



Bildnachweis: Universität Koblenz

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Applications via the online portal:

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More information about the degree programme

uni-ko.de/material



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As of: June 2025

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➤ Contact

Do you have questions about University of Koblenz and starting your studies with us?

International Relations Office (IRO)

E-Mail international@uni-koblenz.de

Student Affairs Office

Phone +49 261 287-1607

E-Mail studienbuero@uni-koblenz.de

Central Student Advisory Office

Phone +49 261 287-1751

E-Mail studienberatung@uni-koblenz.de

Do you have questions about the content of the Materials Science programme?

Academic counselling

E-Mail material@uni-koblenz.de

University of Koblenz

Universitätsstraße 1

56070 Koblenz

Phone +49 0261 287-0

uni-koblenz.de

International Relations Office:



The **University of Koblenz** is one of the youngest universities in Germany – and at the same time has a long academic tradition.

In terms of content, everything revolves around our four profile areas: Education, Computer Sciences, Culture and its Mediation, and Materials and the Environment. These also provide important impetus for teacher training, which plays a central role at the university. Interdisciplinary cooperation, short distances on campus and close networking with the region characterise everyday life at the university. The particularly liveable city of Koblenz and the beautiful location of the university near the Moselle create a perfect environment. Here, everyone knows each other personally, works together to move things forward and can develop big plans. This results in interdisciplinarity and continuous innovation in the academic field, as well as a high-quality and wide range of study programmes that you can use to develop your own educational profile.

Our motto is 'continue discovering'. This reflects our drive to constantly question the familiar and the established in order to gain new insights. Freedom and flexibility are particularly important to us. So that you can develop to your full potential.



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➤ Master Material Science

➤ Your Profil

As the energy transition we are experiencing is also a material transition, the knowledge and development of novel functional materials are more important than ever before. The Master's programme in MSc Material Science is an interdisciplinary course of study that allows graduates with a Bachelor's degree in Applied Natural Sciences, Material Sciences or related fields to acquire advanced knowledge in the chemistry and physics of materials, while exploring modern and innovative research directions in these areas. Chemical and physical concepts are integrated to provide a comprehensive understanding of materials science, with a strong emphasise on contemporary trends such as sustainability, the energy transition, and digital solutions.

➤ Your studies

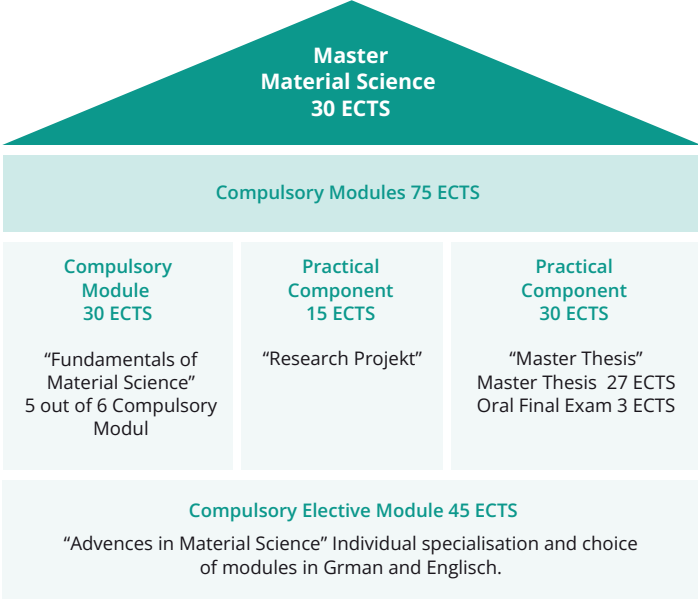
The Master's programme "MSc Material Science" is a research-oriented study programme that imparts subject-specific and interdisciplinary knowledge, skills, and methodological expertise in the physics and chemistry of functional materials. It prepares students for further academic qualifications (such as a doctorate) or for careers in fields related to Materials Science. The programme comprises 120 ECTS credits and has a standard duration of four terms. This internationally oriented Master's programme is taught in English in both compulsory and compulsory elective areas. In the compulsory area, "Fundamentals of Materials Science", you are required to choose 5 out of the following 6 modules:

- Ceramic Materials
- Sustainable Functional Materials
- Polymer Chemistry and Natural Products Chemistry
- Physics of Metals
- Polymer Science
- Surface Science

The elective area, "Advances in Material Science", is divided into modules taught in both German and English, totaling 45 ECTS credits. All students must take a cross-disciplinary compulsory module called "Recent Research Topics", focusing on current scientific issues in the field of Materials Science.

All compulsory and elective courses emphasize sustainability aspects in the respective subjects, with this theme being central to the module "Sustainable Functional Materials". Academic advising is recommended after the first semester to help guide you efficiently through your academic path.

Further modules offered within the elective component include, for example, Physics of Matter, Thermochemical Modeling, and Applied Theoretical Physics. Students can also choose from Special Topics and Methods in Material Sciences 1 and 2, Analytical Chemistry, Technical Chemistry, Biochemistry, and Catalysis. Additional options include Organic Synthetic Chemistry, Glass Materials, Structure of Substances 1 and 2, as well as Nuclear Medicine, Computer Tomography, and X-Ray Diagnostics.



➤ Semester abroad

The elective "Mobility Module", worth 5–30 ECTS credits, allows you to incorporate courses from accredited study programmes outside the university — for example, during a stay abroad or at partner institutions.

➤ Research cooperations

We have cooperation agreements with several universities and research institutes in Germany and abroad, including in the USA, France, China, Chile, Italy, Morocco, and Spain.

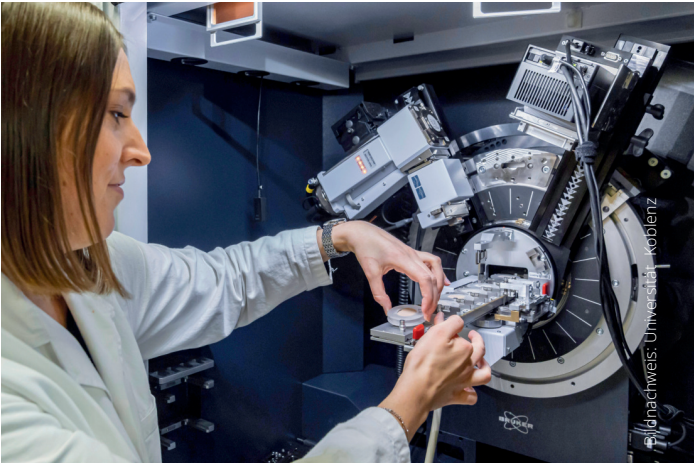
➤ Your career prospects

As a graduate, you will gain in-depth scientific knowledge, both theoretical and practical, that will qualify you for demanding roles in the field of Materials Science. Specifically, you will be well-prepared for an academic career in natural science research, as well as for challenging administrative and industrial positions in sectors related to materials science, chemistry and physics. With courses taught in English and the opportunity for study stays at partner universities abroad, the programme will prepare you for a dynamic, international career.

Thematically, the Master's programme is designed as a direct pathway to a doctorate in the field of Materials Science (metals, ceramics, plastics) within the faculty. In this regard, the postgraduate programme CerMaX provides an excellent platform for doctoral students to connect and develop both scientific and practical aspects of ceramics. The programme also includes soft skills training, mentoring, and the opportunity for research stays with international advisory board members.

➤ 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 within the departments of Chemistry and Physics. The institute has two main research areas, namely anthropogenic environmental change (biology, geography) and material sciences (chemistry, physics).



Material Science	
Degree	Master of Science (MSc)
Standard period of study	4
Start of programme	Summer semester Winter semester
Teaching language	English German
Admission restriction	No
Admission requirements	• BSc in Applied Natural Sciences conferred by University of Koblenz 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. • Prerequisites include basic and application-oriented knowledge in higher mathematics, classical physics (mechanics, thermodynamics, electrodynamics, optics), modern physics (atomic and molecular physics, quantum mechanics), as well as general and inorganic chemistry, solid-state chemistry, classes of substances, reaction mechanisms in organic chemistry, and states of matter in physical chemistry.