



University of Koblenz
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Overview of the degree programme
uni-ko.de/maansen

Uniblog - The online-magazine
uni-ko.de/blog

Testimonials from students
uni-ko.de/was-studieren



QR-Code : University social media channels

Apply now!

Application deadline for the winter semester is 15 June for non-EU students and 15 July for EU students. Application deadline for the summer semester is 15 December for non-EU students and 15 January for EU students. Applicants with a non-German degree should apply via www.uni-assist.de

➤ Contact

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Imprint

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The **University of Koblenz** is one of the youngest universities in Germany—and yet looks back on a long-established scholarly tradition. Four profile areas are linked in a unique way: “Education”, “Computer Sciences”, “Culture and Mediation” as well as “Material and Environment”. These profile areas also provide important impulses for teacher education, which plays a pivotal role at our university. Interdisciplinary cooperation and short distances on campus characterise everyday university life and enable exciting collaboration and continuous innovation in scholarship.

The University of Koblenz offers a broad range of high-quality study programmes to its 9000-plus students. The university sees itself as a driving force in the development of a vibrant economic and academic hub that is both internationally visible and connected at the same time.

The university has taken as its maxim “continue discovering”. This reflects the incentive and aspiration of all members of the university to constantly question the familiar and the customary in order to arrive at new insights and findings. To this end, the university offers its members the required resources to enable them to further improve their studies, teaching and research and to break new ground in transferring ideas, knowledge and technology.

The University of Koblenz will be launched as an independent university on 1 January 2023.



➤ Master Applied Natural Sciences



➤ Profile

The Master's programme in Applied Natural Sciences is an interdisciplinary programme that enables graduates of Bachelor programmes in applied natural sciences to work in research fields comprising chemistry, physics, and life sciences. It combines chemical and physical concepts in material science with environmental sciences, an aspect that is of increasing importance in terms of environmental protection.

The programme offers a broad range of electives, such as mathematics, biology, geoscience, economics, and computer science. The interdisciplinary and applied approach enables graduates of this programme to synthesise and characterise functional materials and to identify interrelationships with aspects of life sciences. Please note that this MSc is not an engineering programme.

➤ Studies

Students will acquire theoretical and practical skills in the synthesis, characterisation and applications of functional materials and environmental sciences. Electives make it possible to individually focus on, for instance, mathematics, biology, geoscience, economics, or computer science. Lectures will be held in English (modules taught in German can also be chosen as electives). Studying abroad for one semester is possible.

The Master's programme comprises three semesters of full-time study during which participants are required to obtain a total of 90 ECTS. For students with a Bachelor's degree equivalent to 180 ECTS, an additional semester (30 ECTS) is offered. Ultimately, a total of 300 ECTS are required for the award of the MSc.

Electives (42 ECTS) offer students the opportunity to deepen their knowledge of the physics and chemistry of functional

materials and environmental aspects as well as in a broad range of other fields, such as biology, geosciences, mathematics, and computer sciences. The programme in particular provides the opportunity to gain practical skills. The practical phase comprises a research project (12 ECTS) and the final Master's thesis (25 ECTS) with a final oral exam (5 ECTS).

Semester	Study contents			ECTS
1	Recent topics in applied natural sciences	3-5 Elective modules: <ul style="list-style-type: none"> • Chemistry • Physics • Life sciences • Free individual electives 		30
2	Recent topics in applied natural sciences	2-4 Elective modules: <ul style="list-style-type: none"> • Chemistry • Physics • Life sciences • Free individual electives 	Research project	30
3		Master thesis	Oral final exam	30
MSc				90



Practical and research orientation

The study programme includes a high proportion of practical classes such as laboratory practicals. Various internships (internal, external and abroad) give students the opportunity to carry out small research projects independently, thus putting their theoretical knowledge into practice and gaining hands-on experience in research. This ensures a strong focus on research and application.

Research cooperations

There are cooperation agreements with several universities and research institutions in Germany and abroad, for instance in Chile, China, France, Italy, Morocco, Spain, and USA. Additionally, an international orientation of the study programme is achieved through our employment of an international research staff, regular talks by guest lecturers from abroad, and internships that can be undertaken all over the world.

Semester abroad

Due to the high number of elective modules (42 ECTS), it is very easy to integrate a semester abroad.

➤ Career prospects

As a graduate, you will have in-depth scientific knowledge in theory and practice that will qualify you for demanding jobs. In particular, you will qualify for a career in natural science research, but also for challenging administrative and industrial careers in sectors related to chemistry, physics, materials and life sciences.

English language courses during your studies will prepare you for scientific work in an international environment.

The Master's degree also opens up the possibility of taking consecutive PhD program.

➤ Faculty of Mathematics and Natural Sciences

The Faculty of Mathematics and Natural Sciences includes all the disciplines of the natural sciences, mathematics, and sport science. The Master's programme is organised by the Institute of Integrated Natural Sciences with its departments of biology, chemistry, geography, and physics. The institute has two main research foci, namely anthropogenic environmental change (biology, geography) and material sciences (chemistry, physics).

Applied Natural Sciences	
Degree	Master of Science (MSc)
Admission requirements	BSc in Applied Natural Sciences conferred by Universität Koblenz-Landau or equivalent degree (final grade 2.5 or better). The board of examiners decides on any exceptions on the basis of applications submitted. Exceptions in this regard are a Bachelor's thesis with the grade 1.5 or better or professional experience of at least one year in the field of chemistry and physics of functional materials.
Course requirements	Prerequisites are a scientifically based command of higher mathematics, standard physics (mechanics, thermodynamics, electrodynamics, optics) and basic modern physics (atomic and molecular physics, quantum mechanics) on the level of experimental physics as well as of the basics and applications of general and inorganic chemistry, substance classes and reaction mechanisms in organic chemistry, material laws and states of matter in physical chemistry.
Local admission restrictions	none
Start of studies	Summer and winter semester
Duration of studies	3 semesters
Language of teaching	English