Veranstaltungen.

**Intended learning outcomes**

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, ausgewählte forschungsorientierte Themen der Biochemie zu erklären und zu analysieren. Er/Sie kann die Inhalte unterschiedlicher Veranstaltungen in einen größeren Zusammenhang stellen.

**Courses**

(type, number of weekly contact hours, language — if other than German)

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

**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

oral examination of one candidate each (approx. 45 minutes)
Language of assessment: German, English

**Allocation of places**

--

**Additional information**

Additional information on module duration: 1 to 2 semesters.

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

--
Research oriented practical course in biochemistry

Module title

Abbreviation
08-BCFM2-132-m01

Module coordinator
focus point coordinator “Biochemistry”

Module offered by
Chair of Biochemistry

ECTS
8

Method of grading
Only after succ. compl. of module(s)

Duration
1 semester

Module level
graduate

Other prerequisites
--

Contents
The module deepens special synthesis and analysis methods in the field of Biochemistry. The students work independently in the laboratory, record their research results in a report and present them in a scientific talk.

Intended learning outcomes

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, anspruchsvolle biochemische Synthese- und Analysemethoden experimentell durchzuführen sowie die erhaltenen Ergebnisse auszuwerten. Er/Sie kann Forschungsergebnisse in einem wissenschaftlichen Bericht formulieren und in einem Vortrag präsentieren.

Courses (type, number of weekly contact hours, language — if other than German)

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

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Research lab course in two 4-week blocks: a) 2 pieces of practical work with 2 lab reports (approx. 20 pages each) and b) 2 talks with discussion (approx. 15 minutes each). Research lab course in one 8-week block: c) one piece of practical work with lab report (approx. 40 pages) and d) talk with discussion (approx. 30 minutes)

Language of assessment: German, English

Allocation of places
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Additional information
Additional information on module duration: block lab course: two 4-week blocks or one 8-week block.

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

German contents available but not translated yet.

Das Modul behandelt spezifische Themen der Funktionsmaterialien anhand dreier ausgewählter, forschungssorientierter Veranstaltungen.

### Intended learning outcomes

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, ausgewählte forschungssorientierte Themen der Funktionsmaterialien zu erklären und zu analysieren. Er/Sie kann die Inhalte unterschiedlicher Veranstaltungen in einen größeren Zusammenhang stellen.

### Courses

(type, number of weekly contact hours, language — if other than German)

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

### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

oral examination of one candidate each (approx. 45 minutes)

Language of assessment: German, English

### Allocation of places

--

### Additional information

Additional information on module duration: 1 to 2 semesters.

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

--
### Module Catalogue for the Subject

FOKUS Chemistry

Master’s with 1 major, 120 ECTS credits

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### Contents

The module deepens special synthesis and analysis methods in the field of Functional Materials. The students work independently in the laboratory, record their research results in a report and present them in a scientific talk.

### Intended learning outcomes

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, anspruchsvolle materialwissenschaftliche Synthese- und Analysemethoden experimentell durchzuführen sowie die erhaltenen Ergebnisse auszuwerten. Er/Sie kann Forschungsergebnisse in einem wissenschaftlichen Bericht formulieren und in einem Vortrag präsentieren.

### Courses

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<td>P (no information on SWS (weekly contact hours) and course language available)</td>
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### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Research lab course in two 4-week blocks: a) 2 pieces of practical work with 2 lab reports (approx. 20 pages each) and b) 2 talks with discussion (approx. 15 minutes each). Research lab course in one 8-week block: c) one piece of practical work with lab report (approx. 40 pages) and d) talk with discussion (approx. 30 minutes)

Language of assessment: German, English

### Allocation of places

--

### Additional information

Additional information on module duration: block lab course: two 4-week blocks or one 8-week block.

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

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<table>
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**Contents**

German contents available but not translated yet.

Das Modul behandelt spezifische Themen der Homogenkatalyse anhand dreier ausgewählter, forschungsorientierter Veranstaltungen.

**Intended learning outcomes**

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, ausgewählte forschungsorientierte Themen der Homogenkatalyse zu erklären und zu analysieren. Er/Sie kann die Inhalte unterschiedlicher Veranstaltungen in einen größeren Zusammenhang stellen.

**Courses**

(type, number of weekly contact hours, language — if other than German)

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

**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

oral examination of one candidate each (approx. 45 minutes)

Language of assessment: German, English

**Allocation of places**

--

**Additional information**

Additional information on module duration: 1 to 2 semesters.

**Referred to in LPO I**

(examination regulations for teaching-degree programmes)

--
Module title | Abbreviation
---|---
Research oriented practical course in homogeneous catalysis | 08-HKFM2-132-m01

**Module coordinator**
focus point coordinator “Homogeneous Catalysis”

**Module offered by**
Faculty of Chemistry and Pharmacy

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**Duration**
1 semester

**Module level**
graduate

**Other prerequisites**
--

## Contents

The module deepens special synthesis and analysis methods in the field of Homogeneous Catalysis. The students work independently in the laboratory, record their research results in a report and present them in a scientific talk.

## Intended learning outcomes

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, anspruchsvolle homogenkatalytische Synthese- und Analysemethoden experimentell durchzuführen sowie die erhaltenen Ergebnisse auszuwerten. Er/Sie kann Forschungsergebnisse in einem wissenschaftlichen Bericht formulieren und in einem Vortrag präsentieren.

## Courses

(no information on SWS (weekly contact hours) and course language available)

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**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Research lab course in two 4-week blocks: a) 2 pieces of practical work with 2 lab reports (approx. 20 pages each) and b) 2 talks with discussion (approx. 15 minutes each). Research lab course in one 8-week block: c) one piece of practical work with lab report (approx. 40 pages) and d) talk with discussion (approx. 30 minutes)

Language of assessment: German, English

## Allocation of places

--

## Additional information

Additional information on module duration: block lab course: two 4-week blocks or one 8-week block.

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

--
Module title: Research oriented pharmaceutical/medicinal chemistry
Abbreviation: 08-MCFM1-132-m01

Module coordinator: Focus point coordinator "Medicinal Chemistry"
Module offered by: Institute of Pharmacy and Food Chemistry

ECTS: 12
Method of grading: Only after succ. compl. of module(s)
Duration: 1 semester
Module level: Graduate
Other prerequisites: --

Contents:
German contents available but not translated yet.

Das Modul behandelt spezifische Themen der Medizinischen Chemie anhand dreier ausgewählter, forschungsorientierter Veranstaltungen.

Intended learning outcomes:
German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, ausgewählte forschungsorientierte Themen der Medizinischen Chemie zu erklären und zu analysieren. Er/Sie kann die Inhalte unterschiedlicher Veranstaltungen in einen größeren Zusammenhang stellen.

Courses:
S + S + S (no information on SWS (weekly contact hours) and course language available)

Method of assessment:
oral examination of one candidate each (approx. 45 minutes)
Language of assessment: German, English

Allocation of places:
--

Additional information:
Additional information on module duration: 1 to 2 semesters.

Referred to in LPO I (examination regulations for teaching-degree programmes)
--
**Module title**  
Research oriented practical course in pharmaceutical/medicinal chemistry

**Abbreviation**  
o8-MCFM2-132-m01

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**Contents**

German contents available but not translated yet.

Das Modul vertieft spezielle Arbeitstechniken und Methoden der Medizinischen Chemie. Die Studierenden arbeiten selbständig im Labor, halten ihre Forschungsergebnisse in einem Praktikumsbericht fest und präsentieren diese in einem Vortrag.

**Intended learning outcomes**

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, anspruchsvolle medizinisch-chemische Arbeitstechniken anzuwenden sowie die erhaltenen Ergebnisse auszuwerten. Er/Sie kann Forschungsergebnisse in einem wissenschaftlichen Bericht formulieren und in einem Vortrag präsentieren.

**Courses** (type, number of weekly contact hours, language — if other than German)

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

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Research lab course in two 4-week blocks: a) 2 pieces of practical work with 2 lab reports (approx. 20 pages each) and b) 2 talks with discussion (approx. 15 minutes each). Research lab course in one 8-week block: c) one piece of practical work with lab report (approx. 40 pages) and d) talk with discussion (approx. 30 minutes)

**Language of assessment**: German, English

**Allocation of places**

--

**Additional information**

Additional information on module duration: block lab course: two 4-week blocks or one 8-week block.

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

--
Module title: Research oriented supramolecular chemistry

Abbreviation: 08-SCFM1-132-m01

Module coordinator: focus point coordinator "Supramolecular Chemistry"

Module offered by: Faculty of Chemistry and Pharmacy

ECTS: 12

Method of grading: numerical grade

Duration: 1 semester

Module level: graduate

Other prerequisites: --

Contents:

Das Modul behandelt spezifische Themen der Supramolekularen Chemie anhand dreier ausgewählter, forschungsorientierter Veranstaltungen.

Intended learning outcomes:

Die Studierenden sind in der Lage, ausgewählte forschungsorientierte Themen der Supramolekularen Chemie zu erklären und zu analysieren. Er/Sie kann die Inhalte unterschiedlicher Veranstaltungen in einen größeren Zusammenhang stellen.

Courses:

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

Method of assessment:

oral examination of one candidate each (approx. 45 minutes)

Language of assessment: German, English

Allocation of places:

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Additional information:

Additional information on module duration: 1 to 2 semesters.

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

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**Contents**

German contents available but not translated yet.


**Intended learning outcomes**

German intended learning outcomes available but not translated yet.


**Courses**

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

**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Research lab course in two 4-week blocks: a) 2 pieces of practical work with 2 lab reports (approx. 20 pages each) and b) 2 talks with discussion (approx. 15 minutes each). Research lab course in one 8-week block: c) one piece of practical work with lab report (approx. 40 pages) and d) talk with discussion (approx. 30 minutes)

Language of assessment: German, English

**Allocation of places**

--

**Additional information**

Additional information on module duration: block lab course: two 4-week blocks or one 8-week block.

**Referred to in LPO**

(examination regulations for teaching-degree programmes)

--
Module title: Research oriented theoretical chemistry
Abbreviation: 08-TCFM1-132-m01

Module coordinator:
focus point coordinator "Theoretical Chemistry"
Institute of Physical and Theoretical Chemistry

ECTS: 12
Method of grading: numerical grade
Only after succ. compl. of module(s)

Duration: 1 semester
Module level: graduate
Other prerequisites: --

Contents:
German contents available but not translated yet.
Das Modul behandelt spezifische Themen der Theoretischen Chemie anhand dreier ausgewählter, forschungsorientierter Veranstaltungen.

Intended learning outcomes:
German intended learning outcomes available but not translated yet.
Die Studierenden sind in der Lage, ausgewählte forschungsorientierte Themen der Theoretischen Chemie zu erklären und zu analysieren. Er/Sie kann die Inhalte unterschiedlicher Veranstaltungen in einen größeren Zusammenhang stellen.

Courses (type, number of weekly contact hours, language — if other than German):
S + S + S (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus):
oral examination of one candidate each (approx. 45 minutes)
Language of assessment: German, English

Allocation of places:
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Additional information:
Additional information on module duration: 1 to 2 semesters.

Referred to in LPO I (examination regulations for teaching-degree programmes):
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### Module Catalogue for the Subject
**FOKUS Chemistry**
Master’s with 1 major, 120 ECTS credits

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<td>Institute of Physical and Theoretical Chemistry</td>
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### Contents

German contents available but not translated yet.

Das Modul vertieft spezielle Methoden der Theoretischen Chemie. Die Studierenden arbeiten selbständig, halten ihre Forschungsergebnisse in einem Praktikumsbericht fest und präsentieren diese in einem Vortrag.

### Intended learning outcomes

German intended learning outcomes available but not translated yet.

Die Studierenden sind in der Lage, anspruchsvolle Methoden der Theoretischen Chemie anzuwenden sowie die erhaltenen Ergebnisse auszuwerten. Er/Sie kann Forschungsergebnisse in einem wissenschaftlichen Bericht formulieren und in einem Vortrag präsentieren.

### Courses

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### Method of assessment

<table>
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<tr>
<th><strong>(type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Research lab course in two 4-week blocks: a) 2 pieces of practical work with 2 lab reports (approx. 20 pages each) and b) 2 talks with discussion (approx. 15 minutes each). Research lab course in one 8-week block: c) one piece of practical work with lab report (approx. 40 pages) and d) talk with discussion (approx. 30 minutes)</td>
</tr>
</tbody>
</table>

Language of assessment: German, English

### Allocation of places

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### Additional information

Additional information on module duration: block lab course: two 4-week blocks or one 8-week block.

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

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Module title: Advanced FOKUS Foreign Studies
Abbreviation: 08-FOMA-132-m01

Module coordinator
Degree programme coordinator FOKUS Chemie (Chemistry)
Module offered by
Faculty of Chemistry and Pharmacy

ECTS: 20
Method of grading: numerical grade
Duration: 1 semester
Module level: graduate

Other prerequisites
A supervisor from the Faculty, who must be an authorised examiner, is to be chosen prior to the placement.

Contents
German contents available but not translated yet.
Das Praktikum wird in einem industriellen Betrieb durchgeführt. Die inhaltlichen Anforderungen sollen denen eines im Bachelor-Studienganges Chemie (180 ECTS) angebotenen Praktikums entsprechen, was im Vorfeld mit dem Verantwortlichen abzusprechen ist.

Intended learning outcomes
German intended learning outcomes available but not translated yet.
Die Studierenden sind mit Arbeitsweisen in der Industrie vertraut. Sie haben neben Fachkompetenz auch Kompetenzen im sprachlichen und sozialen Bereich erworben.

Courses
P (no information on SWS (weekly contact hours) and course language available)

Method of assessment
log (approx. 30 pages) and talk with discussion (approx. 20 minutes); weighted 3:1
Language of assessment: German, English

Allocation of places
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Additional information
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Referred to in LPO I (examination regulations for teaching-degree programmes)
--
### Advanced FOKUS Industrial work experience

<table>
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<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Advanced FOKUS Industrial work experience</td>
<td>08-FOMI-132-m01</td>
</tr>
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</table>

**Module coordinator**

degree programme coordinator FOKUS Chemie (Chemistry)

**Module offered by**

Faculty of Chemistry and Pharmacy

<table>
<thead>
<tr>
<th>ECTS</th>
<th>Method of grading</th>
<th>Only after succ. compl. of module(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>numerical grade</td>
<td>--</td>
</tr>
</tbody>
</table>

**Duration**

1 semester

**Module level**

graduate

**Other prerequisites**

A supervisor from the Faculty, who must be an authorised examiner, is to be chosen prior to the placement.

### Contents

German contents available but not translated yet.

Im Rahmen des Moduls wird ein Praktikum in einem industriellen Betrieb durchgeführt. Die inhaltlichen Anforderungen sollen denen eines im Master-Studienganges Chemie (120 ECTS) angebotenen Praktikums entsprechen, was im Vorfeld mit dem Verantwortlichen abzusprechen ist.

### Intended learning outcomes

German intended learning outcomes available but not translated yet.

Die Studierenden sind mit Arbeitsweisen in der Industrie vertraut. Sie haben neben Fachkompetenz auch Kompetenzen im sozialen Bereich erworben.

### Courses

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

### Method of assessment

log (approx. 30 pages) and talk with discussion (approx. 20 minutes); weighted 3:1

Language of assessment: German, English

### Allocation of places

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### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)

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<table>
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<tr>
<th>Module title</th>
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<tr>
<td>Advanced research lab course</td>
<td>08-FOMF-132-m01</td>
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<th>Module offered by</th>
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<tbody>
<tr>
<td>degree programme coordinator FOKUS Chemie (Chemistry)</td>
<td>Faculty of Chemistry and Pharmacy</td>
</tr>
</tbody>
</table>

| ECTS | Method of grading | Only after succ. compl. of module(s) | |
|------|-------------------|--------------------------------------|
| 20   | numerical grade   | --                                   |

| Duration | Module level | Other prerequisites | |
|----------|--------------|---------------------|
| 1 semester | graduate    | --                  |

**Contents**

German contents available but not translated yet.

Das Modul bietet die Möglichkeit mit Hilfe der für den jeweiligen Fachbereich üblichen wissenschaftlichen Arbeitstechniken und Methoden ein Forschungsthema vertieft zu bearbeiten.

**Intended learning outcomes**

The student is able to deeply acquaint himself/herself with a specific research topic, and to process and to present the results in a written report or a talk.

**Courses** (type, number of weekly contact hours, language — if other than German)

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

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

log (approx. 30 pages) and talk with discussion (approx. 20 minutes); weighted 3:1

Language of assessment: German, English

**Allocation of places**

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**Additional information**

--

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

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<table>
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<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Master's Thesis FOKUS Chemie</td>
<td>08-FOKUS-MA-132-m01</td>
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</table>

**Module coordinator**

head of the research group offering the module

**Module offered by**

Faculty of Chemistry and Pharmacy

<table>
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<th>ECTS</th>
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<tr>
<th>Duration</th>
<th>Module level</th>
<th>Other prerequisites</th>
</tr>
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<tbody>
<tr>
<td>1 semester</td>
<td>graduate</td>
<td>Three focuses in the Schwerpunkte (focuses) area of mandatory electives must have been successfully completed in whole (60 ECTS credits).</td>
</tr>
</tbody>
</table>

**Contents**

Researching and writing on a defined problem within a given time frame and adhering to the principles of good scientific practice.

**Intended learning outcomes**

The student is able to work on a defined problem/topic using scientific methods and to present it in written form.

**Courses** (type, number of weekly contact hours, language — if other than German)

no courses assigned

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Master's thesis (approx. 30 to 60 pages) as well as talk with discussion (approx. 30 minutes total), weighted 9:1

**Allocation of places**

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**Additional information**

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

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