



**Examination and Study Regulations  
for the master's programme  
Food System Sciences  
at the University of Bayreuth  
dated 20 February 2024**

Article 9 sentence 1 in conjunction with Article 80 para 1 sentence 1 and Article 84 para 2 sentence 1 BayHIG forms the framework for the following regulations issued by the University of Bayreuth.

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## § 1

### Aim of the full-time degree programme and structure

- (1) <sup>1</sup>The master's programme Food System Sciences provides the candidate with the following skills:
- in-depth subject-specific and methodological knowledge in one of the following specializations:
    - Analytics in Life Sciences
    - Nutritional Physiology
    - Food Law
    - Bioeconomy;
  - the ability to use this knowledge to solve complex problems in the field of food quality and safety using an integrative approach;
  - the ability to carry out independent scientific work in one of the above-mentioned fields.

<sup>2</sup>The master's programme Food Systems Sciences, including all examinations, is conducted in English.

- (2) <sup>1</sup>New students can begin the programme in the winter semester. <sup>2</sup>The master's programme is to be completed as a full-time degree programme.

## § 2

### General Examination & Study Regulations

<sup>1</sup>Studying in framework of the master's programme is governed by the general examination & study regulations for the bachelor's and master's programmes offered by the Faculty of Life Sciences: Food, Nutrition & Health at the University of Bayreuth (APSO-LEG). <sup>2</sup>Supplementary provisions for studying in framework of this master's programme are given in the present regulations.

## § 3

### Components of the programme of study

- (1) The master's programme Food System Sciences is divided into modules and consists of the module areas and modules listed in Annex 1.
- (2) <sup>1</sup>In module area D, students must complete a compulsory internship of 9 weeks. <sup>2</sup>The internship can alternatively be completed in two partial internships of 4.5 weeks each. <sup>3</sup>Depending on the chosen specialization, the internship can be completed as a (laboratory) internship at research institutions (university or non-university institutions) or at companies or a law firm or similar. <sup>4</sup>In principle, the internship can be completed either in Germany or abroad. <sup>5</sup>The timeframe for carrying out an internship is generally to be scheduled in the semester break, is geared towards the requirements of the hosting institution, and is to be organized by the student independently. <sup>6</sup>The relevant hosting institution is to provide certification of the type of internship and its duration. <sup>7</sup>During the

internship, a report booklet must be kept in which the student describes the activities carried out (5- 10 pages).

## § 4

### Admission to the programme

(1) Admission requirements for the programme are:

1. a university degree with an examination grade of at least "good" (2.5) in one of the bachelor's programmes Chemistry, Biology, Biochemistry, Sustainable Chemistry & Energy, Law & Economics, Health Economics, Business & Information Systems Engineering, Business Administration, or Food & Health Sciences at the University of Bayreuth or an equivalent degree, or

a university degree with a minimum examination grade of "good" (2.5) in a bachelor's programme comprising at least 180 credit points in the fields of analytical chemistry, food chemistry, nutritional sciences, molecular biomedicine, plant biology, law, economics, social sciences, or ecotrophology or an equivalent degree.

2. evidence of having passed the aptitude assessment process described in Annex 2;

3. proof of German language skills at level A1 or better of the Common European Framework of Reference for applicants who neither earned their higher education entrance qualification nor their initial degree in the German language; applicants who are unable to provide proof of these skills will be enrolled on the condition that they submit the proof by the end of the second semester of study at the latest; and

4. proof of English skills at level B2 or better of the Common European Framework of Reference for Languages for applicants who neither earned their higher education entrance qualification nor their initial degree in the English language.

(2) <sup>1</sup>In the review of degree equivalence, the qualifications may not differ substantially in terms of the earned competences from the qualifications referred to in para 1 number 1. <sup>2</sup>Art. 86 BayHSchG applies to determining the eligibility of domestic and foreign degrees. <sup>3</sup>Decisions regarding degree equivalence are to be made by the board of examiners established under the terms of § 5.

(3) <sup>1</sup>If the bachelor's certificate or equivalent diploma has not yet been issued, a confirmation of all individual grades and examinations for courses completed up to the date of registration must be submitted. <sup>2</sup>Such coursework must amount to at least 135 credit points and correspond to a final grade of "gut" (2,5) or better. <sup>3</sup>Applicants who fulfil the requirements of sentence 2 are to be enrolled on the condition that they submit the relevant degree certificate with a grade of "gut" (2,5) or better by the end of the first semester of study.

## **§ 5**

### **Forms of examination and master's thesis**

<sup>1</sup>In addition to the master's thesis, the master's programme Food System Sciences includes examinations in the form of written examinations, oral examinations, term papers, presentations, essays, reports, assignments over the course of the semester, and portfolio examinations. <sup>2</sup>The possible forms of examination in the modules are given in Annex 1.

## **§ 6**

### **Effective date**

<sup>1</sup>These regulations go into effect on 21 February 2024. <sup>2</sup>They shall be valid for students enrolling in this programme in Winter Semester 2024/2025 or later.

## Annex 1: Modules, Credit Points, and Examinations

The following overview lists the module areas, the corresponding modules, credit points, and the associated module examinations:

The modules include the following forms of instruction: Lectures, seminars, tutorials, practical courses.

Modules in the core elective areas B and C are assigned to the relevant specialization(s) in the right-hand column.

- Possible specializations:
- I: Analytics in Life Sciences
  - II: Nutritional Physiology
  - III. Food Law
  - IV: Bioeconomy

Slashes by exams indicate alternative forms of examination.

Module area: Modules	Credit points	Examination	Specializat ion
<b>Module area A: Inter-/transdisciplinary skills</b>			
Analytics in Life Sciences – from Molecules to Cells	6	Portfolio: Written exam (50%), assignments during the semester (50%)	
Nutritional Physiology– from Cells to Organisms	6	Portfolio: Written exam (50%), assignments during the semester (50%)	
Food Law– from National to International Perspectives	6	Written examination	
Bioeconomy – Sustainable Production, Business, and Society	6	Written examination	
Study Skills, Science Communication, and Research Seminar	6	Assignments during the semester	
<b>Total: module area A</b>	<b>30</b>		

Module area: Modules	Credit points	Examination	Specialization
<b>Module area B: Specialization - core elective</b> Modules amounting to 30 credits must be taken, whereby modules amounting to at least 15 credits from one of the four possible specializations must be taken as a specialization. The missing credits in module area B must be completed individually with modules from the other specializations.			
Advanced Analytics and Food Quality	5	Portfolio: Written/ oral exam (40%), assignments during the semester (60%)	I
Advanced Nutritional Biochemistry and Physiology	5	Portfolio: Written exam (60%), assignments during the semester (40%)	I,II
Advanced Microbiology – Food Microbiology	5	Portfolio: Written/ oral exam (60%), assignments during the semester (40%)	I, II
Advanced Genetics and Epigenetics	5	Portfolio: Written exam (60%), assignments during the semester (40%)	I, II
Advanced Cell-Environment Interactions	5	Portfolio: Written exam (60%), assignments during the semester (40%)	I,II
Advanced Human Physiology	5	Portfolio: Written exam (60%), assignments during the semester (40%)	II
Advanced Plant Breeding and Sustainable Food Production	5	Portfolio: Written/ oral exam (60%), essay/ presentation (40%)	II, IV
Seminar Entrepreneurship and Innovation	5	Presentation (100%) / Portfolio: presentation (50%), assignments during the semester (50%)	III, IV
Advanced Institutional and Substantive EU Food Law	5	Written examination	III
Advanced Institutional and Substantive International Food Law	5	Written examination	III

<b>Module area:</b> Modules	<b>Credit points</b>	<b>Examination</b>	<b>Specialization</b>
Advanced Food Policy	5	Essay (100%) / written exam (100%) / portfolio: Written exam (20%), essay (80%)	III, IV
Advanced Business Analytics	5	Portfolio: Written exam (60%), assignments during the semester (40%)	IV
Advanced Theories in Food Studies	5	Written exam/ essay	IV
<b>Total: module area B</b>	<b>30</b>		
<b>Module area C: Specialization - core elective</b>			
Modules amounting to 15 credits in a specialization must be taken. It is strongly recommended that students choose a specialization for which they have already completed modules amounting to at least 15 credits in module area B.			
Current Issues in Analytical Sciences	5	Portfolio: Written exam (60%), assignments during the semester (40%)	I
Current Issues in Biochemistry and Biotechnology of Microorganisms	5	Portfolio: Written/ oral exam (60%), assignments during the semester (40%)	
Current Issues in Cellular Responses to External Cues	5	Portfolio: Essay (40%), Presentation (60%)	
Current Issues in Nutritional Biochemistry and Immunology	5	Portfolio: Written exam (60%), assignments during the semester (40%)	II
Current Issues in Human Nutrition in Health and Disease	5	Portfolio: Written exam (60%), assignments during the semester (40%)	
Current Issues in Cellular, Organismal, and Exercise Physiology/Biology	5	Portfolio: Written exam (60%), assignments during the semester (40%)	
Current Issues in Food and Health Policy	5	Essay (100%)/ exam (100%)/ portfolio [written exam (20%), essay (80%)]	

<b>Module area:</b> Modules	<b>Credit points</b>	<b>Examination</b>	<b>Specialization</b>
Current Issues in European and International Food Trade Economic(s) Law	5	Portfolio: Term paper (60%), presentation (40%)	III
Current Issues in European and International Environmental Law	5	Portfolio: Term paper (60%), presentation (40%)	
Current Issues in Business Analytics	5	Portfolio: Essay (60%), presentation (40%)	IV
Current Issues in Food Studies	5	Portfolio: Term paper (60%), presentation (40%)	
Current Issues in Sustainability and Production of Plant-based Foods	5	Assignments during the semester	
<b>Total: module area C</b>	<b>15</b>		
<b>Module area D: Cross-cutting specialization modules</b>			
Research Seminar Food System Sciences	3	Assignments during the semester	
(Research) Internship	12	Internship report (ungraded)	
<b>Total: module area D</b>	<b>15</b>		
<b>Module area E: Master's thesis</b>			
Master's thesis	30	Master's thesis	
<b>Total: module area E</b>	<b>30</b>		
<b>Total</b>			
	<b>120</b>		

## **Annex 2: Aptitude assessment process**

Legal basis: Art. 90 para 1 sentence 2 BayHSchG

### **1. Purpose of aptitude assessment process**

<sup>1</sup>The purpose of this procedure is to determine whether, in addition to the knowledge proven by earning his or her initial degree, the applicant demonstrates a particular suitability for the interdisciplinary master's programme Food System Sciences. <sup>2</sup> Aptitude parameters are as follows:

- a) a sound command of discipline-specific specialist knowledge from the initial degree programme in (analytical) chemistry, biology, biochemistry, food chemistry, molecular biomedicine, plant biology, economics, sociology, ecotrophology, food and health sciences, or law, which is relevant to the understanding and analysis of problems of food quality and the production, approval, and physiological effects of food;
- b) the distinct ability to acquire knowledge that is foreign from the perspective of the initial degree programme yet essential for food quality and safety.

### **2. Board responsible for the aptitude assessment process**

<sup>1</sup>A committee is responsible for preparing and conducting the aptitude assessment process. <sup>2</sup>The committee consists of the board of examiners according to § 2 of the general examination and study regulations for the bachelor's and master's programmes offered by the Faculty of Life Sciences: Food, Nutrition & Health (APSO-LEG) as well as up to four members from among the university lecturers (Art. 19 para 1 sentence 1 and 3 BayHIG) and other full-time academic staff members who are entitled to administer examinations and are involved in this programme of study. <sup>3</sup>The representatives are appointed by the Faculty Council of the Faculty of Life Sciences: Food, Nutrition & Health for a period of four years; re-election is possible.

### **3. Process for determining aptitude**

- 3.1 <sup>1</sup>The aptitude assessment process is administered once every year, in Summer Semester for the following Winter Semester. <sup>2</sup>The application for admission to the aptitude assessment process must be submitted online to the University of Bayreuth. <sup>3</sup>The online application for admission must be received electronically by the University of Bayreuth by 15 June of the academic year for the following winter semester (cut-off deadline). <sup>4</sup>Documents as described in number 3.2.3 can be submitted up to 15 July.

- 3.2 The following are to be enclosed with the completed application as described in number 3.1 sentence 2:
- 3.2.1 <sup>1</sup>A written rationale of up to two pages in the English language explaining the applicant's choice of the master's programme Food System Sciences in which the applicant explains the specific talents that make him or her particularly suitable for the programme of study. <sup>2</sup> For example, the specific motivation may be borne out by participation in professional training relating to the programme of study, internships, stays abroad, or subject-related supplementary courses taken during one's bachelor's studies beyond the required courses. <sup>3</sup>If applicable, evidence is to be provided.
- 3.2.2 A statement that the cover letter containing the applicant's motivation for choosing the programme of study was written independently, without the help of others, and that any thoughts taken from other sources were identified as such
- 3.2.3 <sup>1</sup>The certificate of the relevant initial degree (e.g. bachelor's degree certificate) as well as a confirmation with individual grades of the examinations and coursework completed during the programme of study. <sup>2</sup>If the relevant initial degree certificate or equivalent degree certificate has not yet been issued, confirmation of all individual grades and examinations for courses completed up to the date of late submission must be presented. <sup>3</sup>Such credit for examination elements must amount to a total of at least 135 ECTS points. <sup>4</sup>The relevant degree certificate is to be submitted by the end of the first semester of study. <sup>5</sup> Upon request, the board of examiners can extend the submission deadline for the relevant degree certificates to up to the end of the second semester, as long as the reasons for the extension are beyond the student's control. <sup>6</sup> This holds, in particular, if the student has already completed all examinations but the grades have not yet been disclosed or the certificate not yet issued.
- 3.2.4 a list of modules from the applicant's initial degree programme for which evidence of completion cannot yet be submitted
- 3.2.5 CV as supplementary information to serve as a basis for the interview (see 5.2).
- 3.2.6 if available evidence of the following:
- a) special relevant qualifications (e.g. awards such as scholarships or prizes, vocational training relevant to the programme of study, internships, visits abroad) or
  - b) interdisciplinary study skills
- 3.2.7 if applicable, a request for reasonable accommodations as described in § 12 of APSO- LEG.

#### 4. Admission to the aptitude assessment process

- 4.1 Admission to the assessment process requires that the documents listed in number 3.2 be submitted on time and in the required form.
- 4.2 The aptitude assessment process (number 5) is to be administered to those applicants who fulfil the requirements.
- 4.3 Applicants who are not admitted are to be sent a notice of denial with a rationale and information concerning legal remedies available; number 6.2 applies mutatis mutandis.

#### 5. Overview of the aptitude assessment process

- 5.1 <sup>1</sup>On the basis of the application documents submitted, the board examines whether the applicant is suitable for the master's programme Food System Sciences with respect to his or her proven qualifications and the specific skills described (first stage of the aptitude assessment process). <sup>2</sup>The assessment is carried out on a scale of 0 to 75, where 0 is the worst score and 75 is the best score. <sup>3</sup>The points are assigned by the committee on the basis of the following criteria:

- 5.1.1 Written statement according to 3.2.1 as well as special qualifications and interdisciplinary study skills (according to 3.2.6)

<sup>1</sup>The written statement of the applicant's reasons for the application will be assessed by two members of the board on a scale of 0 to 25 points. <sup>2</sup>The members of the board will evaluate the following three criteria independently of one another and will score them.

<sup>3</sup>The number of points is calculated as the sum of the individual assessments divided by two and rounded to the nearest whole number value. <sup>4</sup>The content of the written statement is to be assessed in view of the maximum points given in parentheses on the basis of the following criteria:

- a) Verbal skills (5 points)
- b) Ability to demonstrate special aptitude and interdisciplinary study skills (10 points):

The applicant convincingly justifies his or her particular suitability for the interdisciplinary course of studies on the basis of arguments as well as previous qualifications and study skills.

- c) Special qualifications (10 points):

The applicant has relevant qualifications that go beyond the skills and qualifications earned over the course of the initial degree programme, e.g. accolades such as scholarships or prizes, internships, stays abroad (cf. 3.2.6 item a).

- 5.1.2 The subject-specific coursework and examinations in the relevant initial degree or the assessment components to date (according to 3.2.4)

<sup>1</sup>In doing so, the curricular analysis is to be based on competencies, not carried out via a schematic comparison of the modules. <sup>2</sup>It is based on the following elementary subject groups:

- Scientific foundations in mathematics and data analysis, experimental physics, and chemistry (general chemistry, organic chemistry, physical chemistry, analytical chemistry),
- human biology, animal physiology, plant physiology, genetics, cell biology, microbiology, ecology, biochemistry, bioinformatics, ecotrophology.
- Social science foundations in economics, sociology, bioeconomy
- Legal foundations

<sup>3</sup>The examinations and coursework relevant for the master's programme Food System Sciences from the initial degree programme or the assessment components completed to date as per § 4 shall be included in the evaluation with up to 50 points. <sup>4</sup>Assessment of competences shall be based on the relevance to the above-mentioned curricular contents of the corresponding bachelor's degree programmes and the academic performance, taking into account the recognisable range of achievements.

5.1.3 The total number of points awarded to the candidate for the first stage of the aptitude assessment process is the sum of the individual assessments made under 5.1.1 and 5.1.2.

5.1.4 Applicants who received 55 points or more in the first stage of the aptitude assessment process are classified as "suitable" and shall be sent confirmation of having passed the aptitude assessment process.

5.1.5 <sup>1</sup>Applicants who have scored less than 35 points in the first stage of the aptitude assessment process will not proceed to the next stage of the process according to no. 5.2.

<sup>2</sup>They shall be sent a notice of denial with a rationale and information concerning legal remedies available; Nr. 6.2 applies mutatis mutandis.

5.2 <sup>1</sup>The remaining applicants with scores of at least 35 up to 54 points will be invited to an interview (second stage of the aptitude assessment process). <sup>2</sup>In the second stage of the aptitude assessment process, the qualification acquired in the initial degree programme and the result of the interview are evaluated. <sup>3</sup>The date and time of the interview are to be announced at least one week in advance.

5.2.1 <sup>1</sup>The selection interview must be conducted individually for each applicant. <sup>2</sup>The interview is to last between 10 and 20 minutes for each applicant and should demonstrate whether it is to be expected that the aim of the programme of study can be achieved given the applicant's previous education. <sup>3</sup>During the interview, the student's understanding and interest in learning about content from other relevant subject areas will be examined with regard to the requirements of the degree programme. <sup>4</sup>The content of the interview covers the following main topics:

- a) A particular willingness to succeed, which leads to the expectation that the performance level of the relevant initial degree will be significantly exceeded in general or with regard to the chosen subject area (max. 10 points):
- Is there evidence of rapid, determined progress in the applicant's studies?
  - Is there a specific aptitude for a subject that can be studied in the degree programme, documented by additional modules or non-university activities (e.g. membership or activity in relevant organizations) in this field?
  - Does the CV demonstrate a particular determination (e.g. relevant additional internships, relationship between previous employment and the programme of study)?
- b) Ability to appropriately analyze fundamental questions of chemistry, human physiology, law and economics, and/or bioeconomics with reference to food quality as well as the production, approval, and/or physiological effects of food (max. 10 points).
- c) Personal impression of suitability (after interview) (max. 5 points):

For example, this may be based on the applicant's ability to convincingly provide statements by means of arguments and meaningful examples and his or her ability to answer questions appropriately.

<sup>5</sup>The interview shall be conducted by two members of the board who come from different subject areas relevant to the programme of study and are thus able to assess the applicant's interdisciplinary skills. <sup>6</sup>Each member of the board is to assign a grade for the interview on a scale of 0 to 25. <sup>7</sup>The total score of the interview is the sum of the two partial results, where 0 is the worst and 50 the best score possible.

5.2.2 <sup>1</sup>The overall assessment of the second stage of the aptitude assessment process is made up of the score for the interview and the previous studies as described in 5.1.2.

<sup>2</sup>Applicants who received 60 points or more in the first stage of the aptitude assessment process are classified as "suitable" and shall be sent confirmation of having passed the aptitude assessment process. <sup>3</sup>Applicants who received below 60 points are classified as "unsuitable" and shall be sent a notice of denial with a rationale and information concerning their right to appeal; number 6.2 applies mutatis mutandis.

5.2.3 <sup>1</sup>A written record shall be made of the interview by a minute taker, indicating the date, duration, location, name of committee members involved, the name of the applicant, the assessment of the committee members involved, and the overall outcome. <sup>2</sup>The record must show the topics of the interview with the applicant and the rationale for the assessment. <sup>3</sup> The reasons and topics may be listed in note form. <sup>4</sup>The record sheet is to be signed by the committee members.

## **6. Notification of the outcome**

- 6.1 The course of the aptitude assessment process must be documented; in particular, the decisions of the committee in accordance with the present regulations and the overall outcome must be evident.
- 6.2 <sup>1</sup>The applicant will be informed of the outcome of the aptitude assessment process. <sup>2</sup>A notice of denial must be accompanied by a rationale and information on the applicant's right to appeal.
- 6.3 Admission based on the aptitude assessment process for the master's programme Food System Sciences shall remain valid for future applications to this programme of study as long as the content and goals of the programme do not change so significantly that aptitude for this programme can no longer be demonstrated by having undergone the aptitude assessment process at an earlier date.

## **7. Repeating the process**

Applicants who did not provide evidence of aptitude for the master's programme Food System Sciences may register for the aptitude assessment process one more time.

## **8. Aptitude assessment process for higher semesters**

For applicants who wish to enter advanced semesters (university transfer, career changers), nos. 3 to 7 apply accordingly.

## 9. Assessment key

The subject-specific study and examination achievements of the relevant first degree (No. 5.1.2) are included in the assessment according to the following table.

POINTS	Rating	ASSESSMENT
41-50	<i>sehr gut</i> [very good]	Outstanding performance in more than one of the fields of chemistry/biochemistry, physiology/health sciences, law, economics, or sociology
31-40	<i>sehr gut</i> [very good]	Achievements in more than one of the fields of chemistry/biochemistry, physiology/health sciences, law, economics, or sociology that are significantly above the average requirements
21-30	<i>gut</i> [good]	Outstanding performance in the fields of chemistry/biochemistry, physiology/health sciences, law, economics, or sociology
11-20	<i>gut</i> [good]	Achievements in the fields of chemistry/biochemistry, physiology/health sciences, law, economics, or sociology that are significantly above the average requirements
1-10	<i>befriedigend</i> [satisfactory]	Achievements in the fields of chemistry/biochemistry, physiology/health sciences, law, economics, or sociology that meet the average requirements

Issued on the basis of a decision made by the University of Bayreuth's Senate on 13 December 2023 and approved by the President of the University of Bayreuth on 19 February 2024, Ref. No. A 3307/13 - I/ 1.

Bayreuth, 20 February 2024 UNIVERSITY OF BAYREUTH THE PRESIDENT

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Professor Dr. Stefan Leible

The present regulations were enacted at the University on 20 February 2024.  
This was announced on 20 February 2024 by posting a notice at the university.  
The date of the announcement is 20 February 2024.