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**Examination and study regulations  
for the Master's Program Horticultural Science at the  
Technical University of Munich**

From 20 February 2019

**Readable version**

**as amended by the SÄS for the appointment of the commission members in the  
aptitude test for Master's degree programs of the TUM School of Life Sciences  
dated February 1, 2021.**

On the basis of Article 13, Paragraph 1, Sentence 2 in conjunction with Article 58, Paragraph 1, Sentence 1, Article 61, Paragraph 2, Sentence 1 and Article 43, Paragraph 5 of the Bavarian University Act (BayHSchG), the Technische Universität München enacts the following statutes:

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### **§ 34**

#### **Scope, academic degree**

- (1) The Subject Examination and Study Regulations for the Master's Degree Program Horticultural Science (FPSO) supplement the General Examination and Study Regulations for Bachelor's and Master's Degree Programs at the Technical University of Munich (APSO) of March 18, 2011, as amended. The APSO has priority.
- (2) On the basis of the successful completion of the Master's examination, the academic degree "Master of Science" ("M.Sc.") is awarded. This academic degree may be awarded with the university suffix "(TUM)".

### **§ 35**

#### **Start of study, standard period of study, ECTS**

- (1) The Master's program in Horticultural Science at the Technical University of Munich can be started either in the winter semester or in the summer semester.
- (2) The scope of the credits required for obtaining the Master's degree in the compulsory and elective areas is 90 (75-78 semester hours), distributed over three semesters. In addition, there is a maximum of six months for the completion of the Master's thesis in accordance with § 46 and the Master's colloquium (a total of 30 credits). The scope of the examinations to be taken in the compulsory and elective areas according to Annex 1 in the Master's degree program Horticultural Science thus amounts to at least 120 credits. The standard period of study for the Master's program is four semesters in total.

### **§ 36**

#### **Qualification requirements**

- (1) Qualification for the master's degree program in Horticultural Science is demonstrated by
  1. A qualified bachelor's degree of at least six semesters obtained at a domestic or foreign university or a degree of at least equal value in a life science program with applied plant science content; these are in particular the programs of horticultural sciences, agricultural sciences, forest sciences and renewable raw materials or comparable programs,
  2. adequate knowledge of the English language. Adequate knowledge of English is given if courses in the amount of at least 15 credits were completed in English in the Bachelor's program; if this is not the case, proof can be provided by means of a recognized language test such as the "Test of English as a Foreign Language" (TOEFL) (at least 88 points), the "International English Language Testing System" (IELTS) (at least 6.5 points) or the "Cambridge Main Suite of English Examinations",
  3. passing the suitability procedure according to Annex 2.
- (2) A qualified university degree within the meaning of Paragraph 1 exists if there are no significant differences with regard to the competencies (learning outcomes) acquired in the scientifically oriented relevant bachelor's degree program in Agricultural Science and Horticultural Science at TUM or with a comparable degree and these correspond to the professional requirements of the master's degree program in Horticultural Science.

- (3) The compulsory modules of the Bachelor's degree program in Agricultural and Horticultural Sciences shall be used for the determination according to Para. 2. If examination results are missing for this determination, the commission for the aptitude test according to Annex 2 No. 3 can demand that these examinations be taken as additional basic examinations according to Annex 2 No. 5.1.3 as proof of the qualification according to Para. 1. The applicants shall be informed of this after the documents have been reviewed as part of the first stage of the aptitude test.
- (4) The commission for the aptitude procedure decides on the comparability of the study program, on the determination of the special aptitude as well as on the crediting of competences in the examination of university degrees acquired at foreign universities under the consideration of Art. 63 Bavarian University Act.
- (5) Departing from para. 1 no. 1, students enrolled in a bachelor's degree program from the bachelor's degree programs named in para. 1 no. 1 may be admitted to the master's degree program upon justified application. The application may only be submitted if, in the case of a six-semester bachelor's degree program, module examinations amounting to at least 140 credits, in the case of a seven-semester bachelor's degree program, module examinations amounting to at least 170 credits, and in the case of an eight-semester bachelor's degree program, module examinations amounting to at least 200 credits are proven at the time the application is submitted. Proof of having passed the bachelor's degree must be provided within one year of commencing the master's degree program.

### **§ 37**

#### **Modularization, module examination, courses, fields of study, language of instruction**

- (1) General regulations on modules and courses are set out in §§ 6 and 8 APSO. In the event of deviations from module specifications, § 12 Para. 8 APSO shall apply.
- (2) The study plan with the modules in the compulsory and elective areas is listed in Appendix 1.
- (3) As a rule, the language of instruction in the Master's program Horticultural Science is English. If students have not provided evidence of German language skills in their application, the admission will be subject to the condition that at least one module is successfully completed by the end of the second semester in which German language skills are acquired. The offer will be announced by the Examination Committee in accordance with local practice. Voluntary extracurricular courses such as German courses offered by the TUM Language Center will also be recognized.

### **§ 38**

#### **Examination deadlines, study progress monitoring, missed deadlines**

- (1) Examination deadlines, study progress monitoring and missed deadlines are regulated in § 10 APSO.
- (2) At least one of the module examinations from the Fundamentals listed in Appendix 1 must be successfully completed by the end of the second semester. If the deadline is exceeded, § 10 para. 5 APSO shall apply.

### **§ 39**

#### **Audit Committee**

The body responsible for decisions in examination matters according to § 29 APSO is the Examination Board for the Horticultural Science program of the Faculty of Agricultural and Horticultural Sciences of the Technical University of Munich.

## § 40

### Crediting of study periods, study and examination achievements

The crediting of study periods, study and examination achievements is regulated by § 16 APSO.

## § 41

### Course-related examination procedure, forms of examination

- (1) Possible forms of examination according to §§ 12 and 13 APSO are, in addition to written examinations and oral examinations in this course of study, in particular laboratory and exercise performances, reports, project work, presentations, learning portfolios and scientific elaborations.
  - a) An **examination** is written work under supervision with the aim of identifying problems in a limited time using the specified methods and defined aids and finding ways of solving them and, if necessary, being able to apply them. The duration of written examinations is regulated in § 12 Para. 7 APSO.
  - b) Laboratory services include, depending on the discipline, experiments, measurements, work in the field, field exercises, etc. with the aim of carrying out, evaluating and gaining knowledge. Components can be e.g.: the description of the processes and the respective theoretical basis incl. literature study, the preparation and practical execution, if necessary necessary calculations, their documentation and evaluation as well as the interpretation of the results with regard to the knowledge to be gained. The laboratory performance can be supplemented by a presentation in order to test the communicative competence in presenting scientific topics to an audience. The specific components of the respective laboratory performance and the competencies to be tested with it are listed in the module description.
  - c) The **exercise performance (if applicable, tests)** is the processing of given tasks (e.g. mathematical problems, programming tasks, modeling, etc.) with the aim of applying theoretical content to solve application-related problems. It serves the verification of factual and detailed knowledge as well as its application. The exercise performance can be carried out, among other things, in writing, orally or electronically. Possible forms are, for example, homework, exercise sheets, programming exercises, (e-)tests, tasks in the context of university internships, etc. The concrete components of the respective exercise performance and the competencies to be tested are listed in the module description.
  - d) A **report** is a written review and summary of a learning process with the aim of reproducing what has been learned in a structured manner and analyzing the results in the context of a module. The report should prove that the essential aspects have been recorded and can be reproduced in writing. Possible report forms are, for example, field trip reports, internship reports, work reports, etc. The written report can be supplemented by a presentation in order to test the communicative competence in presenting the contents to an audience.

- e) In the context of a **project work**, a project assignment is to be achieved as a defined goal in a defined time and with the use of suitable instruments in several phases (initiation, problem definition, role allocation, idea generation, criteria development, decision, implementation, presentation, written evaluation). In addition, a presentation can be part of the project work in order to test the communicative competence in presenting scientific topics to an audience. The concrete components of the respective project work and the competencies to be tested with it are listed in the module description. The project work is also possible in the form of group work. In this case, it should be demonstrated that tasks can be solved in a team. The contribution to be assessed as examination performance must be clearly recognizable and assessable individually. This also applies to the individual contribution to the group result.
- f) The **scientific paper** is a written performance in which a challenging scientific or scientific-application-oriented question is independently processed using the scientific methods of the respective discipline. It should be demonstrated that a question corresponding to the learning outcomes of the respective module can be completely processed in compliance with the guidelines for scientific work - from analysis to conception to implementation. Possible forms, which differ in their respective level of demand, are e.g. thesis paper, abstract, essay, study paper, seminar paper, etc. The scientific elaboration can be accompanied by a presentation and, if necessary, a colloquium in order to test the communicative competence of presenting scientific topics in front of an audience. The concrete components of the respective scientific elaboration and the competences to be examined with it are listed in the module description.
- g) A **presentation** is a systematic, structured and visually supported oral presentation using suitable media (such as beamers, transparencies, posters, videos), in which specific topics or results are illustrated and summarized and complex issues are reduced to their essential core. The presentation is intended to demonstrate the ability to work on a specific topic in a given time in such a way that it can be presented to an audience in a clear, concise and comprehensible manner. In addition, it should be demonstrated that questions, suggestions or discussion points of the audience can be dealt with in an informed manner in relation to the respective subject area. The presentation may be supplemented by a short written preparation. The presentation may be given individually or in groups. The contribution to be assessed as an examination performance must be clearly recognizable and assessable individually. This also applies to the individual contribution to the group result.
- h) An **oral examination** is a time-limited examination discussion on specific topics and concrete questions to be answered. In oral examinations it should be demonstrated that the qualification objectives documented in the module descriptions have been achieved and that the interrelationships of the examination area have been recognized and special questions can be placed in these interrelationships. The oral examination can be conducted as an individual examination or as a group examination. The duration of the examination is regulated in § 13 Para. 2 APSO.
- i) A **learning portfolio** is a written presentation of one's own work, selected according to previously defined criteria, with which learning progress and performance status at a certain point in time and in relation to a defined content are to be demonstrated. The selection of the work, its relation to the student's own learning progress and its significance for the achievement of the qualification goals must be justified. The learning portfolio should demonstrate that responsibility has been taken for the learning process and that the qualification objectives documented in the module description have been achieved. Depending on the module description, the components of successful self-learning checks of the learning portfolio may include, in particular, work with application relevance, websites, weblogs, bibliographies, analyses, thesis papers as well as graphic

presentations of an issue or a question. The concrete components of the respective learning portfolio and the competencies to be tested with it are listed in the module description.

- (2) The module examinations are usually taken during the course of study. The type and duration of a module examination are specified in Annex 1. In the event of deviations from these specifications, § 12 Para. 8 APSO must be observed. For the evaluation of the module examination, § 17 APSO shall apply. The grade weights of partial module examinations correspond to the weighting factors assigned to them in Annex 1.
- (3) At the request of the students and with the approval of the examiners, examinations can be taken in German for English-language modules.

## **§ 42**

### **Registration and admission to the Master's examination**

- (1) Upon enrollment in the Master's degree program Horticultural Science, students are considered admitted to the module examinations of the Master's examination. Students who take additional examinations in the context of the consecutive Bachelor's degree program in Agricultural and Horticultural Science at the Technical University of Munich are also considered admitted to individual module examinations.
- (2) Registration for a module examination in the compulsory and elective areas is governed by § 15 Para. 1 APSO. Registration for a corresponding repeat examination in a failed compulsory module is governed by § 15 Para. 2 APSO.

## **§ 43**

### **Scope of the Master's examination**

- (1) The master's examination includes:
  1. the module examinations in the corresponding modules according to par. 2,
  2. the Master's Thesis according to § 46 as well as
  3. the master colloquium according to § 46 a.
- (2) The module examinations are listed in Appendix 1. There must be 12 credits in the compulsory modules and at least 78 credits in elective modules. When choosing the modules, § 8 para. 2 APSO must be observed.

**§ 44**  
**Repetition, failure of examinations**

- (1) The repetition of examinations is regulated in § 24 APSO.
- (2) The failure of examinations is regulated by § 23 APSO.

**§ 45**  
**Study achievements**

In the master's degree program Horticultural Science, no course work is required except for examinations.

**§ 45 a**  
**Multiple choice method**

The implementation of multiple-choice procedures is regulated in § 12 a APSO.

**§ 46**  
**Master's Thesis**

- (1) Pursuant to § 18 APSO, students must prepare a Master's Thesis as part of the Master's examination. The completion of the Master's Thesis module consists of a written elaboration and the Master's Colloquium according to § 46 a. The Master's Thesis can be issued and supervised by expert examiners of the Faculty of the Weihenstephan Science Center for Nutrition, Land Use and Environment of the Technical University of Munich (topic issuer). The expert examiners according to sentence 2 are appointed by the examination board.
- (2) The Master's Thesis should normally be the last examination performance. Students may, upon application, start the Master's Thesis early if 60 credits have been achieved.
- (3) The time from issuance to delivery of the Master's Thesis may not exceed six months. The Master's Thesis shall be deemed to have been taken and not passed if it is not delivered on time without valid reasons recognized in accordance with § 10 Para. 7 APSO.
- (4) The Master's Thesis shall be written in English. 30 credits are awarded for the Master's Thesis module.
- (5) If the Master's Thesis has not been evaluated with at least "sufficient" (4.0), it can be repeated once with a new topic. It must be re-registered no later than six weeks after the notification of the result.

### **§ 46 a Master colloquium**

- (1) Students are considered registered for the Master's Colloquium in the Master's Thesis module if they have achieved at least 75 credits in the Master's program and have successfully completed the Master's Thesis. The examination should take place no later than two months after the registration date determined in accordance with sentence 1.
- (2) The Master's Colloquium is to be conducted by the topic writer of the Master's Thesis and an expert assessor.
- (3) The master's colloquium is to be held in English.
- (4) The duration of the master's colloquium is usually 60 minutes. The students have approx. 30 minutes to present their Master's Thesis (written elaboration). This is followed by a disputation which, starting from the topic of the Master's Thesis, extends to the further subject area to which the Master's Thesis belongs.

### **§ 47 Passing and evaluation of the Master's examination**

- (1) The master's examination is passed if all examinations to be taken within the framework of the master's examination according to § 43 Para. 1 have been passed and a point account balance of at least 120 credits has been achieved.
- (2) The module grade is calculated according to § 17 APSO. The overall grade of the Master's examination is calculated as the weighted grade average of the modules according to § 43 para. 2 and the module Master's Thesis. The grade weights of the individual modules correspond to the assigned credits. The overall grade is expressed by the predicate according to § 17 APSO.

### **§ 48 Certificate, Diploma Supplement**

If the Master's examination is passed, a certificate, a certificate and a Diploma Supplement with a Transcript of Records shall be issued in accordance with § 25 Para. 1 and § 26 APSO. The date of the certificate shall be the date on which all examination and study achievements have been completed.

### **§ 49 Double Degree**

The Technische Universität München, the Humboldt-Universität Berlin and the Szent István University in Budapest each offer a double degree program on the basis of cooperation agreements. The following special regulations apply to students of the Master's program Horticultural Science at the Technische Universität München who participate in one of these double degree programs:



1. The selection of participants is made by the home university on the basis of academic success, motivation and knowledge of the English language. The participants of the program with HU Berlin are selected in coordination with the partner university.
2. At the Technical University of Munich as well as at the partner university, achievements amounting to at least 30 credits must be made in each case. For the crediting § 16 APSO applies.

In deviation from § 46 Para. 1 Sentence 3, the Master's Thesis is prepared under the joint supervision of an examiner from the Technical University of Munich and the respective partner university.

4. students who have successfully completed the double degree program will receive the degree of the partner university concerned in addition to the degree of the Technische Universität München.

### **§ 50** **Entry into force \*)**

These regulations shall come into force with effect from January 1, 2019. It applies to all students who begin their specialized studies at the Technical University of Munich as of the winter semester 2019/20.

\*) This provision concerns the entry into force of the Articles of Association in the original version of February 20, 2019. The date of entry into force of the amendments shall be determined by the amending Articles of Association.

## APPENDIX 1: Examination modules

### I Compulsory modules

No.	Module name	Teaching form	Sem.	SWS	Credits	Type of test	Examination duration	Weighting factor	Sub-lingua franca
WZ1671	<b>Crop Physiology: Growth and Development of Plants</b>	V	WiSe	4	6	Written exam	120	1	en
WZ1672	<b>Crop Quality: Basics of Quality Control and Assurance</b>	V	WiSe	4	6	Written exam	120	1	en
	Total:				12				

### II Elective modules

A total of at least 78 credits must be earned from the following list. As an alternative to this list of subjects, modules up to a total of 30 credits can be selected from the entire range offered by TUM and from other universities, provided that the requirements of the modules correspond to those of the Master's program Horticultural Science. The review is the responsibility of the examination board for the Master's program Horticultural Science.

The list can be extended continuously by the examination board. Changes will be announced on the website of the examination board at the beginning of the semester at the latest.

No.	Module name	Teaching form	Sem.	SWS	Credits	Type of test	Exam duration	Weighting factor	Sub-lingua franca
WZ6428	<b>Analytical Methods in Horticulture, Agriculture and Plant Biotechnology</b>	Ü	WiSe	4	6	Laboratory performance		1	en
WZ2620	<b>Applications of Evolutionary Theory in Agriculture: Population Genomics of Crop Pathogens and Disease Management</b>	VI+S	SoSe	3,3 + 0,7	5	oral exam	30	1	en
WZ3098	<b>Basics of Metabolomics</b>	V	SoSe	3	5	Presentation		1	en
WZ6429	<b>Biotechnology in Horticulture</b>	Ü	SoSe	4	5	Laboratory performance		1	en
WZ1673	<b>Crop Biotechnology</b>	V+T	WiSe	2+2	6	Report		1	en
WZ1720	<b>Crop Breeding</b>	VI	WiSe	4	6	Written exam	120	1	en
WZ1696	<b>Crop Genomics</b>	V+T	SoSe	3+1	5	Written exam	90	1	en
WZ1588	<b>Evolutionary Genetics of Plants and Microorganisms</b>	V+T	WiSe	2+2	5	oral	<sup>301</sup>	1	en

No.	Module name	Teaching form	Sem.	SWS	Credits	Type of test	Exam duration	Weighting factor	Sub-lingua franca
WZ6430	<b>Genetic and Environmental Control of Vegetal Crops</b>	V+T	SoSe	3+1	5	oral	30	1	en
WZ1035	<b>Host-Parasite Interaction</b>	V+Ü+S	WiSe	1+2+2	5	Written exam	90	1	en
WZ1545	<b>Human Resource Management for Agriculture and Related Industries</b>	V	WiSe	4	5	Written exam	90	1	en
WZ1589	<b>Marker-assisted selection</b>	V+T	WiSe	3+1	5	oral	30	1	en
WZ2049	<b>Methods for Analysis of Next Generation Sequencing Data</b>	Ü	SoSe	4	5	Report		1	en
WZ6431	<b>Model Systems and Crop Quality</b>	V+T	WiSe	1+3	5	Presentation	30	1	en
WI001205	<b>People in Organizations: Managing Change and Sustainability in Agribusiness and the Food Industry</b>	S	SoSe	4	6	Report		1	en
WZ2581	<b>Plant Biotechnology</b>	V+S	WiSe, SoSe	2+2	5	Written exam	90	1	en
WZ2480	<b>Plant Developmental Genetics 2</b>	V+S	SoSe	2+2	4	oral	30	1	en
WZ1185	<b>Plant Epigenetics and Epigenomics</b>	V+PR	WiSe, SoSe	3+2	5	Presentation	30	1	en
WZ0047	<b>Plant Stress Physiology Biology and Physiology of Plant Stress</b>	V+Ü+S	SoSe	2+2+1	5	Written exam	90	1	en
WZ2400	<b>Practical Course: Computing for Highthroughput Biology</b>	FP	WiSe, SoSe	10	10	scientific elaboration		1	en/en
WZ1578	<b>Project Management in Molecular Plant Biotechnology</b>	S	WiSe, SoSe	4	5	Presentation	60	1	en
WZ1584	<b>Quantitative Genetics and Selection</b>	V+T	SoSe	2+2	5	oral	30	1	en
WZ1674	<b>Research Methods and Economics Research Project</b>	S	WiSe, SoSe	4	6	scientific elaboration		1	en
WZ1577	<b>Research Project 'Biotechnology of</b>	FP	WiSe, SoSe	10	10	Report		1	en

<b>Horticultural Crops'</b>									
WZ1575	<b>Research Project 'Chemical Genetics'</b>	FP	WiSe, SoSe	10	10	Report		1	en
WZ1718	<b>Research Project 'Horticultural Economics and Management'</b>	PT	WiSe, SoSe	10	10	scientific elaboration		1	en
WZ1697	<b>Research Project 'Metabolite Analyses in Crops'.</b>	FP	WiSe, SoSe	10	10	Report		1	en
WZ2401	<b>Research Project 'Molecular Plant Breeding'</b>	FP	WiSe, SoSe	10	10	Report		1	en/en
WZ1576	<b>Research Project 'Plant Growth Regulation Regulation'</b>	FP	WiSe, SoSe	10	10	Report		1	en
WZ1549	<b>Research Project 'Plant Nutrition'</b>	FP	WiSe, SoSe	10	10	Report + presentation		3:1	en
WZ1921	<b>Strategy Supply Chain Management, and Sustainability in Agribusiness and the Food Industry</b>	S	WiSe	4	6	Learning portfolio		1	en
WZ2763	<b>Transcriptional and Posttranscriptional Regulation in Eukaryotes</b>	V+S	WiSe	2+2	5	Written exam + presentation	60	3:2	en

### III Master's Thesis

No.	Module name	Teaching form	Sem.	SWS	Credits	Exam-art	Exam duration	Weight-factor	Under-richts-language
WZ0045	<b>Master's Thesis</b>				30				
	Master's Thesis				27	science. Elaboration			en
	Final colloquium				3	Colloquium	60		en

#### Explanations:

Sem. = semester, SWS = semester hours per week, V = lecture, Ü = exercise, FP = research internship, VI = lecture with integrated exercise, S = seminar, PT = project, PR = internship; SoSe = summer semester; WiSe = winter semester;

In the column Examination Duration, the examination duration in minutes is listed for written and oral examinations.

**Credit balance of the respective semesters:**

<b>Semester</b>	<b>CreditsCompulsory modules</b>	<b>CreditsElectives</b>	<b>CreditsMaster's Thesis</b>	<b>Total Credits</b>	<b>Number of examinations</b>
1	12	18		30	5-6
2	0	30		30	3-6
3		30		30	3-6
4			30	30	2

## **ANNEX 2: Suitability procedure**

### **Qualification procedure for the Master's program in Horticultural Science at the Technical University of Munich**

#### **1. Purpose of the procedure**

In addition to the requirements of Section 36, Paragraph 1, Nos. 1 and 2, qualification for the Master's degree program in Horticultural Science requires proof of suitability in accordance with Section 36, Paragraph 1, No. 3 in accordance with the following regulations. The special qualifications and skills of the applicants should correspond to the professional field of Horticultural Science. Individual suitability parameters are:

- 1.1 Ability to work in a scientific or basic and methodological manner,
- 1.2 Existing expertise from undergraduate studies in the areas of:
  - horticultural plant production systems
  - applied plant sciences
  - bioscientific basics & methods
- 1.3 In-depth interest in current horticultural science research topics.

#### **2. Procedure for checking the suitability**

- 2.1 The eligibility review process is conducted twice a year by the Agriculture and Horticultural Sciences program faculty.
- 2.2 Applications for admission to the procedure must be submitted to Technische Universität München together with the documents according to 2.3.1 up to and including 2.3.3 in the online application procedure by January 15 for an application for the summer semester or by May 31 for an application for the winter semester (cut-off deadlines).
- 2.3 The application must be accompanied by:
  - 2.3.1 a Transcript of Records with modules amounting to at least 140 credits. The Transcript of Records must be issued by the responsible examination authority or the responsible study secretariat,
  - 2.3.2 a curriculum vitae in tabular form,
  - 2.3.3 a written justification of a maximum of 1 DIN-A4 page for the choice of the study program Horticultural Science at the Technical University of Munich, in which the applicants explain which specific talents and interests make them particularly suitable for the Master's program Horticultural Science at the Technical University of Munich; the special willingness to perform is to be substantiated, for example, by explanations of professional training specific to the study program, internships, stays abroad or further education in a subject-related manner during the Bachelor's program, which went beyond attendance times and compulsory courses. If necessary, this must be supported by attachments.

#### **3. Commission on the suitability procedure**

- 3.1 The aptitude test is carried out by a commission, which usually consists of the dean of studies responsible for the Master's program in Horticultural Science, at least two university professors and at least one research assistant. At least half of the commission members must be university professors. A student representative shall participate in the commission in an advisory capacity.
- 3.2 The appointment of the members shall be made by the Dean in consultation with the Associate Dean for Academic Affairs. At least one university lecturer shall be appointed as a deputy

member of the commission. The commission is usually chaired by the Dean of Studies. Article 41 of the BayHSchG, as amended, applies to the course of business.

- 3.3 If the commission acts in accordance with these statutes, the revocable assignment of certain tasks to individual commission members is permissible. If, pursuant to sentence 1, only one commission member is active in the performance of certain tasks, this member must be a university lecturer. If, pursuant to sentence 1, two or more members of the commission are active in the performance of certain tasks, at least half of them must be university professors. The commission shall ensure an appropriate allocation of responsibilities. 5If there is room for maneuver in the evaluation of an assessment criterion of the suitability procedure and at least two commission members are active in the evaluation of this criterion, the commission members shall evaluate independently according to the weighting specified, unless otherwise regulated; the score shall be the arithmetic mean of the individual evaluations, rounded up to whole numbers of points.

#### **4. Admission to the qualification procedure**

- 4.1 Admission to the qualification procedure requires that the documents mentioned in No. 2.3 are submitted in due time and in full.
- 4.2 Those who meet the necessary requirements will be examined in the suitability procedure in accordance with No. 5.
- 4.3 Those who are not admitted will receive a rejection notice with reasons and instructions on how to appeal.

#### **5. Implementation of the suitability procedure**

##### **5.1 First stage of the implementation of the suitability procedure**

- 5.1.1 On the basis of the written application documents required according to No. 2.3, the commission shall assess whether the applicants have the suitability for the study program according to No. 1 (first stage of the implementation of the suitability procedure). The commission shall evaluate the submitted documents on a scale of 0 to 100 points, whereby 0 is the worst and 100 the best result to be achieved.

The following evaluation criteria are included:

##### **a) Professional qualification**

The curricular analysis of the existing subject knowledge is not carried out by schematic comparison of the modules, but on the basis of competences. It is based on the elementary subject groups listed below, which are taken into account for bachelor graduates from the fields of horticultural sciences, agricultural sciences or comparable courses of study.

- A) horticultural plant production systems (e.g., plant protection, plant breeding, crop production, plant nutrition): maximum 10 points,
- B) applied plant sciences (e.g. phytopathology, plant physiology, developmental biology): maximum 10 points,
- C) Basic life science principles and methods (e.g., biotechnology, genetics, biochemistry, chemistry, molecular biology, bioinformatics, ecology): maximum 10 points,

D) **Brief summary of the Bachelor's Thesis**

The short summary of the Bachelor's Thesis or a comparable scientific paper of at least 5 credits, in which the applicant describes the research idea, the aim of the work, the scientific relevance in the context of the state of research, the research questions and central hypotheses, and presents and discusses the methods used and the results, is awarded a maximum of 10 points.

In the case of at least equivalent competences to the Bachelor's degree program in Agricultural Sciences and Horticultural Sciences at the Technical University of Munich, applicants receive a maximum of 40 points. The points are calculated from the sum of the subject groups, each assessed with 10 points and equally weighted under 5.1.1 a). Missing competences will be deducted according to the credits of the corresponding modules of the Bachelor's degree program in Agricultural and Horticultural Sciences at the Technical University of Munich.

b) **Final grade**

One point is awarded for each tenth of a grade that the average calculated over examination performances amounting to 140 credits is better than 4.0. The maximum number of points is 30. Negative points are not awarded. For foreign degrees, the grade converted using the Bavarian formula is used. If a degree certificate with more than 140 credits is available at the time of application, the evaluation will be based on the best graded modules amounting to 140 credits. The applicants must list these as part of the application as well as provide written assurance that the information provided is correct. The average is calculated from graded module examinations amounting to 140 credits. The overall grade point average is calculated as the weighted grade point average of the modules. The grade weights of the individual modules correspond to the assigned credits. In determining the grade, one digit after the decimal point is taken into account; all other digits are deleted without rounding.

c) **Justification letter**

The written statement of reasons is evaluated by two commission members on a scale of 0 - 30 points. The content of the letter of justification is evaluated according to the following criteria:

1. the application request can be formulated factually,
2. the connection between personal interests and contents of the study program can be presented in a well-structured way,
3. the particular suitability and motivation for the Master's degree in Horticultural Science can be convincingly justified by arguments and meaningful examples (see 2.3.3),
4. key points of the justification can be highlighted in appropriate language.

The commission members independently rate each of the four criteria on a point scale from 0 to 10, with 0 being the worst and 10 the best result to be achieved. The individual score of each member is the arithmetic mean of the scores of the equally weighted four criteria. The score of the letter of justification results from the arithmetic mean of the individual scores of the commission members. Non-vanishing decimal places are to be rounded up.

5.1.2 The score for the first stage is the sum of the individual scores. Digits that do not disappear are to be rounded up.

5.1.3 Whoever has achieved at least 90 points shall receive a confirmation of having passed the aptitude test. In cases where it has been determined that only individual subject requirements from the first degree program are not met, the commission for the aptitude test may require as a condition that basic examinations from the bachelor's degree program in agricultural sciences and horticultural sciences to the extent of a maximum of 30 credits



be taken. These basic examinations must be taken in the first year of study. Failed basic examinations may only be repeated once within this period on the next examination date. The examination board may make admission to individual module examinations dependent on passing the foundation examination.

5.1.4 Unsuitable applicants with a total score of less than 60 points shall receive a notice of rejection with reasons and instructions on how to appeal, which must be signed by the management of the university. The authority to sign may be delegated.

## 5.2 Second stage of the implementation of the suitability procedure:

5.2.1 The remaining applicants are invited to a selection interview. In the second stage of the aptitude test, the qualification acquired in the first degree program and the result of the selection interview will be evaluated. The date of the selection interview shall be announced at least one week in advance. Time slots for any selection interviews to be held must be set before the application deadline. The date set for the interview must be observed by the applicants. Anyone who is prevented from attending the selection interview for reasons for which he or she is not responsible may, upon justified application, be given a subsequent appointment no later than two weeks before the start of lectures.

5.2.2 The selection interview must be conducted individually for the applicants. The interview shall last a minimum of 20 minutes and a maximum of 30 minutes per applicant. 3The content of the interview shall cover the following main topics:

1. justification for the study in the Master's program Horticultural Science according to the criteria mentioned in No. 2.3.3 for the evaluation of the letter of justification,
2. basic and application-related questions from/to the
  - 2.1. Horticultural plant production systems.
  - 2.2. applied plant sciences
  - 2.3 Bioscientific principles and methods
3. Evaluate and discuss research methods for answering horticultural science questions.

Subject matter can also be the documents submitted according to 2.3. Scientific knowledge that is to be imparted only in the master's program Horticultural Science does not decide. With the consent of the applicants, a member of the student group may be admitted to the audience.

5.2.3 The selection interview shall be conducted by two members of the commission. The commission members independently evaluate each of the focal points mentioned under 5.2.2 para. 1 no. 1 to no. 3, whereby the focal points are weighted equally. Each of the members shall record the result of the selection interview on the point scale from 0 to 60, where 0 is the worst and 60 the best result to be achieved. The score is the arithmetic mean of the individual scores. Non-vanishing decimal places shall be rounded up.

5.2.4 The total score for the second stage is the sum of the points from 5.2.3 and the points from 5.1.1 a) to b) (professional qualification and final grade). Whoever has achieved 100 or more points is classified as suitable.

5.2.5 The result of the suitability procedure determined by the commission shall be communicated in writing (if necessary, taking into account the conditions already stipulated in stage 1 according to No. 5.1.3). The notification shall be signed by the management of the university. The authority to sign may be delegated. A notice of rejection shall be accompanied by reasons and instructions on how to appeal.

5.2.6 Admissions to the Master's degree program in Horticultural Science apply to all subsequent applications to this program.

## **6. Transcript**

A record must be made of the course of the suitability procedure, showing the date, duration and place of the suitability procedure, the names of the commission members, the names of the applicants and the assessment of the commission members as well as the overall result. The minutes must show the main reasons for and topics of the interview with the applicants; the main reasons and topics may be listed in brief.

## **7. Repetition**

Students who have not provided proof of eligibility for the Master's degree in Horticultural Science may re-apply once for the eligibility process.