

Master of Science

# Food System Sciences

*Your route to secure a sustainable and healthy food supply for future generations.*



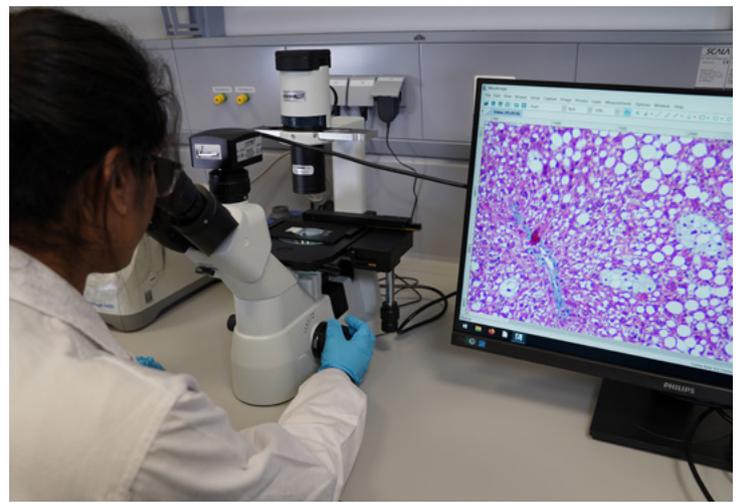


*The ingredients of food, production methods and supply chain management contribute to the health of both humans and the environment.*

## A vision to understand and manage food systems.

The complex world of food is of great importance for many areas of society. Novel food products seek legislation to make the food system more sustainable and healthy. The *Food System Sciences* master's degree programme at the University of Bayreuth offers a comprehensive programme integrating different aspects of the food system, allowing students to gain insights into the interfaces between Food Chemistry, Human Physiology, Food Law, and the Bioeconomy.

The food industry is one of the most important sectors in Germany and worldwide. This degree programme aims to qualify students for research and development in both academic and company-based environments, for executive positions in the food industry and health-management, as well as for executive and consulting positions at authorities, in the media, and in other areas of administration and business.



*Our students benefit from modern equipped seminar rooms and laboratories, small classes, and close student-professor connections.*

## From a cross-disciplinary base to in-depth specialisations for future food security.

The effects of climate change on the production of food become more evident year by year. In order to ensure a sufficient, high quality food supply in the future, different scientific disciplines need to work in close cooperation to allow a fast transformation of food systems for more sustainability and health. The unique study programme *Food System Sciences* at the University of Bayreuth trains students to bridge between disciplines.

Building on this cross-disciplinary base, the programme offers dedicated specialisations in **Analytics in Life Sciences**, **Nutritional Physiology**, **Food Law**, and **Bioeconomy**, training highly qualified specialists with sought-after skills to make a significant contribution to ensure a sufficient, high quality food supply for the growing world population.

# A study programme with future perspectives.

The Food System Sciences programme comprises modules with a total of 120 ECTS credits. It offers a broad range of modules, which are structured into the following specialisations:

1. The **Analytics in Life Sciences** specialisation aims to provide a comprehensive and up-to-date overview of analytical research methods and applications, training students to work on analytical research questions including the basics of analytical quality assurance "From-Farm-to-Fork".

2. In the **Nutritional Physiology** specialisation, students learn about the influence of nutrition on the human body, including the influence of defined diets on the development of non-communicable diseases or the interaction of nutrition and physical activity on the maintenance of health.

3. In the **Food Law** specialisation, students learn European and international food law. This includes substantive and institutional food law. Key areas are dealt with in depth, enabling students to understand and help shape food-related regulatory approaches.

4. In the **Bioeconomy** specialisation, students analyse the various aspects of sustainability in food systems from a production, business, and sociological perspective. The focus of the specialisation is on plant-based foods using integrative approaches to analyse production, distribution, and consumption.

## Your studies at a glance. 4 semesters.

### Semester 1: expand your broad knowledge base

Analytics in life sciences - from molecules to cells – 6 ECTS	Nutritional physiology – from cells to organism – 6 ECTS	Food Law – from National to International Perspectives – 6 ECTS	Bioeconomy – sustainable production, business, and society – 6 ECTS
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### Semester 2: choose courses in 2 to 3 specialisations

Advanced Analytics and Food Quality - 5 ECTS	Advanced human physiology - 5 ECTS	Advanced Institutional and Substantive EU and International Food Law - 10 ECTS	Advanced Business Analytics - 5 ECTS
Advanced microbiology – food microbiology - 5 ECTS		Seminar Entrepreneurship and Innovation - 5 ECTS	
Advanced Cell-Environment Interactions - 5 ECTS	Advanced Plant Breeding and Sustainable Food Production - 5 ECTS		Advanced Theories in Food Studies - 5 ECTS

### Semester 3: go in-depth in your final specialisation

Specialisation in Analytics, Biotechnology, and Cellular Biology - 15 ECTS	Specialisation in Human Health and Nutrition Physiology - 15 ECTS	Specialisation in EU and International Food and Environmental Law - 15 ECTS	Specialisation in bioeconomy - sustainable production and supply chains - 15 ECTS
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Internship in the area of your final specialisation + Research Seminar - 15 ECTS

### Semester 4: Master's Thesis



*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 *Food System Sciences* 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*, the *KErn Competence Centre for Nutrition*, the *State Technical College for Food Technology*, as well as the *Kulmbach Clinical Centre*.

All of these are involved in various research projects and in the 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, complete internships, and discover exciting career prospects.



*We offer a future-oriented master's programme with an 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 in an old spinning mill.

According to Times Higher Education magazine, the University of Bayreuth, which has around 12,500 students, is one of the world's top young universities and is ranked 59th out of the 790 best universities in the world. 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 on sustainable production and distribution of high quality, healthy food, and the effective prevention of modern civilisation diseases. The Faculty is located in the town centre in the premises of an old spinning mill, rich in tradition and renovated to the latest standard harbouring modern equipped seminar rooms and 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 campus in Bayreuth.

## An attractive study programme awaits you.

We appreciate your interest in the international master's programme *Food System Sciences* at the University of Bayreuth. The programme is aimed at interested students with a bachelor's degree with a final grade of 2.5 ("gut") or better in Natural Sciences or Life Sciences or Social Sciences or Law or Economics or Nutrition and Health Sciences. An aptitude test will be required. Students enrolled in comparable courses of study may also be admitted (after an aptitude test).

Start of Studies - Winter Semester. Further information on the application process can be found on our website at:

[www.uni-bayreuth.de/master/food-system-sciences](http://www.uni-bayreuth.de/master/food-system-sciences)



### Programme coordinators:

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### Programme coordination:

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### You can find further information here:

[www.uni-bayreuth.de](http://www.uni-bayreuth.de)

[www.f7.uni-bayreuth.de](http://www.f7.uni-bayreuth.de)

[www.instagram.com/campus\\_kulmbach](https://www.instagram.com/campus_kulmbach)