Universität für Bodenkultur Wien

University of Natural Resources and Life Sciences, Vienna

Curriculum

for the Master's Programme in

Safety in the Food Chain

Programme classification no. 066 451

Effective date: October 1st, 2011

CONTENTS

Impressum

Center for International Relations

University of Natural Resources and Applied Life Sciences, Vienna

Peter Jordan Strasse 82a, 1190 Vienna

Austria, Europe

Phone:(+43-1)-47654-2600

Fax:(+43-1)-47654-2606

e-mail: zib(at)mail.boku.ac.at

http://www.boku.ac.at/zib

Published and printed with support of ERASMUS–OM-funds *Issued in July, 2011*

§ 1 QUALIFICATION PROFILE

The Master's Programme in Safety in the Food Chain is a degree programme which serves to deepen and extend students' pre-vocational academic education, building on the basis provided by a bachelor degree programme (§ 51 [2] item 5 of the Universities Act UG 2002, Federal Law Gazette BGBl I no. 81/2009). The programme fulfils the requirements of Directive 2005/36/EC on the recognition of professional qualifications, article 11, letter e.

Safety in the Food Chain has developed as one of the most important and leading questions for public health. Structural, but also organisational changes led to an urgent necessity of a new and interdisciplinary programme – apart from the already existing and established food and agricultural sciences, veterinary and human medicine – in which issues relevant to food and food chain safety management on national and international level can be researched and taught. Reasons for this development mainly were:

- an increased globalisation in food trade
- the changes in eating habits and consumer behaviour
- new legislations
- the discovery of new pathogen germs and toxic risks
- the existence of new and increasingly sensitive proof methods
- a development of increased possibilities in the field of information technology
- an increased consumer interest in food safety and quality.

Food inspection authorities working on a national and global scale as well as the food industry needs experts who do have an in-depth knowledge of the complete field of food safety. These skills and the knowledge necessary can only be achieved with the help of an internationally oriented university study programme.

1a) **Knowledge and personal and professional skills**

<u>Knowledge:</u>

SIFC graduates are equipped with highly specialized theoretical and practical knowledge to analyze and evaluate various problems of a technical but also social level in relation to food safety. They are ready to communicate this knowledge nationally as well as internationally and to tie in with latest findings in the field of food safety.

They are well grounded in how food is produced, how the field of food safety is organized on an international and interdisciplinary level and how this knowledge is implemented and can be assured.

Furthermore, graduates have the ability to use their knowledge gained in order to develop, realize and implement their independent ideas and they have developed a critical awareness to adequately response to problems.

Skills:

Graduates have the ability to develop a solid, research-based diagnosis of problems by means of integration of knowledge gained in various interdisciplinary fields such as natural sciences and social sciences - for example evaluating various aspects of management and consumer expectations and –behavior - in order to gain insights and develop new concepts and methods.

Furthermore, they are in a position to develop, apply and communicate new skills across the disciplines as a reaction to newly arising insights and techniques in relation to food safety.

They have the ability to evaluate and analyze the risk of the production of already existing as well as new products or production lines including their distribution.

As the Master study program SIFC is an international study program, which is conducted in English, graduates are also enabled to communicate on an international level and thereby using the English language.

Professional competence:

SIFC graduates are trained to work self dependently in the assigned areas of food safety. They are equipped with leadership abilities and the capacity for innovation in complex, unfamiliar and for them unpredictable situations. They have the ability to lead international, interdisciplinary teams strategically and to assess their achievements.

Graduates of the Master study program Safety in the Food Chain are enabled to collaborate in a multidisciplinary team consisting of, for example, experts from the fields of food technology, nutrition, product development, sales, law and IT in order to interpret research results in a holistic approach.

Graduates find themselves in the position to communicate state-of-the-arts results, methods and underlying principles in the fields of food safety to a professional audience as well as non-specialists. Graduates have the competence to research social norms and relationships in detail and actively influence these. They learned to devise systems for the warranty of food safety and they can make a contribution to the general knowledge on safe foods and their production.

SIFC graduates can solve problems by integrating complex, and probably incomplete sources of knowledge for innovative and unfamiliar contexts. They can respond to questions on a social, scientific and ethical level of food safety and are ready to develop new approaches for complex, rapidly changing work- and learning contexts in order to make a contribution to the expert knowledge as well as relevant professional experience.

1b) Professional qualifications

- Food safety management
- Food development
- Food research

- Politics
- Food legislation
- National and international Organisations
- Food industry
- Food trade
- Research establishments
- Public institutions

§ 2 ADMISSION REQUIREMENTS

According § 54 Abs. 5 UG 2002 BGBl. I Nr. 81/2009 Graduates of the Bachelor degree in Environmental Engineering from the University of Natural Resources and Applied Life Sciences, Vienna, will be admitted to the Master degree programme.

They do not have to fulfill any further qualifications apart from the adequate proof of their English qualification. Furthermore, according to § 64 Abs. 5 UG 2002 BGBl. I Nr. 74/2006, students who graduated a professionally linked Bachelor degree programme in Austria or an university abroad are admitted to the Master degree programme Safety in the Food Chain.

Graduates of other Bachelor degrees must be able to demonstrate a fundamental knowledge of chemistry, biology/ bio-chemistry/microbiology/genetics, process technology, mathematics/statistics/physics, management, law and food technology. Where applicable it might be necessary to individually evaluate the admission to SIFC if it does not appear evident that the candidate brings along sufficient proficiency from the previous study programme.

For graduates of other Bachelor degrees, mastery of the following learning outcomes is required for admission:

Chemistry:

The students know the fundamentals of general and qualitative analytical chemistry and they are familiar with the most significant rules of conduct, safety precautions and safety installations in laboratories. They understand the principles of chemical thermodynamics, reaction kinetics and electrochemistry. They are in a position to carry out calculations in these fields. Furthermore, they are equipped with general knowledge of spectroscopic, electrochemical and chromatographic methods. In addition, the students have a fundamental understanding for biochemical reactions. They have knowledge of physical structure and nomenclature of organic molecules and analytical methods for structure detection.

Biology, biochemistry, microbiology and genetics:

Students are equipped with a fundamental understanding of cellular biological as well as genetic principles and cycles and acquired microscopy methods. They know

about the cell structure of prokaryotic and eukaryotic cells as well as the life cycles of viruses. They have a command of general microbiologic work methods, but are also equipped with knowledge in the field of fermentation technology and the reconditioning of fermentatively made products. This includes an understanding of growth kinetics of micro organisms.

In the field of molecular biology students have a fundamental understanding of molecular biological principles and processes and in principle acquired molecular biological work methods (“cloning”, sequential analysis, polymerase chain reaction (PCR), DNA-proof by means of Southernblott Analysis).

Students are familiar with the fundamentals of biochemistry, know the most important techniques in biochemical laboratories and are also in the position to practically apply these.

In the field of hygiene, students know the most essential definitions and foundations as well as in the fields of epidemiology, medical assessment, immunology and the importance of pathogen germs, parasites and toxic agents in foods.

Process technology:

Students possess basic knowledge about technical drawing, can understand and read drawings and can come up with work drawings ready for production. They are capable of mentally realizing simple technical systems and also have basic knowledge in the field of engineering mechanics. The students understand the first and second law of thermodynamics. In the field of measurement and control technology they are informed about the most important devices for data collection and are familiar with the measuring of important measurement categories such as temperature, humidity, and pressure. In the field of process engineering they know traditional proceedings such as filtration and centrifugation or rectification and extraction, but are also familiar with modern proceedings such as supercritical extraction or membrane processes. In the field of nutrition technology they understand main features and interrelations of food processing and have particular knowledge about methods for coking, preparation and life extension.

Mathematics, statistics and physics:

Students have an active understanding of basic mathematic concepts and methods such as data adaptation of function, linearization, power series, applications in chemical kinetics and process technology, graphic tests with the help of logarithmical scales, integral calculus and differential equations. They are in the position to independently evaluate and interpret the information of data sets using statistics software.

In the field of physics they are familiar with the basics of mechanics, thermodynamics and electricity and by that are equipped with the knowledge to solve basic physical examples.

Management and Law:

Students understand the philosophy, strategies and methods of quality management and are in the position to apply essential aspects of quality management.

They possess practice-oriented knowledge in the fields of legislation and can solve legal problems in cooperation with legal practitioners.

The students have basic knowledge in the fields of business management and economics and are familiar with the essentials for the conception, realization and supervision of projects.

Food sciences:

Students have a general overview over important recent issues related to research in the complete field of food sciences and food technology.

Command of English:

Evidence of a sufficient command of English which is required for the successful completion of the study program must be provided at admission (in the form of one of the following certificates):

- BOKU language course (at least level English III)
- Cambridge certificate of Advanced English
- IELTS – test (results 6.0 or better)
- Completion of a study programme that was entirely taught in English
- TOEFL – test (560 paper based; 82 internet based)

§ 3 PROGRAMME STRUCTURE

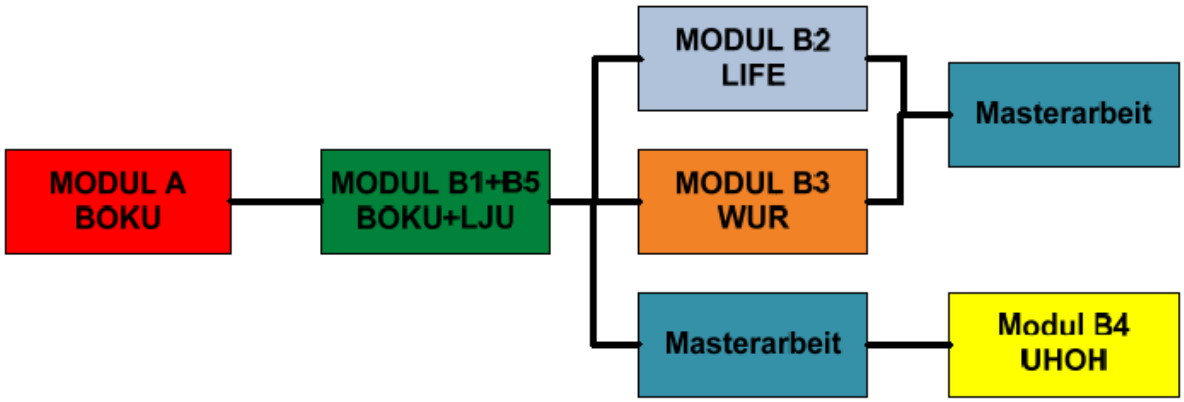
3a) Duration, total ECTS credits, and structure

The programme consists of courses and other requirements worth a total of 120 ECTS credits. This is equivalent to a duration of four semesters (a total of 3,000 60-minute credit hours). The programme is divided into

Compulsory courses:	30 ECTS credits
Master's thesis:	30 ECTS credits
Elective courses:	48 ECTS credits
Free electives:	12 ECTS credits
Foreign language-	

3b) Detailed structure of the study programme

Diagram of the study programme



Module A (30 ECTS):

The first of the three compulsory modules that has to be completed for the Master Degree Programme Safety in the Food Chain is Module A. It comprises compulsory courses to an extent of 30 ECTS credits. The courses of Module A mainly deal with basic knowledge fields and serves to prepare students for the following Module B in which specialised knowledge of the individual participating universities is taught. The Module B is taught in English at all participating universities.

Module B (60 ECTS):

The two following modules are Module B1/B5 and either Module B2, B3 or B4. As a total, 60 ECTS have to be completed, whereby 48 ECTS can be taken as elective courses and 12 ECTS as free elective courses. Free elective courses can be completed successfully in Austria or at one of the chosen partner universities. Students of the Master study program Safety in the Food Chain must complete at least one semester at one of the partner universities. This semester abroad, on one hand, serves as a setting of priorities, as every partner university features its own areas of expertise and the chosen courses in the elective course catalogue shall reflect these respectively. On the other hand, students shall get qualified to operate and work in an international setting.

Module B1/B5:

Module B1 (with a minimum of 15 ECTS) is held at the University for Natural Resources and Life Sciences, Vienna every summer semester and mainly focuses on the topics of food authenticity, safety in animal feed and foodstuffs, danger potentials in the food chain and analytic aspects of food safety.

Module B5 (with a minimum of 3 ECTS) is designed by the University Laibach in summer semesters. Courses on retraceability, the proof of pathogens in food and functional food are held and (at least at the beginning of this programme) are supposed to be held in cooperation with Module B1 of the University of Natural Resources and Applied Life Sciences in Vienna. Therefore, it is referred to as Module B1/B5.

Module B2:

Module B2 (with a minimum of 30 ECTS) is held at the University of Kopenhagen, Faculty of Life Sciences (LIFE), in winter semesters and specialises on topics such as sanitary facilities and hygiene design, food production in the context of micro organism in food, international food laws and safety management, risk analysis in national and international contexts.

Module B3:

At the Wageningen University (WUR) Module B3 (with a minimum of 30 ECTS) is held in winter semesters. It focuses on risk communication, epidemiology and health, genetic engineering and predictive modelling.

Module B4:

The University of Hohenheim (HOH) offers courses for Module B4. These courses will mainly focus on the following topics: nutrigenomics, animal hygiene, consumer habits and micro economy in the food chain.

The first year of this Master degree programme has to be attended at the University of Natural Resources and Life Sciences in Vienna. Here, Module A (with 30 ECTS) and in the subsequent semester Module B1/B5 (with 30 ECTS) have to be completed successfully.

In the second year SIFC students may choose to either change to Copenhagen or Wageningen where they can either complete Module B2 (with 30 ECTS) or B3 (also with 30 ECTS) in the winter semester. The following summer semester serves to conduct the Master degree thesis which may be done at the University for Natural Resources and Applied Life Sciences in Vienna or at any other partner university.

Students who conduct their Master degree thesis in the winter semester of their second study year will change to the University of Hohenheim in the following summer semester to complete Module B4 there.

3c) Three-pillar principle

The three-pillar principle is one of the central identifying characteristics of both the bachelor's and master's programmes offered at the University of Natural Resources and Life Sciences, Vienna. In the master's programmes, the sum of the compulsory and elective courses must be made up of at least

15% technology and engineering
15% natural sciences
15% economic and social sciences, law

The master's thesis, compulsory internship and free electives are excluded from the three-pillar rule.

3d) Joint degree programmes

The Master's programme in Safety in the Food Chain is jointly held by four ELLS (Euroleague for Life Sciences) Universities:

- University of Natural Resources and Life Sciences in Vienna
- University of Copenhagen, Faculty of Life Sciences
- Wageningen University and Research Centre
- University of Hohenheim

In cooperation with the University of Ljubljana, Biotechnical Faculty.

§ 4 COMPULSORY COURSES

The following compulsory courses are required to complete the master's programme:

Module A - Fundamental Food Sciences		**Semester**	**Course Type**	**ECTS credits**	**Percentage/pillar (in%)**		
Course nr.	**Course title**				**Tech./Eng.**	**Nat. sci.**	**EcSoLa**
754325	Food Microbiology for SIFC (in Eng.)	WS	VO	4	15	75	10
754316	Practical training in food microbiology for SIFC (in Eng.)	WS	UE	3	15	75	10
754317	Food Chemistry (for SIFC)	WS	VO	4	15	70	15
754318	Food Chemistry Practical Course for SIFC (in Eng.)	WS	UE	3	25	60	15
976300	Human nutrition	WS	VO	3	10	70	20
Module A – Advanced Food Sciences		**Semester**	**Course Type**	**ECTS credits**	**Percentage/pillar (in%)**		
Course nr.	**Course title**				**Tech./Eng.**	**Nat. sci.**	**EcSoLa**
754317	Food Safety and Risk Management (in Eng.)	WS	VS	3	10	70	20
752313	Practical Course in Food Processing (in Eng.)	WS	UE	5	70	20	10
754319	Practical course in Applied Quality Management for SIFC	WS	UE	5	40	30	30

Tech./Eng.= technology and engineering; Nat.sci. = natural sciences; EcSoLa = economic and social sciences, law

§ 5 ELECTIVE COURSES

Module B1 – Food Chemistry / Hygiene (6 ECTS credits min.)		**Semester**	**Course Type**	**ECTS credits**	**Percentage/pillar (in%)**		
Course nr.	**Course title**				**Tech./Eng.**	**Nat. sci.**	**EcSoLa**
754309	Authenticity of foods	SS	VO	3	15	55	30
754310	Food authenticity practical course	WS & SS	UE	3	25	60	15

941103	Molecular Biological Methods in Food Analysis	WS & SS	VU	3	30	50	20
754320	Reference Materials and Methods Validation in Food Safety Assurance (in Eng.)	SS	VU	3	40	50	10
811357	Biology, Chemistry and Microbiology for Civil Engineering (in Eng.)	SS	VU	3	30	60	10
756321	Hazard Potential of Chemical Residuals in Food (in Eng.)	SS	VO	3	20	70	10
754323	Validation of Cleaning Processes and Hygienic Design (in Eng.)	SS	VO	3	50	30	20
756324	Isotope-based methods for tracking and tracing food origin (in Eng.)	SS	VU	3	40	40	20
970301	Analysis of Bio-Hazards in Foods (in Eng.)	SS	VU	3	70	25	5
Module B1 – Food Processing (3 ECTS credits min.)		**Semester**	**Course Type**	**ECTS credits**	**Percentage/pillar (in%)**		
Course nr.	**Course title**				**Tech./Eng.**	**Nat. sci.**	**EcSoLa**
752306	Packaging of foodstuffs	SS	VU	3	70	20	10
951300	Plant production	SS	VO	3	35	55	10
752308	Detection and Elimination of Risks in Food Production	SS	VU	3	40	40	20
Module B1 - Special Food Safety Issues (3 ECTS credits min.)		**Semester**	**Course Type**	**ECTS credits**	**Percentage/pillar (in%)**		
Course nr.	**Course title**				**Tech./Eng.**	**Nat. sci.**	**EcSoLa**
791312	Safety Aspects of Plant Biotechnology (in Eng.)	SS	VU	3	30	40	30
756325	Safety Aspects of Gene Food	SS	VO	3	30	40	30
754335	Automatic Identification Technology in Food Industry (in Eng.)	SS	VU	3	50	30	20
933303	Safety and Quality of Organic Foods (in Eng.)	SS	VO	3	30	40	30
761312	Food Safety in Livestock Feeding (in Eng.)	SS	VO	3	30	50	20
Module B1 – Seminars (3 ETCS credits min.)		**Semester**	**Course Type**	**ECTS credits**	**Percentage/pillar (in%)**		
Course nr.	**Course title**				**Tech./Eng.**	**Nat. sci.**	**EcSoLa**
754326	National and International Food Safety Authorities (in Eng.)	SS	SE	3	15	45	40
752317	Human Safety in Food Processing (in Eng.)	SS	SE	3	45	10	45
754315	Specific and Emerging Topics in Food Microbiology (in Eng.)	SS	SE	3	10	80	10
Module B5 - Food Traceability – Pathogens in Food (3 ECTS credits min.)		**Semester**	**Course Type**	**ECTS credits**	**Percentage/pillar (in%)**		
Course nr.	**Course title**				**Tech./Eng.**	**Nat. sci.**	**EcSoLa**
756330	Rapid Methods in Food Microbiology (in Eng.)	SS	VS	3	40	50	10
756331	Development of Starters for Traditionally Fermented Foods (in Eng.)	SS	VS	3	40	50	10

756332	Development of Starters for Dairy Products (in Eng.)	SS	VS	3	40	50	10
754333	Molecular Epidemiology of Food-Borne Pathogens (in Eng.)	SS	VS	3	30	50	20
756334	Biomarkers in Food Characterisation (in Eng.)	SS	VS	3	30	50	20
Module B2 (University of Copenhagen, Faculty of Life Sciences)		**Semester**	**Course Type**	**ECTS credits**	**Percentage/pillar (in%)**		
Course nr.	**Course title**				**Tech./Eng.**	**Nat. sci.**	**EcSoLa**
	Hygiene and Sanitation	WS		7,5			
	International Food Legislation and Quality Management	WS		7,5			
	Risk Analysis in Food Safety	WS		7,5			
	Chemical Food Safety	WS		7,5			
	Control of Food Borne Microorganisms	WS		7,5			
	From Gene to Function in Microbial Food Safety	WS		7,5			
	Consumer Economics and Policy	WS		7,5			
	Quantitative Food Spectroscopy	WS		7,5			
	Post Harvest Handling and Use of Horticultural Products	WS		7,5			
Module B3 (Wageningen University)		**Semester**	**Course Type**	**ECTS credits**	**Percentage/pillar (in%)**		
Course nr.	**Course title**				**Tech./Eng.**	**Nat. sci.**	**EcSoLa**
	Introduction to Communication and Innovation Studies	WS		6			
	Food Law	WS		4			
	Epidemiology and Public Health	WS		6			
	Food Toxicology	WS		6			
	Food Related Allergies and Intolerances	WS		6			
	Advanced Food Physics	WS		6			
	Food and Ingredient Functionality	WS		6			
	Advanced Statistics	WS		6			
	Food Fermentation	WS		6			
	Food Microbiology	WS		6			
	Molecular Gastronomy	WS		6			
	Molecular Virology	WS		6			
Module B4 (University of Hohenheim)		**Semester**	**Course Type**	**ECTS credits**	**Percentage/pillar (in%)**		
Course nr.	**Course title**				**Tech./Eng.**	**Nat. sci.**	**EcSoLa**
	Nutrient/Gene Interaction						
	Oxidative Stress and Disease: Biofunctionality of Antioxidants						
	Food-Borne Microorganisms and Human Health						
	Prevention of Metabolic Syndrome by Nutrition						
	Authenticity Control and Chemical Methods for the Determination of Food Quality (valuable ingredients and						

	undesired contaminants)						

Tech./Eng.= technology and engineering; Nat.sci. = natural sciences; EcSoLa = economic and social sciences, law

§ 6 FREE ELECTIVES

Free electives worth a total of 12 ECTS credits are required to complete the master's programme. Free electives may be selected from all courses offered by all recognized universities in Austria and abroad. Free electives are intended to impart knowledge and skills in the student's own academic subject as well as in fields of general interest.

A list of recommended free electives is included in Annex C.

§ 7 COMPULSORY INTERNSHIP

In the course of the Master study program Safety in the Food Chain no mandatory internship has to be completed.

However, students are highly encouraged to deepen and apply those competences gained in the course of their study program in practice. These task-based implementation of knowledge learned also aims at enhancing the relationship between science, research and practice.

§ 8 MASTER'S THESIS

A master's thesis is a paper on a scientific topic, to be written as part of a master's degree programme (for exceptions please see the By Laws of the University of Natural Resources and Life Sciences, Vienna, part III- Teaching, § 30[9]). The thesis is worth a total of 30 ECTS credits. With their master's theses, students demonstrate their ability to independently address a scientific topic, both thematically and methodologically (§ 51 [8] UG 2002 BGBl. I no. 81/2009).

The topic of a master's thesis shall be chosen in such a way that it is reasonable to expect a student to be able to complete it within six months. Multiple students may jointly address a topic, provided that the performance of individual students can be assessed (§ 81 [2] UG 2002 BGBl. I no. 81/2009).

The master's thesis shall be written in English. Languages other than English are permissible only if approved and confirmed by the thesis supervisor. The thesis defence must be held in English regardless of the language of the thesis.

§ 9 COMPLETION OF THE MASTER'S PROGRAMME

The Master's Programme in Safety in the Food Chain has been completed when the student has passed all required courses and received a positive grade on the master's thesis and defence examination.

§ 10 ACADEMIC DEGREE

Graduates of the Master's Programme in Safety in the Food Chain are awarded the academic title *Diplomingenieur* (m) or *Diplomingenieurin* (f), abbreviated as Dipl.-Ing./ Dipl.Ing.^{in} or DI/DI^{in}.

The academic title Dipl.-Ing./Dipl.Ing.^{in} or DI/DI^{in}, if used, shall precede the bearer's name, while the academic title MSc (M.Sc) shall follow it (§ 88 [2] UG 2002 BGBl. I no. 81/2009).

§ 11 EXAMINATION REGULATIONS

For those parts of the Master degree programme completed at co-operating partner universities the examination regulations of the respective university have to be applied.

(1) At the University of Natural Resources and Life Sciences, Vienna the Master's Programme in Safety in the Food Chain has been completed successfully when the following requirements (corresponds to components in [7] below) have been met:

- positive completion of compulsory courses worth a total of 30 ECTS credits (§ 4)
- positive completion of elective courses worth a total of 48 ECTS credits (§ 5)
- positive completion of free electives worth a total of 12 ECTS credits (§ 6)
- a positive grade on the master's thesis and the defence examination
- positive completion of a minimum of 6 ECTS credits in module B1 "Food Chemistry/Hygiene", 3 ECTS credits in B1 "Food Processing", 3 ECTS credits in B1 "Special Food Safety Issues", 3 ECTS credits in B1 "Seminars" and 3 ECTS credits in B5 "Food Traceability – Pathogens in Food"

(2) Student evaluation takes the form of course and module examinations. Course examinations can be either written or oral, as determined by the course instructor, taking the ECTS credit value of the course into account. Any prerequisites for admission to examinations shall be listed in § 4 under the respective course/module.

(3) The choice of examination method shall be based on the type of course: Lectures shall conclude with a written or oral examination, if continuous assessment of student performance is not applied. Seminars and project-based courses can be evaluated based on independently written papers, length and contents of which are determined by the course instructor. For all other course types, the examination type is at the instructor's discretion.

(4) The topic of the master's thesis shall be selected from one of the subjects of the master's programme.

(5) The completed master's thesis shall be publically presented by the student and defended in the form of an academic discussion (defence examination). The examination committee shall consist of a committee chair, a first examiner (the student's thesis supervisor) and a second examiner. The student's total performance (thesis and defence examination) will be assigned a comprehensive grade. Both thesis and defence examination must receive a passing grade for the student to complete the programme. The written evaluations stating the grounds for the thesis grade and the defence examination grade are included in calculating the comprehensive grade and are documented separately.

The comprehensive grade is calculated as follows:

- Master's thesis: 70%
- Defence examination (incl. presentation): 30%

(6) A comprehensive evaluation of the student's performance on the entire programme shall be assigned. A comprehensive evaluation of "passed" means that each individual component of the programme was completed successfully. If individual components of the programme have not been successfully completed, the comprehensive evaluation is "failed". A comprehensive evaluation of "passed with honours" is granted if the student has received no grade worse than a 2 (good) on all individual components, and if at least 50% of the individual components were graded with 1 (excellent).

§ 12 TRANSITIONAL PROVISIONS

For students continuing their studies under the provisions of the previously valid curriculum, the list of equivalent courses pursuant to a resolution of the Committee for Academic Programmes (*Studienkommission*) applies. This list includes all courses that correspond to courses offered in the previously valid curriculum.

For students who switch to the new master's programme curriculum, examinations for courses taken under the provisions of the previously valid curriculum shall be recognized towards the new programme based on the list of equivalent courses (Annex C).

§ 13 EFFECTIVE DATE

This curriculum shall take effect on October 1st, 2011.

ANNEX A TYPES OF COURSES

The following types of courses are available:

Lecture (VO)
Lectures are courses in which certain areas of a subject and the methods used in this area are imparted through didactic presentation.

Lab course (UE)
Lab courses are courses in which students are instructed in specific practical skills, based on theoretical knowledge.

Practical course (PR)
Practical courses are classes in which students deal with specific topics independently, based on previously acquired theoretical and practical knowledge.

Seminar (SE)
Seminars are courses in which students are required to work independently on the respective subject, deepen their knowledge of the topic and discuss relevant issues.

Master thesis seminar (MA)
Master thesis seminars are seminars intended to provide students with academic support during the thesis writing process.

.

ANNEX B RECOMMENDED FREE ELECTIVES

In order to achieve education and training of integrity in the field of food safety it is recommended to complete the free elective courses from the free elective catalogues stated in this curriculum or to alternatively choose courses which are offered on the areas of expertise by the respective departments.

The following course is recommended:

Course nr.	**Course title**	Semester	Type	**ECTS**	**Tech./Eng.**	**Nat. sci.**	**EcSoLa**
754002	Functional Food and EU Food Legislation - "Novel Food and Health Claim Regulations in the EU"	SS	SE	3	10	40	50

ANNEX C LIST OF EQUIVALENT COURSES

Curriculum 2009			Curriculum 2011		
Courrse Title	**Type**	**ECTS**	**Courrse Title**	**Type**	**ECTS**
Food Microbiology	VO	4,5	Food Microbiology for SIFC (in Eng.)	VO	4
Practical training in food microbiology for SIFC (in Eng.)	UE	4,0	Practical training in food microbiology for SIFC (in Eng.)	UE	3,0
Food Chemistry for SIFC (in Eng.)	VO	6,0	Food Chemistry for SIFC (in Eng.)	VO	4,0
Food Chemistry Practical Course for SIFC	UE	4,0	Food Chemistry Practical Course for SIFC	UE	3,0
Practical Course in Food technology	UE	4,5	Practical Course in Food Processing (in Eng.)	UE	5