TODAY’S TOPICS

Student Counseling: April 13th, 4.00 pm, s.t.
BBB: https://bbb.rlp.net/b/rat-ngd-apt-mkm

- Welcome
- (y)our university, (y)our faculty, (y)our professors
- Modules
- Route of study
- Organizational Issues
- Next steps
- Further questions?
OVERVIEW

➢ Degree
  - Master of Science (M.Sc.)
  - enabling for doctoral research
  - 300 LP in B.Sc.+M.Sc.

➢ Duration
  - 3 semester (90 LP)
  - optional 4 semester (120 LP, admission subject to requirements 30 LP)

➢ Specialty
  - interdisciplinary and research oriented
  - individually structured
  - general overview on functional materials
  - more in the fields of the local research groups in chemistry and physics
UNIVERSITY KOBLENZ-LANDAU

since 1990 university
earlier „Erziehungswissenschaftliche Hochschule Rheinland-Pfalz (EWH)“

UNIVERSITY KOBLENZ-LANDAU

today
more than 16500 students
on both campi
(nearly 8500 in Koblenz)

since 2013 second largest university in the state Rheinland-Pfalz (Rhineland-Palatinate)
FACULTY 3: MATHEMATICS / NATURAL SCIENCES

Institute for Integrated Natural Sciences (IfIN)

Chemistry and Physics Department

Campus Koblenz

since 2002

since 2011
YOUR PROFESSORS

Wolfgang Imhof  
Organic Chemistry  
M318

Werner Manz  
Microbiology  
G327

Peter Quirmbach  
Technical Chemistry  
M116

Silke Rathgeber  
Material Physics  
G428

Joachim Scholz  
Inorganic Chemistry  
M219

Christian Fischer  
Surface Physics  
G429

Carola Winkelmann  
Aquatic Ecology  
D121
GUIDING THEME IN RESEARCH

Material & Environment

Faculty 3: Mathematics / Natural Sciences

Material Properties and Functional Surfaces

Modeling and Simulation

Biodiversity and Ecosystems

Education
Material & Environment
Faculty 3: Mathematics / Natural Sciences

Bachelor

B.Sc. Angewandte Naturwissenschaften
since 2011

Double-Subject-Bachelor (B.A./B.Sc.)
Chemistry    Physics    Mathematics    Sports Science    Biology    Geography

Master

M.Sc. Applied Natural Sciences
since 2015

M.Sc. Applied Physics
since 2015 in cooperation with

M.Sc. Mathematical Modeling of Complex Systems
since 2015

M.Sc. BioGeo-Wissenschaften
since 2008

M.Sc. Mathematical Modelling of Complex Systems
since 2015 in cooperation with

M.Sc. Applied Physics
since 2015 in cooperation with

M.Sc. Applied Natural Sciences
since 2015

M.Eng. Ceramic Science and Engineering
since 2012 in cooperation with

B.Sc. Mathematische Modellierung
since 2015

B.Sc. BioGeo-Wissenschaften
since 2005

M.Sc. Applied Natural Sciences
since 2015

B.Sc. Mathematische Modellierung
since 2015

B.Sc. Applied Physics
since 2015 in cooperation with

B.Sc. Applied Natural Sciences
since 2015

Bachelor in cooperation with

Education BBS
since 2008

Master

M.Sc. BioGeo-Wissenschaften
since 2008

M.Sc. Mathematical Modeling of Complex Systems
since 2015

M.Sc. Applied Natural Sciences
since 2015

M.Sc. Applied Physics
since 2015 in cooperation with

M.Sc. Applied Natural Sciences
since 2015

B.Sc. BioGeo-Wissenschaften
since 2005

Bachelor

Education BBS
in cooperation with
since 2008

since 2013
Interdisciplinary problem solving competence in the field of material properties and functional materials

- Courses cover in particular the following research fields: plastics, coatings, corrosion, surface and interfacial phenomena, high-temperature-materials, catalyzers and rare earth elements.

- Inter-semester and inter-disciplinary network between students and scientists.

- One approach in the educational sector to increase the future viability of the region.
## COMPULSORY MODULES

<table>
<thead>
<tr>
<th>Module</th>
<th>Title</th>
<th>ECTS [LP]</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Compulsory modules (6 LP)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>03XX2403</td>
<td>Recent Topics in Applied Natural Sciences</td>
<td>3+3</td>
<td>SS+WS</td>
</tr>
<tr>
<td></td>
<td><strong>Research Work (42 LP)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>03XX2404</td>
<td>Research Project</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>03XX2490</td>
<td>Master Thesis</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>03XX2499</td>
<td>Oral Final Exam</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Sum</strong></td>
<td>48</td>
<td></td>
</tr>
</tbody>
</table>

Detailed information about the course program, e.g. content, exam format, scheduling (SS/WS), can be found in the module handbook ([Modulhandbuch](#), Version 23.09.2020).
### ELECTIVE MODULES PHYSICS/ CHEMISTRY

<table>
<thead>
<tr>
<th>Module</th>
<th>Title</th>
<th>ECTS [LP]</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>03CH2401</td>
<td>Modern Concepts of Inorganic Chemistry</td>
<td>6</td>
<td>SS</td>
</tr>
<tr>
<td>03CH2402</td>
<td>Thermochemistry</td>
<td>3+3</td>
<td>SS+WS</td>
</tr>
<tr>
<td>03CH2408</td>
<td>Polymer Chemistry and Natural Products Chemistry</td>
<td>6</td>
<td>WS</td>
</tr>
<tr>
<td>03PH2501</td>
<td>Solid State Physics</td>
<td>6</td>
<td>SS</td>
</tr>
<tr>
<td>03PH2403</td>
<td>Physics of Metals</td>
<td>3+3</td>
<td>SS+WS</td>
</tr>
<tr>
<td>03PH2503</td>
<td>Surface Science</td>
<td>6</td>
<td>WS</td>
</tr>
<tr>
<td>03PH2504</td>
<td>Applied Theoretical Physics</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>03PH2505</td>
<td>Polymer Science</td>
<td>6</td>
<td>SS</td>
</tr>
</tbody>
</table>

At minimum modules with a contact time > 12 h/week (= 18 ECTS, 3 modules) have to be taken from the filed of physics and/or chemistry.
## ELECTIVE MODULES BIOLOGY/ GEOGRAPHY

<table>
<thead>
<tr>
<th>Module</th>
<th>Title</th>
<th>ECTS [LP]</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>03BI2330</td>
<td>Aquatic Ecology and Management</td>
<td>6</td>
<td>SS</td>
</tr>
<tr>
<td>03GE2331</td>
<td>Physical Geography</td>
<td>3+3</td>
<td>SS+WS</td>
</tr>
<tr>
<td>03BI2337</td>
<td>Biodiversity and Assessment Methods for Insects</td>
<td>6</td>
<td>WS</td>
</tr>
</tbody>
</table>

At minimum additional modules with a contact time > 8 h/week (= 12 ECTS, 2 modules) have to be taken from the field of physics, chemistry, biology and/or geography.
FREE ELECTIVE MODULES

In agreement with the student counseling (mandatory before finishing the first semester) up to four modules (with a contact time of up to 8 h/week ≈ 12 ECTS) can be chosen from any course program of our university, e.g.

**Mathematics**

<table>
<thead>
<tr>
<th>Module</th>
<th>Title</th>
<th>Requirements</th>
<th>ECTS [LP]</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>03MA2502</td>
<td>Optimization</td>
<td></td>
<td>9</td>
<td>SS</td>
</tr>
<tr>
<td>03MA2501</td>
<td>Applied Differential Equations</td>
<td></td>
<td>9</td>
<td>WS</td>
</tr>
<tr>
<td>03MA2504</td>
<td>Optimization 2</td>
<td>Optimization</td>
<td>9</td>
<td>WS</td>
</tr>
<tr>
<td>03MA2503</td>
<td>Numerics of Partial Differential Equations</td>
<td>Applied Differential Equations</td>
<td>9</td>
<td>SS</td>
</tr>
<tr>
<td>03MA2108</td>
<td>Special topics of Mathematics</td>
<td></td>
<td>9</td>
<td>irregularly</td>
</tr>
<tr>
<td>03MA2109</td>
<td>Special topics of Applied Mathematics</td>
<td>In consultation with Prof Götz or Prof. Hinze</td>
<td>9</td>
<td>irregularly</td>
</tr>
<tr>
<td>03MA2110</td>
<td>Specialization in Mathematics</td>
<td></td>
<td>9</td>
<td>irregularly</td>
</tr>
</tbody>
</table>
FREE ELECTIVE MODULES

Computer Science

Before assigning to the courses please get in touch with the lecturers to ensure availability. Some courses are given in English on demand only.

In the following recommended courses are listed. A full list of courses available in English can be found under this link.

The active links in this list forward you to the module information. On this webpage the active links of each course forward you to the detailed course information.
## FREE ELECTIVE MODULES

### Computer Science

<table>
<thead>
<tr>
<th>Module</th>
<th>Title</th>
<th>Requirements</th>
<th>ECTS [LP]</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>04CV2005</td>
<td>Pattern Recognition</td>
<td></td>
<td>6</td>
<td>SS</td>
</tr>
<tr>
<td>04IN1003</td>
<td>Foundations of computer architectures</td>
<td></td>
<td>6</td>
<td>SS</td>
</tr>
<tr>
<td>04IN1023</td>
<td>Introduction to functional programming</td>
<td></td>
<td>6</td>
<td>SS</td>
</tr>
<tr>
<td>04IN2012</td>
<td>Engineering Web and Data-intensive Systems</td>
<td></td>
<td>6</td>
<td>WS</td>
</tr>
<tr>
<td>04IN2026</td>
<td>Introduction to Web Science</td>
<td></td>
<td>6</td>
<td>WS</td>
</tr>
<tr>
<td>04IN2027</td>
<td>Network Theory and Dynamic Systems</td>
<td></td>
<td>6</td>
<td>SS</td>
</tr>
<tr>
<td>04IN2028</td>
<td>Machine Learning</td>
<td></td>
<td>6</td>
<td>Every 3. sem. /WS</td>
</tr>
</tbody>
</table>
# FREE ELECTIVE MODULES

## Computer Science

<table>
<thead>
<tr>
<th>Module</th>
<th>Title</th>
<th>Requirements</th>
<th>ECTS [LP]</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>04IN2043</td>
<td>Introduction to Data Science</td>
<td></td>
<td>6</td>
<td>WS</td>
</tr>
<tr>
<td>04WI2013</td>
<td>Enterprise Architecture</td>
<td></td>
<td>6</td>
<td>SS</td>
</tr>
<tr>
<td>04WI1015</td>
<td>Enterprise Information Management</td>
<td>Enterprise Architecture</td>
<td>6</td>
<td>SS</td>
</tr>
<tr>
<td>04WI2007</td>
<td>Research Methods</td>
<td></td>
<td>6</td>
<td>SS</td>
</tr>
<tr>
<td>04WI2022</td>
<td>Information, Technology and Society</td>
<td></td>
<td>6</td>
<td>WS</td>
</tr>
<tr>
<td>04WI2102</td>
<td>Risk Management in Verteilten Systemem</td>
<td></td>
<td>6</td>
<td>SS</td>
</tr>
<tr>
<td>04WI2030</td>
<td>Smart Process Analytics</td>
<td>Pre-test</td>
<td>6</td>
<td>WS</td>
</tr>
<tr>
<td>04IM2007</td>
<td>Management for Information Management</td>
<td></td>
<td>9</td>
<td>SS+WS</td>
</tr>
</tbody>
</table>
# FREE ELECTIVE MODULES

## Computer Science

<table>
<thead>
<tr>
<th>Module</th>
<th>Title</th>
<th>Requirements</th>
<th>ECTS [LP]</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>04IM1016</td>
<td>Entrepreneurship</td>
<td></td>
<td>6</td>
<td>Every 3. sem.</td>
</tr>
<tr>
<td>04IM2010</td>
<td>Entrepreneurial Strategies</td>
<td></td>
<td>6</td>
<td>WS/SS</td>
</tr>
<tr>
<td>04IM2009</td>
<td>Entrepreneurial Design Thinking</td>
<td></td>
<td>6</td>
<td>WS/SS</td>
</tr>
<tr>
<td>04IM2112</td>
<td>Case-Based Technology and Innovation Management</td>
<td></td>
<td>6</td>
<td>Every 3. sem.</td>
</tr>
<tr>
<td>04WI1011</td>
<td>Computer Supported Cooperative Work</td>
<td></td>
<td>6</td>
<td>WS</td>
</tr>
<tr>
<td>04WI1101</td>
<td>Business Intelligence</td>
<td></td>
<td>6</td>
<td>Every 3. sem.</td>
</tr>
<tr>
<td>04WI2019</td>
<td>Business Software</td>
<td></td>
<td>6</td>
<td>SS</td>
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<tr>
<td>04WI2103</td>
<td>Security in computer networks and mobile systems</td>
<td></td>
<td>6</td>
<td>Every 3. sem.</td>
</tr>
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</table>
### SUMMARY

<table>
<thead>
<tr>
<th>Compulsory</th>
<th>LP</th>
<th>Contact hours/week</th>
<th>Number modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recent Topics in Applied Natural Sciences</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research Project</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master Thesis</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Exam</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>∑ 48</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Student counseling before finishing the first semester

<table>
<thead>
<tr>
<th>Elective</th>
<th></th>
<th>&gt; 12</th>
<th>&gt; 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics and chemistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physics, chemistry, geography, biology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free elective modules</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>∑ 42</strong></td>
<td></td>
<td><strong>≤ 8</strong></td>
<td><strong>≤ 4</strong></td>
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</tbody>
</table>
# ROUTE OF STUDY

<table>
<thead>
<tr>
<th>Sem</th>
<th>Recent Topics in Applied Natural Sciences (Part 1)</th>
<th>3-5 Elective Modules</th>
<th>(Research Project)</th>
<th>LP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3 LP</td>
<td></td>
<td>Student counseling</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>Recent Topics in Applied Natural Sciences (Part 2)</td>
<td>2-4 Elective Modules</td>
<td>Research Project</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>3 LP</td>
<td></td>
<td></td>
<td>12 LP</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Master thesis</td>
<td>Oral final exam</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25 LP</td>
<td>5 LP</td>
<td></td>
</tr>
<tr>
<td>M.Sc.</td>
<td>$\sum$ 6 LP</td>
<td>$\sum$ 42 LP</td>
<td>$\sum$ 42 LP</td>
<td>90</td>
</tr>
</tbody>
</table>
Note:

Please register in KLIPS for your course to be able to receive all information via KLIPS.

You will find information, as e.g. availability and way of lecturing, in KLIPS.

Further details will be communicated via KLIPS by the lecturer at the beginning of the course.

All lectures will start in calendar week 15 (April 12th, 2021)
Enrollment and Cancellation for the course ends on April 26th, 2021.

• This semester the seminar will be organized as Webinar. Details about the organization will be communicated before each seminar by the individual lecturer.

• The seminar takes place each Tuesday at 4.00 pm from April 27th, 2021 until July 13th, 2021.

• You have to participate in at minimum 8 seminars. Your participation is documented by the individual lecturer. In addition you have to give a presentation by yourself in the second semester.
Preparation of your own presentation

• Inform yourself about the research topics available at our departments. Links to the webpages of the working groups are given on page 6.

• Get in touch with the individual professors for a topic of and date for your presentation.

• Your presentation has to be scheduled latest until April 26th, 2021.

• The seminar presentation (module 03XX2403) counts as one exam. Register for this exam in KLIPS as well!
Institution: Universität Koblenz-Landau
Registration on OLAT via university log-in data.

Further Information regarding online teaching and OLAT is published here: [Link]
Organizational issues on exams

an der Universität Koblenz-Landau


Inhaltsübersicht
§ 1 Geltungsbereich, Ziel des Studiums, Zweck der Bachelor- und der Masterprüfung, akademischer Grad
§ 2 Zugangsvoraussetzungen
§ 3 Prüfungsausschuss
§ 4 Prüferinnen und Prüfer, Beisitzerinnen und Beisitzer
§ 5 Anerkennung von Leistungen
§ 6 Regelstudienzeit, modulärer Studienaufbau, Fristen
§ 7 Studienumfang, Gliederung des Studiums
§ 8 Leistungspunktesystem
§ 9 Modulprüfungen, Studienleistungen, prüfungsrelevant Studienleistungen
§ 10 Schriftliche Modulprüfungen
§ 11 Mündliche Modulprüfungen
§ 12 Forschungspraktikum
§ 13 Projektarbeit
§ 14 Bachelor- und Masterarbeit
§ 15 Mündliche Abschlussprüfung
§ 16 Bestehen und Nichtbestehen der Bachelor- und der Masterprüfung, Wiederholung von Prüfungsleistungen
§ 17 Bewertung von Prüfungsleistungen, Bildung der Abschlussnoten und der Gesamtnote
§ 18 Zeugnis, Urkunde, Diploma Supplement
§ 19 Versäumnis, Rücktritt, Täuschung, Ordnungsverstoß
§ 20 Ungültigkeit der Bachelor- und der Masterprüfung
§ 21 Einsicht in die Prüfungsakten
§ 22 Inkrafttreten

Please refer to the exam regulation version mentioned in your admission papers.

Prüfungsordnung (PO)

(Version July 9th, 2019 + important: changes July 8th, 2020)
ORGANIZATIONAL ISSUES ON EXAMS

Written Exams

- All courses of the module have to be documented (in KLIPS) before taking a module exam, but as soon as all courses are completed the exam has to be taken (de-register if necessary in time).
- Register for the first trial immediately at the end of the course for the exam at the end of the same or beginning of the next semester, respectively.
- Register resp. unsubscribe in KLIPS till 14 days before exams. Dead line for the earliest first trial holds (end of the same semester).
- Up to three attempts, but none for improvement.
- Use only technical aids permitted by the lecturer (e.g. formulary, calculator).
- No electronic devices within reach (if so, failed).
ORGANIZATIONAL ISSUES ON EXAMS

Oral Exams

➤ All courses of the module have to be documented (in KLIPS) before taking a module exam, but as soon as all courses are completed the exam has to be taken (de-register if necessary in time).

➤ Register for the first trial immediately at the end of the course for the exam at the end of the same or beginning of the next semester, respectively.

➤ Register resp. unsubscribe in KLIPS till 14 days before exams. Dead line for the earliest first trial holds (end of the same semester). Note: exams are sorted by date of the exam not by course.

➤ For individual exams (e.g. master thesis) the date of the exam is arranged in agreement with lecturer prior enrollment in KLIPS.

➤ Up to three attempts, but none for improvement.

➤ The seminar presentation (module 03XX2403) counts as one exam as well. So you have to agree with one professor on a presentation date and topic and register for this exam in KLIPS as well!
Important

- Registration and deregistration for/from a module is subject to deadlines (see Klips).
- Once your registered for a module and the deadline for deregistration has passed you have to take part in the exam.
- In case of failing the exam, the module cannot be replaced by another module. You have to register for the 2nd and, if necessary, for the 3rd trial. This regulation holds for compulsory and for elective modules.
- The 2nd and 3rd trial for the exam must be completed within one year after the 1st trial.
Please note:

Due to the current pandemic situation exams will partly take place in the semester breaks (calendar week 29/30 2021).

Actual information can be found on our webpage (physics) and in KLIPS (physics, chemistry).
SAFETY INSTRUCTIONS
(in German as a seminar, in English on paper only)

<table>
<thead>
<tr>
<th></th>
<th>Chemistry (annually)</th>
<th>Physics (each semester)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date</strong></td>
<td>Monday April 6(^{th}), 2021</td>
<td>Monday April 12(^{th}), 2021</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td>See Klips</td>
<td>2.00 pm (s.t.)</td>
</tr>
<tr>
<td><strong>Room</strong></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>Online</td>
<td>Online</td>
</tr>
<tr>
<td><strong>In charge</strong></td>
<td>Dr. Michael Kunze</td>
<td>Dr. Merten Joost</td>
</tr>
</tbody>
</table>
Research Work and Master Thesis

• Inform yourself at an early stage of your study:
  - Topic: consult lecturer
  - Formalities: exam regulations (PO § 12 - § 15)
  - For details see also checklist

• Duration:
  - Research work: 12 weeks, 15 ECTS
  - Master thesis: 20 weeks, 25 ECTS (+ 5 ECTS oral exam)

• Working time must include lecture-free time:
  End of January/Mid February - Mid April/Beginning of May
  or
  Mid July/End July - End of September/Mid October
  or
  in semester without lectures or exams
Questions …

… please refer to the secretariats

Petra Kires
G433
Physics Department
phone: 2330
physiksekretariat@uni-koblenz.de

Silvia Schuller
M216
Chemistry Department
phone: 2250
schuller@uni-koblenz.de

Petra Kapellen
G229
Biology Department
phone: 2220
biologie@uni-koblenz.de

… see also our webpage

Currently not possible

… notice board

Building G, 4th floor
MUTUAL BOARD OF EXAMINERS

B.Sc. Angewandte Naturwissenschaften and M.Sc. Applied Natural Sciences

- Prof. Dr. Silke Rathgeber (Chairwomen)
- Prof. Dr. Wolfgang Imhof
- Prof. Dr. Werner Manz
- Prof. Dr. Joachim Scholz
- Dr. Almuth Sax
- Petra Kires
- Simon Nickel (Student)
EVALUATION in January 2021

your version will be in English

Please participate!
NEXT THINGS TO DO

➢ Enroll for courses as soon as possible

➢ Get safety instructions

➢ Please also note the information of the student council (Fachschaft): Angewandte Naturwissenschaften (B.Sc.) + Applied Natural Sciences (M.Sc.)