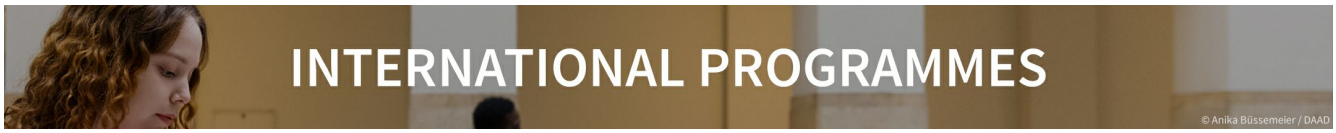
Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Master's degree

Agricultural Biosciences

Technical University of Munich • Freising





Overview

Degree	Master of Science (MSc)
Teaching language	• English
Languages	English
Full-time / part-time	• full-time
Mode of study	Fully on-site with voluntary online elements
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	Application period: From 1 January to 31 May (for the following winter semester) For international students, we strongly recommend to apply as early as possible, ideally before 31 March.
Tuition fees per semester in EUR	4,000 EUR
Additional information on tuition fees	Please refer to the following website for more information on tuition fees at TUM: https://www.tum.de/en/studies/fees/tuition. Many international students can have their fees waived or receive scholarships to finance them. You can find all information on waivers and scholarshipshere.
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No

Description/content

How can we secure the world's food supply? How can we preserve natural resources and mitigate the effects of climate change?

By studying Agricultural Biosciences at the TUM School of Life Sciences, you will become an expert with a set of skills needed to address these and other important challenges of our time. The MSc Agricultural Biosciences programme offers courses in biological disciplines relevant for crop and livestock production. It integrates molecular, biochemical, physiological, genetic and genomic knowledge as well as quantitative and computational approaches in a unique, interdisciplinary agricultural programme.

Are you interested in enhancing your knowledge and skills for a future in the rapidly evolving field of agricultural science?

Agricultural biosciences offer solutions to major societal challenges. They can make significant contributions to securing food supplies, preserving natural resources, and mitigating the effects of climate change.

The Agricultural Biosciences international study programme**focuses on basic biological research for an efficient and environmentally-friendly agricultural production of crop and livestock species**. It aims to understand crop and livestock species from the level of cells up to the whole organism and populations.

In contrast to other Master's programmes that have a specialised view on basic research and distinguish between plant and animal science, we at TUM believe that a generic approach is more timely, as many biological mechanisms are shared between plants and animals. A strong focus on molecular and computational methods reflects the TUM strategy to value innovation as the basis for knowledge.

The MSc Agricultural Biosciences programme deals with different organisms, namely plants, animals and microbes. The programme takes advantage of the synergistic effects created by integrated studies on plant and animal species teaching generic as well as specific biological concepts, methods and tools. It reflects the high level of innovation in agricultural biosciences and prepares graduates for a multi-path career, allowing for flexibility and migration in the job market.

As a graduate, you will...

- have a profound **understanding of the scientific basis** of biological processes relevant for agricultural production.
- be able to **perform research** in the field of Agricultural Biosciences and link your knowledge and results to other disciplines
- be aware of **societal challenges and demands** in the context of Agricultural Biosciences and possess the **social skills** to communicate across disciplines and cultures
- have developed your own **competencies** for navigating in a changing environment and managing complex projects

Upon graduating, you will be able to find employment in the national or international job market, e.g., at universities, at research institutes, in the public sector or in biotech, breeding and **life science companies**.

Furthermore, more and more young scientists with expertise in agricultural biosciences are finding employment in **smaller companies** and **start-ups in areas such as biotechnology and machine intelligence**.

Course Details

Course organisation

During the first and second semesters, five compulsory modules (Physiology, Plant and Animal Cell Biology, Immunology: Crop and Livestock Health and Disease, Genetics and Genomics as well as Statistical Computing and Data Analysis) have to be completed. After passing these core courses, students possess solid knowledge in basic biological concepts relevant for agricultural production.

Elective modules are very important in the study programme. You can choose from a list of different

lab courses that cover either molecular or computational techniques. In addition, the programme offers research tool modules that allow for independent study and enable students to perform research in the field of Agricultural Biosciences.

By virtue of the mobility window in the third semester, students are encouraged to gain international study experience through exchange programmes such as Erasmus+ or TUMexchange. If approved by the Examination Board, you will be able to take up a research internship outside TUM, e.g., with a qualified industry partner or an external research organisation.

The fourth semester is devoted to preparing the Master's thesis, which concludes the study programme. In their theses, students identify and address a research question in the Agricultural Biosciences by choosing and implementing appropriate molecular, experimental or data methods. The thesis will serve to raise your professional profile.

For more information, you can also watch our **video**: "Agricultural Biosciences – What makes this international Master's programme so unique?"

» PDF Download

International elements	• Integrated/optional study abroad unit(s)
Integrated/optional study abroad unit(s)	By opening a **mobility window** in the **third semester**, students are encouraged to gain international study experience through exchange programmes such as Erasmus+ or TUMexchange. You can also take up a research internship outside TUM, e.g. with a qualified industry partner or an external research organisation.
Course-specific, integrated German language courses	No
Course-specific, integrated English language courses	No

Costs / Funding

Tuition fees per semester in EUR	4,000 EUR
Additional information on tuition fees	Please refer to the following website for more information on tuition fees at TUM: https://www.tum.de/en/studies/fees/tuition. Many international students can have their fees waived or receive scholarships to finance them. You can find all information on waivers and scholarshipshere.
Semester contribution	Please refer to this page for more details: https://www.tum.de/en/studies/fees.
Costs of living	In order to cover personal expenses while studying in Munich, we recommend a budget of at least 900 EUR per month. Please refer to the following page for more information: https://www.studentenwerk-muenchen.de/en/international/international-students-in-munich/in-preparation/cost-of-living/.
Funding opportunities	Yes

within the university

Description of the above-mentioned funding opportunities within the university	**Germany Scholarship at TUM:** • Who can qualify: currently enrolled undergraduates and graduates with university entrance certificates from Germany or abroad • Scholarship amount: 300 EUR per month • Qualification requirements: academic achievement and aptitude, social engagement, a sense of responsibility and special circumstances such as physical handicaps or a minority status **Scholarships for international students:** • Who can qualify: currently enrolled undergraduates and graduates with non-German university entrance certificates • Scholarship amount: one-time financial aid of 500 to 1,500 EUR per semester • Qualification requirements: Good academic record (merit), proven need (low income) Learn more about scholarships.

Requirements / Registration

Academic admission requirements	Admittance to the Master's programme requires a Bachelor of Science degree of at least six semesters awarded by a German or foreign university, or at least an equivalent degree in the field of life sciences with a focus on plant and/or animal sciences. In particular, this degree should be from a study programme in Agricultural Sciences, Horticultural Sciences, Life Sciences Biology or Molecular Biotechnology, or it should be from a comparable study programme.
Language requirements	Applicants must provide proof of their English skills before the end of the application period. Required English language proficiency: TOEFL with at least 88 points or IELTS with at least 6.5 points Learn more about recognised certificates and other ways to prove your language skills.
Application deadline	Application period: From 1 January to 31 May (for the following winter semester) For international students, we strongly recommend to apply as early as possible, ideally before 31 March.
Submit application to	In order to apply at TUM, you need to open a TUMonline account: https://campus.tum.de/tumonline/webnav.ini. Our application wizard will guide you step by step through the online application procedure. For more information, see: https://www.tum.de/en/studies/application-and-acceptance/online-application/.

Services

Possibility of finding part-time employment	Student jobs are offered regularly within the departments and institutes of the university. Some students work at the nearby airport. Student assistant positions are also available.

	Please refer to the following page for more details: https://www.tum.de/en/studies/during-your-studies/living-and-working/jobs-and-internships.
Accommodation	It's not easy to find a place to live in Munich – but it's not impossible either! The Technical University of Munich (TUM) supports students and staff in their search for accommodation, providing personal advice, listings for housing and useful information to ensure that you can quickly find a place to call your own. Click here to learn more.
Career advisory service	The TUM Career Service offers students, graduates, doctoral candidates and alumni individual counselling appointments. The consultations range from application portfolio checks and decision-making assistance to career orientation and classic career counselling/planning.
Support for international students and doctoral candidates	• Welcome event • Buddy programme
General services and support for international students and doctoral candidates	Fit for TUM – service fair for newcomers

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Sukhmanpreet Kaur
MSc Agricultural Biosciences

The programme helps students gain experience in agro-biotechnology and genetic engineering in order to bring about innovations in the crop and livestock agribusiness.

Agricultural Biosciences – What Makes this International Master's Programme So Unique?

The TUM School of Life Sciences has developed a unique international Master's programme in Agricultural Biosciences. This new course of study uniquely combines the different disciplines of animal and plant sciences and creates excellent conditions for committed young scientists.
Come and join us. Study Agricultural Biosciences. You can make a difference!

» more:
https://www.youtube.com/watch?v=HLajnvi0ZfA

Technical University of Munich

Welcome to our green campus: TUM School of Life Sciences

© TU München (TUM)

The Technical University of Munich (TUM) is one of Europe's leading universities in research and teaching. As the entrepreneurial university, it doesn't just seek to understand the world – it sets out to improve it. TUM's unparalleled range of disciplines covers engineering and natural sciences, life sciences and medicine, management and social sciences – a combination found nowhere else in Europe. TUM leverages this enormous potential by intensively and intelligently combining the different subjects. This inspires modern fields of research and teaching extending from bioengineering to machine intelligence. At the same time, TUM links technological questions closely with social, political and ethical issues.

The outstanding course offering is strongly oriented toward research and, at the same time, tightly coupled to practical experience. TUM invests in the professional development of individual talent and gives its students room to live out their passion for science; students work on developments such as space elevators, robots, and gas turbines in autonomous research groups that carry on for generations. Managers regularly choose TUM as one of the 10 best universities worldwide for the quality of graduates (Global Employability University Rankings).

TUM has a dense network of industry partnerships, collaborating with companies such as BMW, Siemens, SAP, and Google. No other German university produces more start-up founders – the result of an unrivalled support infrastructure. TUM is an international university with a high proportion of foreign students and researchers as well as more than 150 partner universities around the globe. In 2006, 2012, and 2019, it won recognition as a German "Excellence University".

University location

Munich – Germany's innovation engine and the world's most liveable city

TUM is based in the European metropolitan region of Munich: a research, business and cultural hub of global standing with cosmopolitan flair. In rankings of the world's best locations for students, Munich regularly occupies the top spots and it was ranked the most liveable city in the world several times.

Munich is Germany's innovation engine. Almost all major branches of industry have established a presence in the city, including global players from abroad. This is particularly true of high-tech fields such as IT, automotive and aerospace, as well as for medical engineering, biotechnology and pharmaceutical companies. Thanks to the economic power, the city's first-rate educational and research institutions, and its location at the heart of Europe, Munich ranks as Europe's leading ICT hub, as an EU study confirms.

Munich and the surrounding area offer a virtually unlimited range of leisure activities. The Bavarian capital is famous for its museums, historic palaces and churches as well as for theatres, music venues and clubs which ensure a varied nightlife. The English Garden – one of the world's largest inner-city parks – and the Isar river create an oasis of green.

Freising is located approx. 35 kilometres north of Munich on the Isar River. Freising is renowned for its ancient history, the bishop's cathedral on Cathedral Hill (Domberg) and the oldest working brewery of the world on Weihenstephan Hill. This is where the TUM School of Life Sciences is situated. From the viewing terrace of TUM's Weihenstephan campus, the Alps look close enough to touch, and the clear waters of the Bavarian lakes are just an hour away.

Contact

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School of Life Sciences

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Course website: https://www.ls.tum.de/en/ls/studies/courses-and-programs/agricultural-biosciences-msc/

https://www.facebook.com/people/TUM-School-of-Life-Sciences/61558113013752/

https://twitter.com/tu_muenchen

https://www.linkedin.com/company/102836845/admin/feed/posts/

https://www.instagram.com/tum_life_sciences/

https://www.youtube.com/user/TUMuenchen1

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