

Degree Program at a Glance

Standard Duration of Study/Credits

4 semesters/120 credits, fulltime study (2 academic years)

Degree

Master of Science (M. Sc.)

Start of Course

Winter semester (application deadline: 31.05.) and
summer semester (application deadline: 15.01.)

Language

English

Admission Requirements

Above average completion of a Bachelor of Science degree at a domestic or foreign university in a qualifying degree program in the life sciences, such as horticultural sciences, agricultural sciences, forest sciences, renewable resources or comparable programs.

Criteria for acceptance include a solid basic knowledge of the life sciences, advanced understanding of plant sciences, an ability to work scientifically and a sufficient knowledge of English (e.g. a score of at least 6.5 in the IELTS test). Furthermore, applicants have to pass the aptitude assessment successfully. For more information, see: www.tum.de/en/studies/degree-programs/detail/horticultural-science-master-of-science-msc/

Costs per Semester

TUM does not charge for tuition. Students are required to pay a contribution for the basic student union fee and semester ticket for public transportation. For more information, see: www.tum.de/en/studies/fees-and-financial-aid/

Further Information

www.agrar.wzw.tum.de



Contact

Technical University of Munich

TUM School of Life Sciences Weihenstephan
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General Questions about Studying at TUM

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Program specific Questions

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Dean of Studies

Program Coordinator

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Master of Science

TUM School of Life Sciences Weihenstephan

Horticultural Science



Objectives

This program focuses on aspects of the natural, technical and economic sciences relevant for horticultural crop production. Graduates of the program gain knowledge and skills in particular within the thematic complex of applied plant sciences, including:

- the biological, genetic and molecular basis for plant growth, plant physiology, including environmental stress physiology, disease development and plant-pathogen interactions, as well as for an understanding of their co-evolution
- concepts and methods of plant breeding, plant protection and plant production in fields, orchards, and in protected greenhouse cultivation and other closed production systems
- material and energy flows in horticultural cropping systems and awareness of the factors impacting crop physiology and crop quality
- means of classical plant biotechnology for in vitro crop propagation and of molecular biotechnology for crop improvement

Requirements

The following interests and abilities are conducive to successful completion of the program:

- applied plant sciences, especially horticultural crops (fruits, vegetables, nuts, herbs, medicinal plants, ornamentals)
- scientific research
- working in international teams

Degree Program Structure

Example study structure
Start in winter semester

1st semester	<p>Required modules (12 ECTS):</p> <ul style="list-style-type: none"> • Crop Physiology: Growth and Development of Plants • Crop Quality: Basics of Quality Control and Assurance <p>Elective modules (18 ECTS)</p>
2nd semester + 3rd semester	<p>Elective modules with the following options for specialization (60 ECTS):</p> <ul style="list-style-type: none"> • Molecular Plant Sciences • Population Genetics and Epigenetics relevant for Horticulture • Breeding and Production of Horticultural Crops • Human Resource Management in Horticulture <p>Mobility Window: During an optional exchange semester, elective modules can also be attended at our partner institutions. These are:</p> <ul style="list-style-type: none"> • BOKU, Vienna, Austria • University of Bologna, Italy • Free University of Bozen, Italy • Humboldt University, Berlin, Germany • Szent Istvan University, Budapest, Hungary
4th semester	<p>Master's Thesis (27 ECTS) Master's Colloquium (3 ECTS)</p>

Distinctive Features of the Program

- An international program taught entirely in English and carried out by a consortium of six European universities
- Scientific and research-oriented training for the horticultural industry and its upstream and downstream sectors
- TUM – a top address for teaching and research in modern, applied plant sciences
- International experience and individual profiling at one of our partner universities
- Elective courses from a large range of possible specializations, including all major horticultural crop classes as well as advanced economics, production technologies, ecophysiology, product quality or plant breeding
- Award-winning program: Erasmus Mundus Award for raising the quality of European university education and promoting intercultural exchange

Career Profile

Graduates of this program are qualified to hold executive positions in enterprises of horticulture and related industries such as in sectors of the pharmaceutical industry active in plant production, and to hold national or international research positions conducting plant-related scientific research in the public or private sectors.