

Master of Science

# Food Quality and Safety

*Research into healthy and sustainable food supply.*

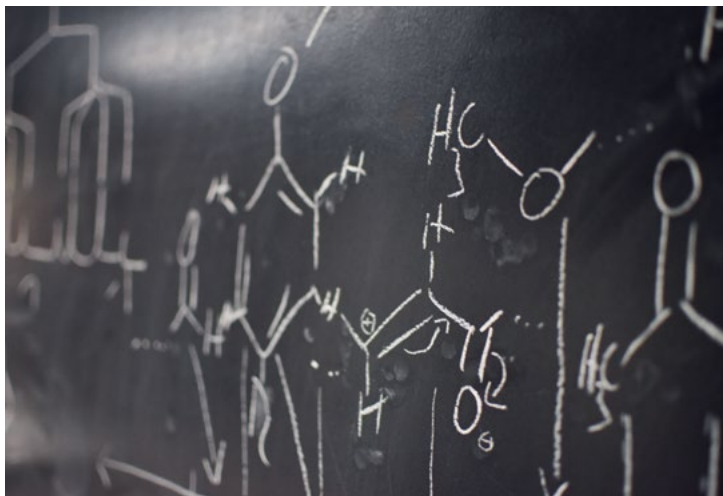




*The aim of the degree programme is to qualify students both for a career in research as well as for executive positions in the food industry, at authorities and in related areas.*

## An integrated vision of nutrition.

The food industry is a highly complex environment. Besides the overwhelming variety of ingredients food contains, our products are produced, traded, and processed globally. Quality assurance and quality enhancement must come to terms with this complexity, as must the legal framework, and new technical innovations. Unique to Germany, the *Food Quality and Safety* master's degree course at the University of Bayreuth addresses some of the greatest challenges of the 21st century: the sustainable production and distribution of healthy food of the highest possible quality, feeding a steadily growing world population, and optimizing existing supply chains while developing new ones. Complex problems require interdisciplinary solutions. This is where the scientific, legal, and economic skills you will acquire, thanks to this programme's interdisciplinary scope, will come to the fore.



*In addition to complex specialist knowledge, our students acquire key social and personal competencies such as: research- and practice-oriented work, teamwork, science communication, media training, and many more.*

## Study at the research interface and contribute towards future applications.

We are confronted almost daily with new questions on food quality and safety. The life and health sciences are developing rapidly and demand extreme flexibility and adaptability from students. Your master's programme is dedicated to topics of great relevance, and aspires to implement future-oriented findings. You will be introduced to highly topical issues related to food, nutrition and health, work on concrete case studies, and be included in current research projects. You will acquire skills in the following areas: *Biology and Biochemistry of Food, Human Biology, Food Chemistry, Data Science/Statistics, Food Law, Trade Law, Safety and Risk Management Law, Quality Management, Food Supply Chain Management, and Science Communication*. Your ability to work in an interdisciplinary manner will therefore be just as important as creativity, teamwork, and a sense of responsibility.



*Food quality and safety are directly related to human health. Ensuring the integrity and supply of nutritious food is critical for public health.*

## A master's degree with exciting prospects.

With the food industry being one of the most important sectors in Germany, attractive prospects exist for those who have successfully completed the English-taught master's programme in *Food Quality and Safety* at the University of Bayreuth. And not only in Germany, your skills will be in demand worldwide as food and health challenges have long since become global.

In many sectors you will be the sought-after specialist – taking up leadership roles in research, the food industry, health management authorities as well as politics and media.

# Your studies at a glance.

## 4 semesters.

Course structure <i>Food Quality and Safety</i>	Credit points (ECTS) *
<b>A. Biology, Biochemistry and Chemistry of Food</b>	<b>25</b>
■ Food Metabolome and Toxicology	5
■ Food Microbiology	5
■ Crop Plant and Animal Biology	5
■ Chemical Food Analysis	5
■ Nutritional Biochemistry, Physiology and Immunology	5
<b>B. Data Science / Information Technology / Statistics</b>	<b>5</b>
■ Data Analysis and Statistics	5
<b>C. Law and Management</b>	<b>25</b>
■ Introduction to Law and Food Law	5
■ Food Safety and Risk Management Law	5
■ Food Quality and Food Authenticity Law	5
■ Food Supply Chain Management	5
■ Food Quality Management	5
<b>D. Multidisciplinary Training</b>	<b>8</b>
■ Research Seminar	3
■ Interdisciplinary Topics in Food Quality and Safety	5
<b>E. Specialisation and Skills (Supplementary Module Area)</b>	<b>15</b>
<i>Varying course offer each semester but regularly offered courses include</i>	
■ Advanced Plant Breeding and Sustainable Food Production	5
■ Food Trade Law	5
■ Impact Entrepreneurship – Developing Social and Ecological Innovations	6
■ Research and Study Skills	5
■ Science Communication	3
<b>Mandatory 9-Week Internship</b>	<b>12</b>
<b>Master's Thesis</b>	<b>30</b>
<b>Total</b>	<b>120</b>

\* ECTS credit points according to ECTS

The awarding of credit points according to the European Credit Transfer System (ECTS) facilitates the international comparability of coursework completed at European higher education institutions.



*Kulmbach is an old margravate town which is home of companies, authorities, and research institutes in the food sector. With around 26,000 inhabitants, the town offers a full range of cultural and gastronomic delights.*

## Special programme, special place.

Why, you may ask is the master's degree programme taught on the University of Bayreuth's satellite campus in the charming beer-brewing town of Kulmbach? There are good reasons, Kulmbach is not only home to some globally recognized companies, but also to the *Max Rubner Institute*, the *Bavarian Control Authority for Food Safety and Veterinary Medicine*, *KErn* (Competence Centre for Nutrition), the *State Technical College for Food Technology* and the *Kulmbach Clinical Centre*. All of these are involved in various research projects and teaching at the Faculty. Students benefit from the practice-oriented courses as well as the close cooperation with companies in the food industry enabling them to network and often discover exciting career prospects.





*We offer a future-oriented master's programme with individual support for our students from the very first request for advice to the nurturing of relationships within the framework of an alumni network.*

## Pioneering spirit and fresh ideas within the home of an old spinning mill.

The University of Bayreuth, home to approximately 12.000 students, is a top rated university in many national and international rankings. The University has a unique character appealing to both highly talented students and excellent scientists alike. A recent example of its success is the interdisciplinary *Faculty of Life Sciences: Food, Nutrition and Health* in Kulmbach, which is dedicated to research into high quality and healthy food, its sustainable production and distribution and the effective prevention of diseases of modern civilization. The Faculty is located in an old spinning mill in the centre of Kulmbach and offers well-equipped seminar rooms, on-site Faculty library and cafeteria as well as state-of-the-art laboratories. As a satellite campus of the University of Bayreuth, we offer a specific study service and, of course, we are closely networked with all facilities and services on the main campus in Bayreuth.

## **An exciting interdisciplinary study programme awaits you.**

We appreciate your interest in the international master's programme *Food Quality and Safety* at the University of Bayreuth. As a prerequisite for the course of study, you should hold a bachelor's degree in one of the following subjects: *biology, biochemistry, biotechnology, agricultural science, food sciences, health sciences, ecotrophology, bioanalytics, nutrition science, or food chemistry*. Comparable courses of study will be considered. In all cases, applicants must undergo an aptitude process.

Programme start: Winter Semester

Visit our website for further information on the application process:  
[www.foodquality.uni-bayreuth.de](http://www.foodquality.uni-bayreuth.de)



### **Programme Coordination:**

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**You can find further information here:**

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[www.f7.uni-bayreuth.de](http://www.f7.uni-bayreuth.de)  
[www.instagram.com/campus\\_kulmbach](https://www.instagram.com/campus_kulmbach)