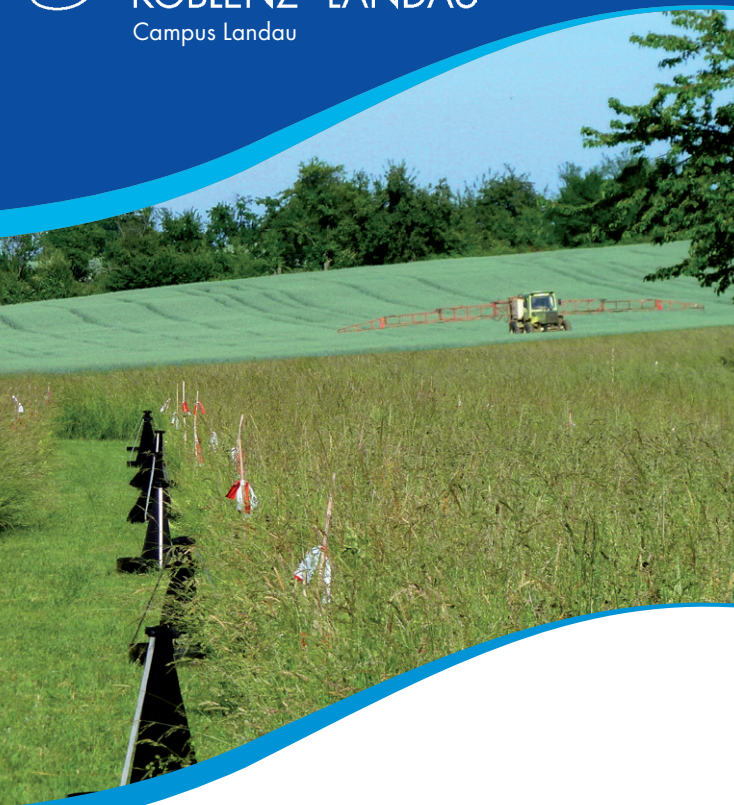




UNIVERSITÄT  
KOBLENZ · LANDAU

Campus Landau



# **Ecotoxicology**

## **Master of Science (M.Sc.)**



INSTITUTE FOR  
ENVIRONMENTAL SCIENCES



*Hands-on: taking water samples to assess the ecological and chemical quality.*

## Ecotoxicology

An increasing number of chemicals is used by society today, some of which are also released into the environment. Ecotoxicology is concerned with their potential impacts on the ecosystem.

This emerging field of science investigates effects of chemicals on biological systems in order to develop methods for risk assessment and management as well as to predict ecological consequences.

**The international Master of Science program in Ecotoxicology integrates concepts of Environmental Chemistry, Toxicology and Ecology and also the Social Sciences and Environmental Economics. Due to its interdisciplinary and applied approach, the program enables its graduates to analyze complex problems and to develop practical solutions.**

As environmental problems reach far beyond national borders, an international approach is necessary and the situation in developing countries needs special attention.

*"Environmental concerns and more stringent laws are providing opportunities for environmental toxicologists. In the future, toxicologists will need to consider cumulative effects of many exposures and work as part of multidisciplinary research teams. Most environmental toxicologists say they are highly satisfied with their work, partly because they can apply their expertise to pressing, real-world problems."*

### Mascarelli 2012 Nature CAREERS



*"I very much appreciated the excellent education and the close individual support from the teaching staff during my studies that allowed me to pursue my own research ideas and to find my field of interest. The high quality of my studies enabled me to qualify for a traineeship at the European Food Safety Authority. I then took on a position in the German Federal Environment Agency where I'm now working in the field of pesticide risk assessment."*

Klaus Swarowsky  
(Master Ecotoxicology, Federal Ministry for the Environment)



*Applied Science: students participate in pesticide application during a field test.*

## Study program

All students take the nine required modules, as well as a 10-week Research Project Course and an 8-week Applied Module at External Organisations to obtain a deep knowledge in the field of Ecotoxicology. Afterwards, students personalize the program by choosing two modules from the five Specialty Areas. The Master Thesis with colloquium rounds out the 4-semester program.

### Specialty Areas:

- ☐ Applied Environmental Chemistry & Environmental Physics,
- ☐ Chemistry,
- ☐ Applied Ecology,
- ☐ Geoecology and
- ☐ Socioeconomics & Environmental Management

1 <sup>st</sup> Semester (Winter semester)	2 <sup>nd</sup> Semester (Summer semester)	3 <sup>rd</sup> Semester (Winter semester)	4 <sup>th</sup> Semester (Summer semester)
<b>Compulsory part</b> (11 modules, 78 ECTS)			<b>Master Thesis</b> (30 ECTS)
<b>Compulsory modules in Ecotoxicology</b> (9 modules, 56 ECTS)			
Fate and Transport of Pollutants (6 ECTS)	Methods in Ecotoxicology (9 ECTS)	Models in Ecotoxicology (8 ECTS)	
Principles of Ecotoxicology (6 ECTS)	Molecular Ecology I (4 ECTS)	Risk Assessment and Management (6 ECTS)	
Tools for Complex Data Analysis (6 ECTS)	<b>Applied Module at External Organisations</b> (10 ECTS)	<b>Research Project Course</b> (12 ECTS)	
Lab Course Environmental Chemistry (6 ECTS)			
Toxicology and Pharmacology (5 ECTS)	<b>Elective modules</b> from the Specialty Areas (2 modules, 12 ECTS)		

ECTS = European Credit Transfer System; The Winter semester runs from mid October to mid Februar and the Summer semester from mid April to mid July.



University of Koblenz-Landau  
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## Who can apply?

We are looking for highly motivated students interested in working on ecotoxicologically relevant problems using an interdisciplinary approach. Basic academic knowledge will be acquired in the fields of Ecology, Environmental Chemistry, Geographic Informations Systems and Mathematics/Statistics. If necessary, previous knowledge may be complemented in preparatory courses.

- A Bachelor degree in Environmental Sciences, Natural Sciences or Earth Sciences is required with a minimum final grade of "good" (e.g., 2.5 on a 6.0 scale or 3.0 on a 4.0 scale).
- The program is conducted in English. Therefore, good active and passive English language skills are required.
- The program starts in the Winter semester (October).

Details about the admission process and frequently asked questions as well as information on studying in Germany can be found at [www.uni-landau.de/international-masters](http://www.uni-landau.de/international-masters)

## Further questions? Please contact us!



### Program Advisor

Dr. Carsten Brühl  
Institute for Environmental Sciences Landau  
Fortstraße 7  
76829 Landau i.d. Pfalz  
Germany

[MSc-Ecotox@uni-landau.de](mailto:MSc-Ecotox@uni-landau.de)



*Cooperations all over the world guarantee international networking.*

## **Employment outlook**

The program enables the graduates to conduct independent scientific work and prepares in particular for leadership positions in the numerous emerging fields of Ecotoxicology. The graduates are able to take on professional responsibility in:

- ☐ Scientific facilities and research institutes,
- ☐ Authorities, public offices and ministries with a regulatory role,
- ☐ Non-governmental organizations,
- ☐ Industry and consulting enterprises.

The international orientation of the program qualifies graduates for a global job market. In addition, the Master program prepares students for doctoral studies.

## **Internationally networked**

The Institute for Environmental Sciences, which offers the Master of Science in Ecotoxicology, is globally connected through international research projects and student exchange programs. The international nature of the program is achieved through numerous international research and teaching staff, regular seminars from guest lecturers from abroad, and possible internships all over the world.



*Easy living: the historic market place in the center of Landau.*

## University of Koblenz-Landau

**A university on the move** – The University of Koblenz-Landau is the youngest university in the state of Rhineland-Palatinate. There are two campuses, one located in the city of Koblenz and one in Landau. The Landau campus is situated in a green belt within the city and is only a short walk to the city center and to the train station.

The limited enrollment and selective admission process guarantee personal contact with fellow students and intensive mentoring by the teaching staff.

**Orientation at the start** – Students can clarify all questions concerning their studies during an orientation session at the beginning of every semester and in personal exchange with the staff.

## Landau – a city to enjoy

Nestled between the Rhine river plains and the Palatinate Forest, the small city of Landau, with its more than 7,500 students, offers a true university city atmosphere. In the heart of German wine country (the so-called German Tuscany because of its mild climate and many castles), wine festivals are in season throughout the year. The Palatinate Forest, the largest continuous block of forest in Central Europe, part of a trans-border biosphere reserve with France, provides excellent outdoor recreational possibilities like hiking, rock climbing, or mountain biking, and is a paradise for all nature lovers.



*Hiking in the Palatinate Forest.*



*The modern campus  
of a university on  
the move.*

## Why study in Landau?

- 1. Degree program with a future** – As a result of economic development and climate change the impact of pollutants on ecosystems are increasing on a global scale. Environmental concerns and more stringent laws provide good jobs for Ecotoxicologists.
- 2. Excellence in research and teaching** – Our lecturers are involved in international collaborative research projects and with governmental advisory groups. This means they are able to incorporate the very latest developments in their teaching.
- 3. Practical experience** – The study program includes not only a series of practical laboratory and field courses, but also six weeks of internship in a company or research organization.
- 4. Contact and interaction** – Students develop their individual strengths and interests through close contact between students and faculty.
- 5. Moderate costs** – German universities are state-funded, therefore no tuition fees are charged. You only have to bear a semester fee of currently 105 EUR and your living expenses.
- 6. Support for international students** – The International Welcome Center provides support for incoming students, and makes the transition to life in Germany as easy as possible.
- 7. Financial support** – Stipends are available from independent organizations (<https://www.daad.de/deutschland/stipendium/en/>). Many are competitive, so early application is essential.



*Small and personal  
laboratory courses.*





*Palatinate Forest: a biosphere reserve with many historical sites.*



## Contact

University of Koblenz-Landau, Campus Landau  
Institute for Environmental Sciences Landau  
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76829 Landau i.d. Pfalz  
Germany

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[www.master-ecotoxicology.de](http://www.master-ecotoxicology.de)  
[www.youtube.com/unikoblenzlandau](http://www.youtube.com/unikoblenzlandau)

