

## Innovation through biotechnology

Biotechnology facilitates the production or modification of high-quality products (e.g. food and food compounds) through advanced biotechnological processes, that involve microbiological and enzyme technological aspects. In the Master Biotechnology you focus on microorganisms as producers of enzymes and their cultivation in bioreactors under controlled, secure and standardized conditions. Additionally, you will learn about enzymatic production processes, their evaluation and optimization. In Hohenheim you can specialize in the field of food biotechnology but you can also gain knowledge about industrial and pharmaceutical biotechnology. Since the Master's program is entirely taught in English, you are well prepared for an international career in research and industry.



## At a Glance

<b>DEGREE</b>	Master of Science
<b>LANGUAGE OF INSTRUCTION</b>	English
<b>CREDITS</b>	120
<b>STANDARD PERIOD OF STUDY</b>	4 semesters
<b>AVAILABLE PLACES</b>	22
<b>ADMISSION REQUIREMENTS</b>	Bachelor's degree (180 ECTS-credits) in the natural, sciences or equivalent English (B2)
<b>SELECTION CRITERIA</b>	Final grade of Bachelor's degree, Subject-specific coursework, Vocational training, work experience, internships, further qualifications, Result of mandatory aptitude assessment
<b>APPLICATION DEADLINE</b>	May 15



## Contact

### University of Hohenheim

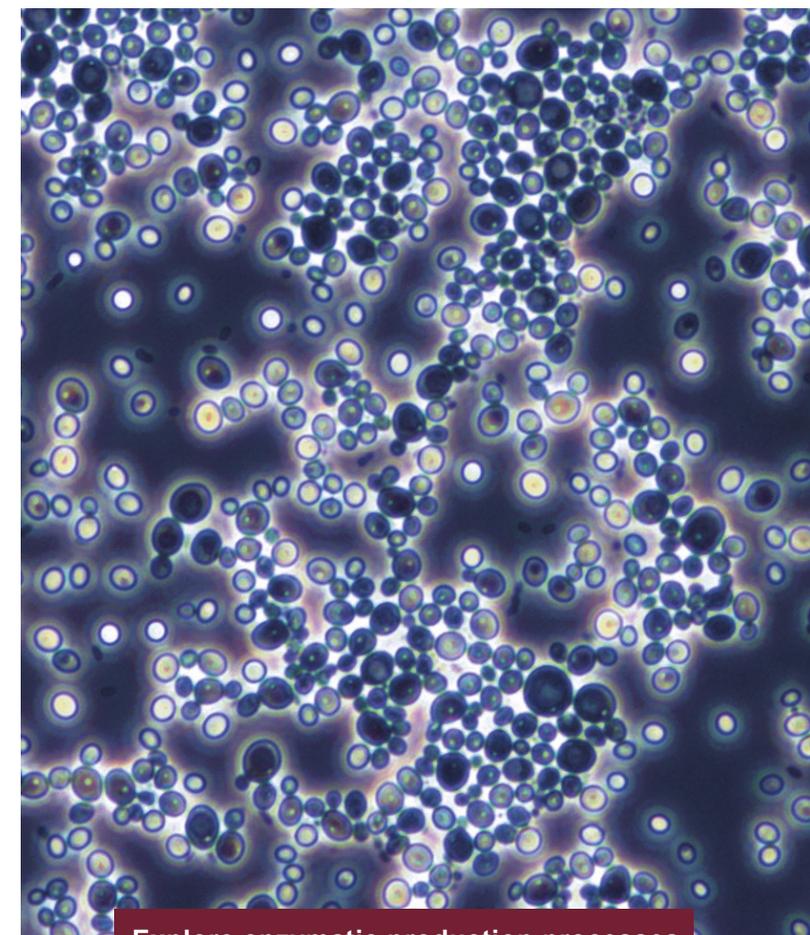
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[www.uni-hohenheim.de/  
biotechnology-master-studium](http://www.uni-hohenheim.de/biotechnology-master-studium)



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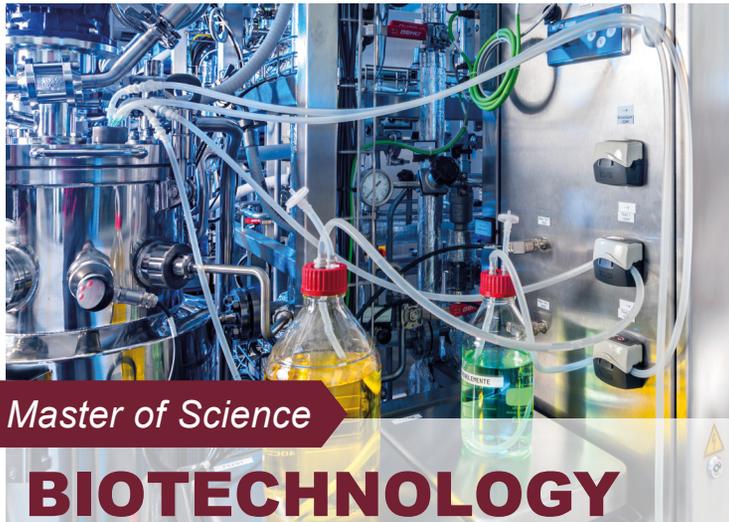


Explore enzymatic production processes

# Biotechnology

Master of Science

[www.uni-hohenheim.de/  
biotechnology-master-studium](http://www.uni-hohenheim.de/biotechnology-master-studium)



Master of Science

# BIOTECHNOLOGY

## EXPLORE THE WORLD OF MICROORGANISMS AND ENZYMES

The interdisciplinary and research-oriented Master in Biotechnology is concerned with the properties, the production processes and the manifold applications of enzymes and microorganisms in the food/pharmaceutical/chemical/cosmetics industry, its supplying industries and for bioanalytical purposes. During your studies you will be embedded in ongoing research projects at the Institute of Food Science and Biotechnology. Together with the Institute of Food Chemistry and the nutritional science institutes, our interdisciplinary expertise covers all aspects of food systems and their analysis.

You explore enzymatic production processes and familiarize yourself with biochemical methods, including the purification, characterization and immobilization of enzymes, enzyme kinetics, gene expression and the mutagenesis of recombinant enzymes. Additionally, you gain a thorough understanding of pathogens and the importance of hygiene in food production, which is essential for utilizing microorganisms and enzymes in the life sciences. Hence, you will acquire the necessary skills and expertise for a career in research as well as in relevant fields in the industry.

### Course Design

During the **first semester** students acquire fundamental knowledge of the identification and recovery of enzymes and microorganisms in the life sciences and its connected industries. This includes a comprehensive introduction to food microbiology, enzyme analysis, and their corresponding methodologies and research strategies. From the **second semester** onwards you freely plan your studies according to your individual interests and preferred areas of specialization. You can for example focus on enzymatic production processes and their utilization in the industrial sector or on food microbiology and the reproduction of microorganisms. While your approach to the program may thus differ, you will, in all cases, increasingly conduct independent research from the second semester onwards. A research-intensive **Master's thesis**, integrated into ongoing research at the Faculty, concludes the program.

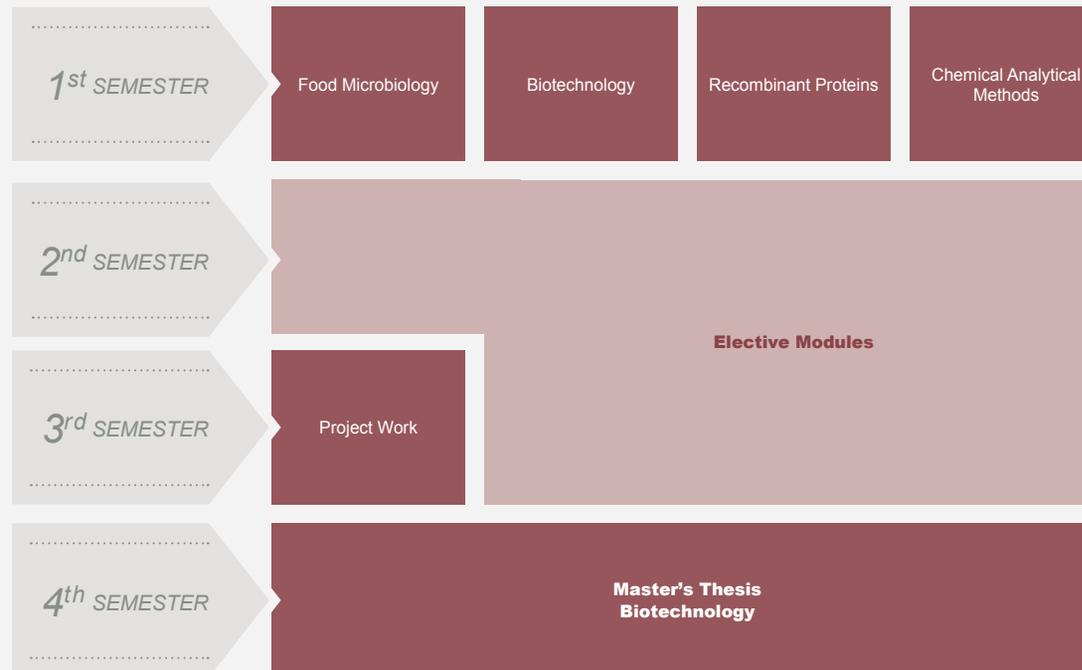
### Perspectives

Our graduates' interdisciplinary expertise leads to many excellent job opportunities in Germany and abroad. These include positions of responsibility in research and development, project management or quality assurance and management in the following fields:

- Biotechnology, food, cosmetics, chemicals, and pharmaceutical industry and its supplying industries
- Federal and state research centers
- Science Journalism

This Master offers the possibility to participate at modules in the areas of food science and engineering, nutritional sciences and biology. Additionally, you can choose electives in the field of economics and agriculture. This allows you to form your personal profile by including areas adjacent to and beyond the field of biotechnology.

### Course of study



■ Compulsory modules  
■ Elective modules