

#### Universität für Bodenkultur Wien

University of Natural Resources and Life Sciences, Vienna



### Curriculum







Organic Agricultural Systems and



Agroecology (AgrEco-Organic)



and the International Master Programme



Organic Agricultural Systems and



Agroecology (EUR-Organic)



Programme Classification No. 066 500







Effective Date: October 1st, 2018



For legal purposes, only the version of the curriculum that has been published in the official journal (Mitteilungsblatt) is binding and valid - this English translation is for information purposes only.

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# Curriculum of the Master degree programme "Organic Agricultural Systems and Agroecology (AgrEco-Organic)" And the international Master degree programme "Organic Agricultural Systems and Agroecology (EUR-Organic)"

At the University of Natural Resources and Life Sciences, Vienna

As at October 1<sup>st</sup>, 2018

The study programme at hand deals with two aspects: first, the Master study programme "Organic Agricultural Systems and Agroecology" at the University of Natural Resources and Life Sciences, Vienna (BOKU) which is shortened to "AgrEco-Organic", and second, the international study programme "Organic Agricultural Systems and Agroecology (EUR-Organic)" which is offered in co-operation with the Universities of Aarhus (AU), Hohenheim (UHOH), ISARA-Lyon (ISARA) and the University for Life Sciences Warsaw (WULS). In this document, both study programmes are referred to in the singular to allow for simplification.

#### §1 QUALIFICATION PROFILE

The Master programme in "Organic Agricultural Systems and Agroecology" 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 BGBI I no. 81/2009). The programme fulfils the requirements of Directive 2005/36/EC on the recognition of professional qualifications, article 11, letter e.

#### 1a) Knowledge and Personal and Professional Skills

The Master programme offers an all-embracing system-led education in the field of "Organic agriculture systems" and "Agro-ecosystems in general".

The languages of instruction German and English and the international focus provide opportunities to deepen the scientific qualifications and opens up occupational outlooks in science, in businesses, in national and international administration in various fields of agriculture, for relevant non-governmental organisations where organic farming as well as the evaluation of agrarian influences on ecologic and social interactions are in the focus of attention. Furthermore, a solid basis is provided for freely elective university study abroad options.

After the successful completion of this Master programme, graduates are equipped with a broad topical knowledge including the theories and methods to scientifically deal with organic agriculture, agroecology and related fields of expertise. Furthermore, graduates are familiar with the assessment of related agro-ecosystem services. This foundation covers cultural, ecological, economic, political, cultural and geographic – as well as production-related – features of sustainable land use such as organic agriculture in its diverse characteristics. The

qualification profile especially includes organic agriculture in the tropics and subtropics. This university programme is aimed both at the development of scientific qualifications and at a preparation for "application-oriented" fields.

#### (a) Master Programme AgrEco-Organic

Graduates of this Master programme are in the position to:

- know and understand the characteristics and modes of operation of organic and sustainable agriculture,
- understand and apply the systems approach of organic agriculture and related implications on approaches to research, test designs, experiments etc. in both, their socioeconomic and their natural science contexts,
- analyse systems of organic agriculture in order to develop and conduct scientific projects which take into account the close interrelations of individual elements,
- evaluate the effects of global change on organic farming and agro-ecosystems in general and to develop adaption and mitigation measures,
- apply state of the art scientific theories and methods to the development and completion of research projects, which reflect the disciplinary as well as inter- and transdisciplinary specialisations,
- assess, valuate and steer structures and processes in agro-ecosystems at different scales,
- evaluate agrarian ecosystems and the influence of (organic) agriculture on these and understand driving forces which influence land use and changes in land use,
- analyse the contribution of differing agricultural systems to development and loss of biodiversity and related ecosystem services,
- make use of the knowledge and abilities gained during the academic study programme for professional occupations in the private and public sector.

Students following the specialisation "Organic Agriculture" are equipped with the following additional qualifications:

- describe and apply ethics based concepts and understand their significance for and applications in context to organic agriculture,
- interpret the influence of political, social and legal framework requirements on organic agriculture,
- understand the connections and interrelations between the production of organic products and food quality.

The focus on "Agroecology" allows for an understanding of ecosystematic aspects of both organic and conventional agriculture. Students with a degree in this specialisation in their study programme also have further additional qualifications:

 Ability to analyse the importance of selected organism groups for the production and trophic chains of agro-ecosystems (beneficial organisms in their interactions with pests),

- Ability to make generalizations about agro-ecosystem processes in order to analyse and display functional chains and possibilities of influence by means of cultivation / use (modelling),
- Knowledge of possibilities and limitations of the application of specific groups of organisms as indicators for various land use systems as well as for the success of maintenance with regards to biodiversity.

The study programme contributes to equipping graduates with the following personal competences:

- intercultural communication and cooperation,
- inter- and transdisciplinary teamwork,
- practical experience due to project modules and a Master's Thesis in cooperation with research, agricultural businesses and companies from the agrarian sector.

#### (b) International Master Programme EUR-Organic

In this Master programme, in addition to the systems approach of the University of Natural Resources and Life Sciences, Vienna (BOKU), also a specialisation in the fields of "Livestock, fruit and vegetable production" (AU), "Socio-economy" (UHOH), "Food quality" (WULS) and "Agroecology" (ISARA) are offered.

This combination of a systems and a food chain approach enhances the students' ability to work with a broad range of methods, theories and content regarding organic agriculture and nutrition, which cannot be offered by any (other) single university. As a consequence graduates possess a deepened and partially specialised international qualification. Furthermore, the two semesters stay abroad at a partner university, which must cover at least 60 ECTS credits, helps the graduates to gain detailed insight into the organic agriculture sector of another European country.

Students of the international specification as ELLS Master study programme "Organic Agricultural Systems and Agroecology (EUR-Organic)" will experience further specialist immersion at the respective partner universities in addition to the general education and further qualifications for the study focus "Organic Farming" stated under §1a) (a).

#### 1b) Professional Qualifications

#### (a) Scientific fields:

Graduates are equipped with qualifications relevant for the following occupations and activities with a technical, natural science or socio-economic emphasis. In relation to this, students also acquire necessary research skills for careers in public and private, national and international research establishments:

- qualification for a doctorial study programme,
- organisation of research on interdependencies between land use and ecosystems,
- research in the fields of organic agriculture in the Tropics and Subtropics,

- research in organic agriculture-related fields of expertise, as well as inter- and transdisciplinary research contexts.
- creation of a scientific basis for developing furtherance and steering measures in agriculture for maintaining biodiversity,
- development and evaluation of regulation measures to maintain biodiversity and related ecosystem services.

#### (b) Non-scientific fields:

Graduates are equipped with qualifications in the following fields of occupations:

- Management of organic businesses (production, processing, market), especially
  across company borders and with a social objective (e.g. interlinking with tasks in social areas, rural areas, market initiatives across company borders, etc.),
- administrating organic agriculture (e.g. organic organisations, environmental associations, chamber of agriculture, controlling and certification authorities, administrative offices, EU, media, international organisations),
- project management in the field of regional development and sustainable land use.

#### § 2 Admission Requirements

Apart from the general criteria for admission, the international specification as EUR-Organic has further criteria that have to be met.

#### 2a) General Admission Requirements

Graduates of the Bachelor programme in Agricultural Sciences offered by BOKU University of Natural Resources and Life Sciences, or professionally equivalent Bachelor programmes of accredited national or international universities are eligible for admission with no further requirements.

For graduates of thematically related Bachelor programmes completed at other universities in Austria or abroad<sup>i</sup>, basic, equivalent knowledge to the content taught in the core subjects of the Bachelor's degree programme Agricultural Sciences is required.

For admission of graduates of other Bachelor's degree programmes in particular:

(1) Basics in natural sciences in the disciplines: Statistics, physics, chemistry, soil science, botany, zoology, agroecology, microbiology, genetics

<sup>&</sup>lt;sup>i</sup> It should be noted that a technical, natural scientific and socio-economic (basic) knowledge is required and presupposed for graduates of such Bachelor study programmes. This is in accordance with the Three Pillar Principle of BOKU (see §3b; page 10). Same holds true for basics in agrarian production.

- (2) Basics in production engineering sciences in the disciplines: Agricultural engineering or agricultural process engineering, crop sciences, plant protection, plant nutrition, crop breeding, animal nutrition, animal husbandry, organic farming
- (3) Basics in socio-economics and law in the disciplines: Basics of economy, general business administration, agricultural business administration, agricultural markets, regional planning, general and agricultural sociology.

Upon proof of 20 ECTS credits in each of these three categories, applicants will be admitted.

Furthermore, competences in English at a level of B2 (according to the Common European Framework of Reference for Languages by the Council of Europe) are a precondition.

#### 2b) Additional Admission Requirements for EUR-Organic

For admission to EUR-Organic, the following requirements have to be fulfilled:

(a) Deadlines

Deadline for application is March 15<sup>th</sup> for non-European Union citizens and June 1<sup>st</sup> for European Union (EU) citizens.

#### (b) Admission criteria

At each university offering EUR-Organic, the following criteria have to be fulfilled by the students: To be admitted to EUR-Organic, students require a Bachelor of Science (BSc) or an equivalent degree in Agricultural Sciences or a related discipline (e.g. Biology, Food Technology, Nutrition Sciences, Environmental Sciences, etc.) following at least three years of university studies at a recognised post-secondary educational institution in Austria or abroad.

Students who hold a Bachelor degree in Economics are admissible at UHOH and can choose AU as host university for the second year of their studies.

These admission criteria apply to all EUR-Organic partner universities. Admission at one consortium university (as a home university) is automatically accepted at the other universities (as host university) of the consortium with the restrictions stated under § 3a) on page 9.

#### § 3 PROGRAMME STRUCTURE

#### AgrEco-Organic:

After the completion of a foundation module, the study programme offers the choice between two specialisations: "Organic Agriculture" and "Agroecology". The selection of one specialisation is compulsory and is also stated in the graduation certificate. The Master programme is completed with a Master's Thesis.

#### **EUR-Organic**:

The Master programme EUR-Organic includes a stay abroad of minimum 60 ECTS credits. It is completed with a Master's Thesis.

#### 3a) Duration, Total ECTS Credits and Structure

The Master programme comprises a total of 120 ECTS credits corresponding to a study period of four semesters (in total, 3000 hours with 60 minutes). The programme is divided into:

	AgrEco-Organic	EUR-Organic
Compulsory courses:	32 ECTS credits (including 2 ECTS Master's Thesis seminar)	
Master's Thesis:	30 ECTS credits (excluding Master's Thesis seminar)	30 ECTS credits (excluding Master's Thesis seminar) in BOKU-HOST
Elective courses:	43 ECTS credits	30 ECTS credits for BOKU- HOME 16 ECTS credits for BOKU- HOST
Free elective courses:	15 ECTS credits (including 3 ECTS credits internship seminar, if an internship is completed)	12 ECTS credits for BOKU-
(see also figure 1, page 10).		

 $<sup>^{\</sup>rm ii}$  BOKU-HOME: BOKU as home university; BOKU-HOST: BOKU as host university

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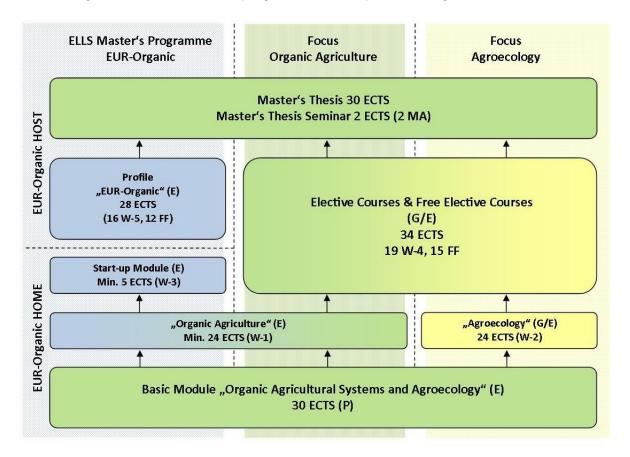
#### **Foreign Language-Taught Courses:**

#### AgrEco-Organic:

Students complete courses worth a total of at least 30 ECTS credits taught in English, from the basic module "Organic Agricultural Systems and Agroecology".

#### **EUR-Organic**:

In EUR-Organic, the entire Master programme is completed in English.



P: Compulsory course; W: Elective course; FF: Free elective course; G: in German; E: in English The Joint Start-up Module is an integral part of the EUR-Organic curriculum

Figure 1: Structure of the Master programme "Organic Agricultural Systems and Agroecology"

#### **General Structure of EUR-Organic:**

The ELLS EUR-Organic Master programme is divided into two "Basic Semester Packages" (BSP  $-2 \times 30$  ECTS credits), one "Specialisation Semester Package" (SSP -30 ECTS credits) and the Master's Thesis (30 ECTS credits).

Students can start the study programme EUR-Organic at BOKU, AU or UHOH. The university where the student is admitted and completes the first year of study is regarded as home university (EUR-Organic HOME). The other universities chosen by the students (UHOH, BOKU, AU, WULS or ISARA) are referred to as host university (EUR-Organic HOST). The

Basic Semester Packages BSP and the Specialisation Semester Package SPP/Master's Thesis may not be completed at the same university. The agreement with ISARA is only valid for the period mentioned in the operational agreement starting with winter semester 2016/17. Only a limited number of students will be accepted. In the Master programme EUR-Organic, it is compulsory to complete a jointly held "Start-up Module" offered by the partner universities, counting towards the 30 ECTS to be taken at the home university.

Table 1: General structure of EUR-Organic

Home university	1 <sup>st</sup> semester	Basic Semester Package (30 ECTS credits)	Compulsory courses: Start-up Module + e- learning (min. 5 ECTS credits)
			Compulsory and elective courses (min. 24 ECTS credits)
	2 <sup>nd</sup> semester	Basic Semester Package (30 ECTS credits)	Compulsory and elective courses (min. 5 ECTS credits)
			Elective courses: Summer school (min. 5 ECTS credits)
Host university	3 <sup>rd</sup> semester	Specialisation (30 ECTS credits)	Compulsory, elective and free elective courses
	4 <sup>th</sup> semester	Master's Thesis (30 ECTS credits)	Master's Thesis

The partner host universities offer different specialisations (Table 2).

Table 2: Specialisations in EUR-Organic

AU	BOKU*	UHOH	WULS	ISARA
Organic Live- stock Farming     Organic Produc- tion of Fruits & Vegetables in a Temperate Cli- mate	<ul> <li>Soil Fertility, Water Management and Ecology</li> <li>Organic Agricultural Production</li> <li>Organic Agriculture in Subtropical and Tropical Environments</li> <li>Systems, Scenarios, Sociology and Ethics</li> <li>Local Knowledge and Ethnobiology</li> </ul>	<ul> <li>Organic Crop Production</li> <li>Socioeconomics and Organic Farming</li> <li>Organic Farming in the Tropics and Subtropics</li> </ul>	Organic Food Quality and Marketing	• Agroecology

<sup>\*</sup> Students can combine courses from different specialisations

Detailed information about EUR-Organic can be found in Annex B (Page 29).

#### 3b) Three-Pillar Principle

The three-pillar principle is one of the central identifying characteristics of both the Bachelor and Master programmes offered at BOKU. In the Master programmes, the sum of the compulsory and elective courses must be made up of at least

15% technology and engineering15% natural sciences15% economic and social sciences, law

The Master's Thesis, internship and free electives are excluded from the three-pillar rule.

#### 3c) Limited Number of Participants in Courses

For courses with a limited number of participants the head of the Master course is authorised to first admit students enrolled in the Master programme (that means that students enrolled in a Bachelor study programme can only be admitted to the courses if further spaces are left on the course!) The admission of students enrolled in the Master study programme is conducted according to the following order of required courses by the students: compulsory course, elective course, free elective course.

#### § 4 COMPULSORY COURSES

#### **Used Abbreviations:**

ECTS = European Credit Transfer System WS = Winter Semester SS = Summer Semester

#### Notes:

- 1) In English
- <sup>2</sup>) In English and German
- 3) Courses not offered in the academic year 2018/19
- <sup>4</sup>) Courses only offered in even academic years
- <sup>5</sup>) Courses only offered in uneven academic years

#### 4a) AgrEco-Organic:

This Master programme comprises the following compulsory basic modules worth a total of 30 ECTS credits:

Course Number	P Basics Organic Agricultural Systems and Agroecology	Course Type	Semester	ECTS Credits
	Course Title			
933308	Soil fertility and soil ecology in organic agriculture <sup>1</sup>	VU	SS	3
933307	Crop production systems in organic agriculture <sup>1</sup>	VU	WS	3
932302	Animal production in organic agriculture <sup>2</sup>	VO	WS	4
933310	System analysis and scenario technique - methods and prac-	SE	WS	5

	tises <sup>1</sup>			
831304	Ecology and population biology of plants in agro-ecosystems 1	VX	WS	5
833301	Soil ecology <sup>1</sup>	VO	WS	3
831312	Plant and environment <sup>1</sup>	VO	WS	3
833311	Farmland ecology <sup>1</sup>	VO	WS	1
912339	Vegetation dynamics and fire ecology <sup>1</sup>	VS	SS	3
	Sum			30
Course	MA Master's Thesis Seminar	Course	Semester	ECTS
Number		Type		Credits
	Course Title			
830301 930300	Master's thesis seminar <sup>1</sup>	MA	WS or SS	2

#### 4b) EUR-Organic

Within the EUR-Organic HOME programme, the following compulsory basic modules worth a total of 30 ECTS credits have to be completed:

Course	P Basics Organic Agricultural Systems and Agroecology	Course	Semester	ECTS
Number		Type		Credits
	Course Title			
933308	Soil fertility and soil ecology in organic agriculture <sup>1</sup>	VU	SS	3
933307	Crop production systems in organic agriculture <sup>1</sup>	VU	WS	3
932302	Animal production in organic agriculture <sup>2</sup>	VO	WS	4
933310	System analysis and scenario technique - methods and practises <sup>1</sup>	SE	WS	5
831304	Ecology and population biology of plants in agro-ecosystems 1	VX	WS	5
833301	Soil ecology <sup>1</sup>	VO	WS	3
831312	Plant and environment <sup>1</sup>	VO	WS	3
833311	Farmland ecology <sup>1</sup>	VO	WS	1
912339	Vegetation dynamics and fire ecology <sup>1</sup>	VS	SS	3
	Sum			30

Within the EUR-Organic HOST programme, the Master's Thesis seminar is obligatory:

Course Number	MA Master's Thesis Seminar	Course Type	Semester	ECTS Credits
	Course Title			
830301	Master's thesis seminar <sup>2</sup>	MA	WS or SS	2
930300				

#### § 5 ELECTIVE COURSES

#### 5a) AgrEco-Organic

In the course of this Master study programme elective courses to an extent of at least 43 ECTS credit points have to be completed successfully. These may come from various advanced study fields. These advanced study fields are subdivided in elective courses from the pool W-1 or W-2 respectively in the advanced study fields of "Organic Agriculture" or "Agroecology" to an extent of 24 ECTS credit points, and in further elective courses to the extent of 19 ECTS credit points taken from the common course pool W-4 of both specialisations, see figure 1. The elective course pools in detail:

#### (a) Specialisation "Organic agriculture"

For the specialisation "Organic agriculture", elective courses selected from this focus worth a total of 24 ECTS credits are required. 8 ECTS credits have to be completed from the courses marked with \*.

Course Number	W-1 Organic Agriculture	Course Type	Semester	ECTS Credits
	Course Title			
933306	Ethics in organic agriculture* 1	SE	WS	3
931322	Technology in organic agriculture* 1	VS	WS	3
933312	Interdisciplinary excursion on organic agriculture* 1	EX	SS	2
911300	Soil physics and chemistry <sup>1</sup>	VO	WS	3
911312	Rhizosphere processes and application to agriculture and soil protection <sup>1</sup>	VO	WS	3
933330	Conversion to organic agriculture - interdisciplinary project <sup>1</sup>	PJ	SS	4
933326	Case studies in organic grassland management <sup>1</sup>	SE	SS	2
953324	Ecological plant protection <sup>2</sup>	VU	WS	3
933302	Protection of natural resources by organic farming <sup>1,4</sup>	VS	WS	3
931300	Agricultural engineering in plant production – seminar <sup>1</sup>	SX	SS	4
931362	Production systems and atmospheric pollution 1, 3	VO	SS	3
933333	Local knowledge and ethnobiology in organic farming - introduction <sup>1</sup>	VS	WS	3
933320	The global organic control and certification system <sup>1</sup>	VS	SS	3
933316	Organic farming and regional development <sup>1</sup>	PJ	SS	6
933334	Local knowledge and ethnobiology in organic farming - methods seminar <sup>1</sup>	SE	WS	3
933329	Agroecology, cultural ecology and ethnoecology- the interdisciplinary discourse in natural resource management <sup>1</sup>	SE	SS	3
958317	Organic fruit production and organic viticulture <sup>1</sup>	VX	WS	3
952333	Organic horticulture (vegetables and ornamentals) <sup>1</sup>	VX	WS	3
933303	European regulatory framework for organic production <sup>1</sup>	VO	SS	3
933331	Procedures of plant production in organic agriculture I <sup>1</sup>	VX	WS	1
933332	Procedures of plant production in organic agriculture II <sup>1</sup>	SX	SS	1
933317	Organic farming in the public debate <sup>1</sup>	VS	SS	3

#### (b) Specialisation "Agroecology"

For the specialisation "Agroecology", elective courses selected from this focus worth a total of 24 ECTS credits are required. 8 ECTS credits have to be completed from the courses marked with \*.

Course Number	W-2 Agroecology	Course Type	Semester	ECTS Credits
rambor	Course Title	1,700		Ordano
833308	Selected animals of Central European landscapes*	VU	SS	4
833312	Seminar in zoology and ecology*	SE	WS or SS	1
831322	Indicator values of plants and ecological bioindication*	VU	WS	1.5
833304	Interdisciplinary excursion ecology*	UX	SS	1.5
834300	Nature conservation in practice	SE	SS	4.5
831335	Techniques for plant determination <sup>4</sup>	VS	WS	2
831336	Plant determination - exercises <sup>4</sup>	UX	SS	1
831329	Evaluation of ecosystem functions for nature conservancy in cultural landscapes <sup>5</sup>	VO	WS	3
833317	Formulation of questions and experimental design in ecological research <sup>1</sup>	VS	WS	4.5
833300	Animal species of conservation concern and their habitat demands	VO	SS	2
912306	Exercises in vegetation dynamics <sup>4</sup>	UX	SS	3
912309	Methods in ecosystem dynamics <sup>4</sup>	VS	SS	6
953336	Global change and pest management <sup>1</sup>	VO	WS	3
831308	Ecology and sociology of grassland <sup>3</sup>	VX	SS	4,5
833318	Global change ecology	VO	WS	3
941301	Structure and analysis of genomes <sup>1</sup>	VO	WS	3
831326	Evaluation of ecosystem functions for nature conservancy in cultural landscapes <sup>5</sup>	UX	SS	1,5
831331	Stress physiology of plants	VO	SS	2
953327	Laboratory diagnosis of plant damages <sup>2</sup>	UE	WS	3
953305	Agricultural pest diagnostics	UX	SS	3

#### (c) Specialisations "Organic agriculture" and "Agroecology"

For the specialisation "Organic Agriculture" and "Agroecology", in addition to the elective courses W-1 and W-2, further elective courses to an extent of 19 ECTS have to be completed. These have to come from the elective course pool W-4<sup>iii</sup>. As further optional lecture courses alternatively to the W-4 optional lecture courses also all of the optional lecture courses from the areas W-1 and W-2 that have not previously been selected may be chosen as further optional lecture courses. These W-4 elective courses are sub-divided in thematic areas of focus which are assigned to the specialisations. Some focus areas are attributed to both specifications. Elective courses to an extent of at least 6 ECTS have to be taken from the chosen field of specialisation or from those elective courses that have not already been chosen as personal specialisation (W-1 for Organic Agriculture, W-2 for Agroecology).

Elective course field W-4 with areas of focus and their assigned specialisations Organic Agriculture (OA) and Agroecology (AE):

Course Number	W-4 Focus: Soil Sciences (OA & AE)	Course Type	Semester	ECTS Credits
	Course Title			
911304	Soil indicators <sup>1</sup>	VO	WS	3
911309	Soil chemistry laboratory <sup>1</sup>	UE	WS	3
911308	Soil physics - exercises in the laboratory	UE	SS	3
911329	Soil microbiology	VO	WS	3
911333	Soil microbiology course <sup>1</sup>	UE	SS	4
911303	Land taxation and soil mapping	VU	WS	3
911323	Soil in the environment	VX	SS	3
911307	Interdisciplinary project work: soil sciences <sup>1</sup>	PJ	WS	6
833303	Soil zoology	VO	WS	3
833309	Soil zoology <sup>3</sup>	UE	SS	1.5

Course	W-4 Focus: Agronomy and Crop Sciences (OA & AE)	Course	Semester	ECTS
Number		Type		Credits
	Course Title			
958318	Research project in viticulture and fruit science <sup>1, 3</sup>	PJ	SS	4
957307	Field crop breeding	VO	SS	3
951330	Field crop production and products	VS	WS	4

Course Number	W-4 Focus: Crop Protection (OA & AE)  Course Title	Course Type	Semester	ECTS Credits
953316	Phytopathology	VS	WS	3
953335	Phytomedicine in pomology <sup>1</sup>	VU	SS	3
831311	Biology and ecology of weeds	VO	WS	3

iii All of the specialisation-specific elective courses that have not been previously chosen from the fields W-1 and W-2 may be selected as further elective courses alternatively to the W-4 elective courses.

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953303	Parasitology and pathology of crop plants	VO	WS	3
953331	Soil-borne pathogenes and symbionts	VU	SS	3

Course	W-4 Focus: Global Change and Nature Conservation (OA	Course	Semester	ECTS
Number	& AE)	Type		Credits
	Course Title			
853308	Landscape ecology field course <sup>5</sup>	PJ	SS	4.5
933314	Nutrient cycles and energy fluxes in organic farming <sup>5</sup>	VS	WS	3
931307	Technology assessment for agriculture <sup>5</sup>	VS	SS	3
831323	Biodiversity: structures and processes in grassland and agroecosystems <sup>2,5</sup>	PJ	SS	7.5
833323	Biological monitoring (theory and practice)	VO	WS	3
831324	Biological monitoring exercises <sup>4</sup>	UX	SS	1.5
731350	Nature and landscape conservation economics	VO	WS	3

Course Number	W-4 Focus: Tools and Methods (OA & AE)	Course Type	Semester	ECTS Credits
	Course Title			
814302	Bioclimatology	VU	WS	3
953328	Principles and methods in weed control	VX	WS	3
831315	Multivariate analysis of ecological data sets 1,3	VO	WS	3
831316	Multivariate analysis of ecological data sets - exercises <sup>2, 3</sup>	UE	WS	1.5
954310	Phylogenetic Evaluation of DNA Sequences 1,3	VU	WS	3
857320	Remote sensing and GIS in natural resource management <sup>1</sup>	UE	WS	3
835305	Mathematical modelling in life sciences	VU	SS	3

Course Number	W-4 Focus: Agricultural Engineering & Technology (OA)	Course Type	Semester	ECTS Credits
	Course Title			
931321	Technology in organic agriculture 1,5	SX	WS	1.5
931301	Mechanisation on grassland	VO	WS	3
931306	Composting technology	VX	SS	3
931314	GPS-based agriculture	VX	SS	3
931302	Climate engineering <sup>3, 4</sup>	VO	WS	3
931308	Instruments of an advisory service for agricultural engineering and construction	VS	WS	3
931317	Biogas technology	VU	WS	3
931305	Post-harvest technology <sup>1</sup>	VO	SS	3
931318	Technology manure utilisation <sup>5</sup>	VU	WS	3
915326	Life cycle assessment of renewable resources	VU	SS	4
931319	Seminar on animal husbandry systems	VS	SS	4

Course Number	W-4 Focus: Livestock Sciences (OA)	Course Type	Semester	ECTS Credits
	Course Title			
932303	Animal health care in organic agriculture	VS	SS	3
932325	Specific aspects of organic livestock husbandry	VS	WS	3
932336	Advanced livestock ethology	VU	WS	3
932337	Animal welfare assessment	VU	WS	3
932338	Animal protection in livestock husbandry	VS	WS	3
932329	Sustainability of livestock production systems	VS	WS	3
932333	Biostatistics in livestock sciences	VU	SS	7
976311	Nutrition physiology	VO	SS	3
932320	Applied animal physiology: diagnosis and clinic	VU	SS	3

Course Number	W-4 Focus: Social and Economic Systems (OA)	Course Type	Semester	ECTS Credits
	Course Title			
933335	Applied science studies	VS	SS	2
732307	Participation and conflict resolution	VS	SS	3
731383	Principles of empirical research methods in the social sciences <sup>1</sup>	VS	SS	3
952323	Women in rural gardening and agriculture	VU	WS	3
933336	Food sovereignty - theory and practice of an alternative food and agriculture system <sup>1</sup>	VO	SS	1
731337	Methods and tools of rural development	VO	WS	3
731342	Core seminar rural development	SE	WS	3
933015	Ethnobotany – introduction <sup>1</sup>	VO	SS	2
933016	Ethnobotany - research and application <sup>1</sup>	SE	SS	3
854321	Peasant economies and sustainable development <sup>4</sup>	VO	WS	2
735313	Direct marketing	SE	SS	3
733324	Business administration and marketing in Austrian agriculture	VO	WS	3
736305	Principles of law for biotechnology	VO	SS	2

Course Number	W-4 Focus: International Development Cooperation (OA)	Course Type	Semester	ECTS Credits
	Course Title			
933319	Global case studies on organic agriculture <sup>1</sup>	VS	WS	1.5
933321	Development processes of organic agriculture in tropical and subtropical regions 1,5	SE	SS	3
933323	Project: Organic farming in tropical and subtropical regions <sup>1</sup>	PJ	SS	6
911324	Soil management in tropical and subtropical developing regions <sup>1</sup>	VO	SS	3
932324	Animal husbandry in tropical and subtropical regions <sup>1</sup>	VO	SS	3
931312	Mechanization of agriculture in developing countries 1,3	VS	SS	4
933322	Nutrition systems in countries of the global south <sup>5</sup>	VS	SS	3

Course	W-4 Focus: Ecology of Organisms (AE)	Course	Semester	ECTS
Number		Туре		Credits
	Course Title			
831321	Woody plant physiology - practical exercises <sup>3</sup>	UE	SS	1.5
831334	Biology and management of invasive plants <sup>4</sup>	SE	SS	3
831302	Methods of measuring stress resistance in plants <sup>1</sup>	VU	SS	3
831313	Water relations of plants <sup>1</sup>	VO	WS	3
833306	Introduction to entomology <sup>3</sup>	UE	SS	1.5
832335	Wildlife ecology and management of habitats (biotopes)	VO	WS or SS	3

Course Number	W-4 Focus: Genetics and Biotechnology (AE)	Course Type	Semester	ECTS Credits
Nambor	Course Title	Type		Ordano
957320	Plant breeding - principles and methods <sup>1</sup>	VO	WS	3
957321	Plant breeding - principles and methods - practical exercises <sup>1</sup>	UX	WS	3
772312	Plant biochemistry	VO	WS	2
941321	Plant molecular biology <sup>1</sup>	VO	SS	3
941318	Developmental genetics of plants <sup>1</sup>	SE	WS or SS	3
941333	Molecular genetics of yeasts and hyphal fungi <sup>1</sup>	VO	WS	3
791111	Plant biotechnology <sup>1</sup>	VO	WS	3
791327	Practical course in plant biotechnology <sup>1</sup>	UE	SS	4.5
932334	Molecular animal genetics <sup>1</sup>	VO	WS	3

#### 5b) EUR-Organic

In the EUR-Organic HOME programme, completion of the course "Joint-Start-up Module" worth a total of 6 ECTS credits is obligatory (see Figure 1, page 10).

Course Number	W-3 Joint Start-up Module - Compulsory	Course Type	Semester	ECTS Credits
	Course Title			
933300	Start-up module <sup>1</sup>	PJ	WS	6
	Sum			6

Within the EUR-organic HOME programme, in addition to the course "Joint-Start-up Module", courses from the thematic focus "Organic Agriculture" worth a total of 24 ECTS credits (W-1) have to be completed. Of the courses marked by \*, it is compulsory to complete courses worth 8 ECTS credits.

Course Number	W-1 Organic Agriculture	Course Type	Semester	ECTS Credits
	Course Title			
933306	Ethics in organic agriculture* 1	SE	WS	3
931322	Technology in organic agriculture* 1	VS	WS	3
933312	Interdisciplinary excursion on organic agriculture* 1	EX	SS	2

911300	Soil physics and chemistry <sup>1</sup>	VO	WS	3
911312	Rhizosphere processes and application to agriculture and soil protection <sup>1</sup>	VO	WS	3
933330	Conversion to organic agriculture - interdisciplinary project <sup>1</sup>	PJ	SS	4
933326	Case studies in organic grassland management <sup>1</sup>	SE	SS	2
953324	Ecological plant protection <sup>1</sup>	VU	WS	3
933302	Protection of natural resources by organic farming <sup>1, 4</sup>	VS	WS	3
931300	Agricultural engineering in plant production - seminar <sup>1</sup>	SX	SS	4
931362	Production systems and atmospheric pollution 1,3	VO	SS	3
933333	Local knowledge and ethnobiology in organic farming - introduction <sup>1</sup>	VS	WS	3
933320	The global organic control and certification system <sup>1</sup>	VS	SS	3
933316	Organic farming and regional development <sup>1</sup>	PJ	SS	6
933334	Local knowledge and ethnobiology in organic farming - methods seminar <sup>1</sup>	SE	WS	3
933329	Agroecology, cultural ecology and ethnoecology - the interdisciplinary discourse in natural resource management <sup>1</sup>		SS	3
958317	Organic fruit production and organic viticulture <sup>1</sup>	VX	WS	3
952333	Organic horticulture (vegetables and ornamentals) <sup>1</sup>	VX	WS	3
933303	European regulatory framework for organic production <sup>1</sup>	VO	SS	3
933331	Procedures of plant production in organic agriculture I <sup>1</sup>	VX	WS	1
933332	Procedures of plant production in organic agriculture II <sup>1</sup>	SX	SS	1
933317	Organic farming in the public debate	VS	SS	3

As part of the EUR-Organic HOST programme, elective courses worth a total of at least 16 ECTS credits (W-5) have to be completed within the Specialisation Semester Package (SSP). Courses of different specialisations can be combined.

The course package W-5 for EUR-Organic HOST (SSP) consists of the following courses:

Course Number	W-5 Soil Fertility, Water Management and Ecology	Course Type	Semester	ECTS Credits
	Course Title			
933308	Soil fertility and soil ecology in organic agriculture <sup>1</sup>	VU	SS	3
911300	Soil physics and chemistry <sup>1</sup>	VO	WS	3
911312	Rhizosphere processes and application to agriculture and soil protection <sup>1</sup>	VO	WS	3
815340	Lecture series in soil, water and atmosphere <sup>1</sup>	VO	WS	3
815320	Soil water management <sup>1</sup>	VO	WS	3
815321	Soil conservation and soil protection <sup>1</sup>	VU	WS	3

Course Number	W-5 Organic Agricultural Production	Course Type	Semester	ECTS Credits
	Course Title			
933307	Crop production systems in organic agriculture <sup>1</sup>	VU	WS	3

933331	Procedures of plant production in organic agriculture I <sup>1</sup>	VX	WS	1
933332	Procedures of plant production in organic agriculture II <sup>1</sup>	SX	SS	1
932302	Animal production in organic agriculture <sup>2, 3</sup>	VO	WS	4
933330	Conversion to organic agriculture - interdisciplinary project <sup>2</sup>	PJ	SS	4
933326	Case studies in organic grassland management <sup>1</sup>	SE	SS	2
933302	Protection of natural resources by organic farming 1,4	VS	WS	3
958317	Organic fruit production and organic viticulture <sup>1</sup>	VX	WS	3
952333	Organic horticulture (vegetables and ornamentals) <sup>1</sup>	VX	WS	3
958318	Research project in viticulture and fruit sciences <sup>1,3</sup>	PJ	SS	4
953324	Ecological plant protection <sup>2</sup>	VU	WS	3
953335	Phytomedicine in pomology <sup>1</sup>	VU	SS	3
953306	Laboratory diagnosis of plant damages <sup>2</sup>	UE	WS	3
953336	Global change and pest management <sup>1</sup>	VO	WS	3
831302	Methods of measuring stress resistance in plants <sup>1</sup>	VU	SS	3
931322	Technology in organic agriculture <sup>1</sup>	VS	WS	3
931300	Agricultural engineering in plant production - seminar <sup>1</sup>	SX	SS	4
931305	Post-harvest technology <sup>1</sup>	VO	SS	3
931362	Production systems and atmospheric pollution <sup>1, 3</sup>	VO	SS	3
933303	European regulatory framework for organic production <sup>1</sup>	VO	SS	3
933312	Interdisciplinary excursion on organic agriculture <sup>1</sup>	EX	SS	2

Course Number	W-5 Local Knowledge and Ethnobiology	Course Type	Semester	ECTS Credits
	Course Title			
933333	Local knowledge and ethnobiology in organic farming - introduction <sup>1</sup>	VS	WS	3
933334	Local knowledge and ethnobiology in organic farming - methods seminar <sup>1</sup>	SE	WS	3
933329	Agroecology, cultural ecology and ethnoecology - the interdisciplinary discourse in natural resource management <sup>1</sup>	SE	SS	3
834321	Biocultural diversity in rural landscapes <sup>1</sup>	VS	SS	3
9333337	Ethnobotany - introduction <sup>1</sup>	VO	SS	2
933338	Ethnobotany - research and application <sup>1</sup>	SE	SS	3

Course Number	W-5 Systems, Scenarios, Sociology and Ethics	Course Type	Semester	ECTS Credits
	Course Title			
933310	System analysis and scenario technique - methods and practises <sup>1</sup>	SE	WS	5
933306	Ethics in organic agriculture <sup>1</sup>	SE	WS	3
731383	Principles of empirical research methods in the social sciences <sup>1</sup>	VS	SS	3
991301	Foresights - what future to expect? (Late lessons from early warnings) <sup>1</sup>	VO	WS	2
933316	Organic farming and regional development <sup>1</sup>	PJ	SS	6
735322	Global networking <sup>1</sup>	SE	SS	6

735318	Decision support systems <sup>1</sup>	SE	WS	3
733321	Organisational behaviour and gender issues <sup>1</sup>	VU	SS	3
933317	Organic farming in the public debate <sup>1</sup>	VS	SS	3

Course Number	W-5 Organic Agriculture in Subtropical and Tropical Environments	Course Type	Semester	ECTS Credits
	Course Title			
933319	Global case studies on organic agriculture <sup>1</sup>	VS	WS	1.5
933320	The global organic control and certification system <sup>1</sup>	VS	SS	3
933321	Development processes of organic agriculture in tropical and subtropical regions 1,5	SE	SS	3
933323	Project: Organic farming in tropical and subtropical regions <sup>1</sup>	PJ	SS	6
911324	Soil management in tropical and subtropical developing regions <sup>1</sup>	VO	SS	3
932324	Animal husbandry in tropical and subtropical regions 1	VO	SS	3
931312	Mechanization of agriculture in developing countries 1,3	VS	SS	4
169317	Participatory methods in development research and practice <sup>1</sup>	SE	SS	3

#### § 6 FREE ELECTIVES

#### AgrEco-Organic:

Free electives worth a total of 15 ECTS credits are required to complete the Master programme. Free electives may be selected from all courses offered by all recognised 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 can be found on the website of the Academic Programme Committee for Agricultural Sciences (*Fachstudienkommission Agrarwissenschaften*).

#### § 7 INTERNSHIP

(1) For this Master programme no compulsory internship is required. It is, however, recommended to deepen those competences gained during the study programme in voluntary vocational practice experiences, especially if no internship has been completed in the course of the Bachelor programme. The internship is intended to help students improve the skills acquired in their degree programme. It is also intended to encourage students to learn to apply what they have learned in practice, and recognize relationships between theory and practice. The vocational practical experience can be completed in the frame of the electives and to an extent of 4 weeks in terms of a full employment (this accounts for 3 ECTS credit points). This practical experience has to be approved by the Programme Coordinator and has to provide for a meaningful addition to the study programme.

- (2) It is recommended to complete the internship between the second and third semesters of the degree programme. Students may also split the internship into more than one part.
- (3) The compulsory internship seminar provides students with a thematic review of the internship experience. It is worth 3 ECTS credits, requires the successful completion of an internship and can be completed as a free elective course.

#### §8 MASTER'S THESIS

#### 8a) General

A Master's Thesis is a paper on a scientific topic, to be written as part of a Master 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 Thesis, students demonstrate their ability to independently address a scientific topic, both thematically and methodologically (§ 51 [8] UG 2002 BGBI. 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 BGBI. I no. 81/2009).

#### 8b) AgrEco-Organic

In the Master programme AgrEco-Organic the Master's Thesis must be written in German or English. Another language may only be chosen with a confirmation from the supervisor. The defence has to be in German or English.

#### 8c) EUR-Organic

In the Master programme EUR-Organic HOST the Master's Thesis must be written in English. This also applies for the defence. Another language may only be chosen with a confirmation from the supervisor. The Master's Thesis must be completed and defended at the host university, and will be jointly supervised by a main supervisor from the host university and a co-supervisor from the home university.

#### § 9 COMPLETION OF THE MASTER PROGRAMME

The Master programme "Organic Agricultural Systems and Agroecology" 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

#### AgrEco-Organic:

Graduates of the Master programme in "Organic Agricultural Systems and Agroecology" (AgrEco-Organic) who completed their studies entirely at BOKU are awarded the academic title "Diplom-Ingenieur"/"Diplom-Ingenieurin", abbreviated as "Dipl.-Ing."/"Dipl.-Ing. or "DI"/"DI

The academic title "Dipl.-lng."/"Dipl.-lng. in or "DI"/"DIin, if used, shall precede the bearer's name (§ 88 [2] UG 2002 BGBI. I no. 81/2009).

#### **EUR-Organic:**

Graduates of the Master programme in "Organic Agricultural Systems and Agroecology" (EUR-Organic) are awarded the academic title "Master of Science", abbreviated as "MSc".

The academic title MSc, if used, shall follow the bearer's name (§ 88 [2] UG 2002 BGBI. I no. 81/2009).

Upon successful completion (see §9) of the Master programme "Organic Agriculture and Food Systems" (EUR-Organic) students are awarded a double diploma: by the home and by the host university as well as a diploma supplement.

#### § 11 Examination Regulations

#### 11a) General

- (1) Student evaluation takes the form of course 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.
- (2) The choice of examination method shall be based on the type of course: Lectures shall conclude with a written and/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.
- (3) The topic of the Master's Thesis shall be selected from one of the subjects of the Master programme. The student must inform the dean in writing prior to the commencement of the work on the Master's Thesis. Thereby, the student has to state the Master's Thesis topic as well as the name of the supervisor of the Master's Thesis.
- (4) The completed Master's Thesis which has been assessed positively by the supervisor shall be publically presented by the student and defended in the form of an academic discussion (defence examination). The committee shall consist of a committee chair and two additional university lecturers with a *venia docendi* or equivalent qualification. 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%
- (5) 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).

#### 11b) AgrEco-Organic

- (1) The Master programme AgrEco-Organic has been completed successfully when the following requirements (corresponds to components in § 11a) 5) have been met:
  - positive completion of compulsory courses worth a total of 30 ECTS credits (§ 4)
  - positive completion of the Master's Thesis seminar worth 2 ECTS credits (§ 4)
  - positive completion of elective courses worth a total of at least 43 ECTS credits (§
     5)
  - positive completion of free electives worth a total of 15 ECTS credits (§ 6)
  - a positive grade on the Master's Thesis and the defence examination (30 ECTS credits).

#### 11c) EUR-Organic

- (1) For the Master programme EUR-Organic the respective examination regulations of the partner universities must be adhered to in addition to the BOKU examination regulations termed here.
- If a student fails in exams and changes between home and host university before reexamination the home and the host university are obliged to make the re-examination possible for the student. The assessment of the courses is in accordance with the "European Credit Transfer System", where 60 ECTS credits represent one year of full study.
- (2) The Master programme EUR-Organic with BOKU as home university has been completed successfully when the following requirements (corresponds to components in §11a) 6) have been met:

- positive completion of compulsory courses from the basic semester packages to the extent of 30 ECTS points (§ 4).
- positive completion of elective courses from the basic semester packages to the extent of at least 24 ECTS credits, as well as the Joint-Start-up Module to the extent of 6 ECTS credits (see Annex B, § 5)
- positive completion of at least 30 ECTS credits from the Specialisation Semester Packages at the respective host university – UHOH, AU, WULS or ISARA.
- a positive grade on the Master's Thesis and the defence examination at the host university (30 ECTS credits).
- (3) The Master programme EUR-Organic with BOKU as host university has been completed successfully when the following requirements (corresponds to components in § 11a) 6) have been met:
  - positive completion of all basic semester packages including the Start-up module (to the extent of at least 5 ECTS credits) at the respective home university – UHOH or AU – to the extent of at least 60 ECTS credits (see Annex B from page, § 4),
  - positive completion of the Master's Thesis seminar at BOKU worth 2 ECTS credits (§ 4)
  - positive completion of elective courses from the chosen specialisation at BOKU within the Specialisation Semester Package to the extent of at least 16 ECTS credits (see Annex B, § 5)
  - positive completion of free elective courses at BOKU within the Specialisation Semester Package to the extent of at least 12 ECTS credits (see Annex B, § 6)
  - a positive grade on the Master's Thesis and the defence examination at BOKU (30 ECTS credits).

#### § 12 Transitional Provisions

For students who are subject to the new Master's curriculum, already completed exams on courses of the former Master's curricula are acknowledged based on the equivalence list for the respective study programme. This list of equivalent courses is available on the website of the Academic Programme Committee for Agricultural Sciences (*Fachstudienkommission Agrarwissenschaften*).

#### §13 EFFECTIVE DATE

This curriculum shall take effect on October 1st, 2018.

#### 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.

#### **Internship Seminar (PP)**

The compulsory internship seminar is a class in which students deal independently with topics related to their internship placements, 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.

#### Field Trips (EX)

Field trips are courses in which students have the opportunity to experience relevant fields of study in real-life practical application, to deepen their knowledge of the respective subject. Field trips can be taken to destinations both in Austria and abroad.

#### Master's Thesis Seminar (MA)

Master's Thesis seminars are seminars intended to provide students with academic support during the thesis writing process.

#### Mixed-Type Courses:

Mixed-type courses combine the characteristics of the courses named above (with the exception of project-type courses). Integration of different course-type elements improved the didactic value of these courses.

#### **Project Course (PJ)**

Project courses are characterized by problem-based learning. Under instruction, students work (preferably in small groups) on case studies, applying appropriate scientific methods.

Lecture /Seminar (VS)
Lecture/Lab (VU)
Lecture/Field Trip (VX)
Seminar/Field Trip (SX)
Lab/Seminar (US)
Lab/Field Trip (UX)

## ANNEX B EXECUTIVE SUMMARY OF THE EUROLEAGUE FOR LIFE SCIENCES (ELLS) MASTER DEGREE "ORGANIC AGRICULTURAL SYSTEMS AND AGROECOLOGY" (EUR-ORGANIC)

#### §1 QUALIFICATION PROFILE

The Master programme EUR-Organic is a double 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 BGBI I no. 81/2009). The programme fulfils the requirements of Directive 2005/36/EC on the recognition of professional qualifications, article 11, letter e.

The Master programme EUR-Organic is carried out within the framework of the Euroleague for Life Sciences (ELLS). The ELLS partner universities of the University of Natural Resources and Life Sciences (BOKU) in this Master programme are the University Hohenheim (UHOH), the Aarhus University (AU), the Warsaw University of Life Sciences (WULS) and the ISARA-Lyon (ISARA).

As WULS and ISARA do not at present offer the complete Master programme EUR-Organic, students of the Master programme EUR-Organic can currently only start their academic studies at BOKU, AU and UHOH. The university at which the student is admitted and completes the first academic study year is referred to as home university. The other selected universities (BOKU, UHOH, AU, WULS and ISARA, respectively) are referred to as host universities.

Currently, WULS only serves as a host university. As soon as WULS offers a complete Master programme EUR-Organic, it can also be chosen as home university.

#### 1a) Knowledge, Skills and Personal and Professional Competences

The Master programme EUR-Organic offers an all-embracing system-led (further-) education in the fields of "Organic Agriculture Systems" and "Agro-Ecosystems in General" through its compulsory and elective courses. The language of instruction is English. The international focus provides opportunities to deepen academic as well as scientific qualifications and opens up occupational outlooks in businesses, which operate on an international level and in the field of organic agriculture as well as the related food industry.

After the successful completion of this Master programme, graduates are equipped with broad topical knowledge as well as theories and methods to scientifically deal with organic agriculture, agroecology and related fields of expertise. Furthermore, graduates are familiar with the assessment of related agro-ecosystem services. This foundation covers cultural, ecological, economic, political and geographic — as well as production-related — features of organic agriculture in its diverse characteristics. The combination of a systems and a food chain approach enhances the students´ ability to work with a broad range of methods, theories and content regarding organic agriculture and nutrition. Part of the Master programme EUR-Organic is a compulsory "Joint Start-Up Module" (held in September), which serves as an introduction into the systems and the food chain approach.

The broad perspective of this programme which includes various European as well as country-specific contributions cannot be offered by any single university. As a consequence graduates possess a deepened and partially specialised international qualification (Table 1).

Table 1: Thematic foci – Specialisation Semester Packages (SSP) in the third and fourth semester

AU	BOKU*	UHOH	WULS	ISARA
Organic Live- stock Farming     Organic Produc- tion of Fruits & Vegetables in Temperate Cli- mates	<ul> <li>Soil Fertility, Water Management and Ecology</li> <li>Organic Agricultural Production</li> <li>Organic Agriculture in Subtropical and Tropical Environments</li> <li>Systems, Scenarios, Sociology and Ethics</li> <li>Local Knowledge and Ethnobiology</li> </ul>	Organic Crop Production  Socioeconomics and Organic Farming  Organic Farming in the Tropics and Subtropics	Organic Food Quality and Marketing	• Agroecology

<sup>\*</sup> Students can combine courses from different specialisation semester packages

Furthermore, the two semesters stay abroad at a partner university, which must cover at least 60 ECTS credits, helps the graduate to gain detailed insights into the organic agriculture sector of another European country. The Master programme EUR-Organic is aimed both at the development of scientific qualifications and at "application-oriented" fields.

Graduates of the Master programme EUR-Organic at BOKU are in the position to:

- know and understand the characteristics and modes of operation of organic and sustainable agriculture.
- understand and apply the systems approach of organic agriculture and related implications on approaches to research, test designs, experiments etc. in both, their socioeconomic and their natural science contexts,
- describe and apply ethics-based concepts and understand their significance for and applications in organic agriculture,
- analyse systems of organic agriculture in order to develop and conduct scientific projects which closely related to his/her individual areas of expertise,
- evaluate the effects of global change on organic farming and agro-ecosystems in general and to develop adaption and mitigation measures,
- apply state of the art scientific theories and methods to the development and completion of research projects which reflect the disciplinary as well as inter- and transdisciplinary specialisations,
- assess, valuate and steer structures and processes in agro-ecosystems at different scales.

- evaluate agrarian ecosystems and the influence of (organic) agriculture on these and understand driving forces which influence related land use and changes in land use,
- analyse the contribution of differing agricultural systems to development and loss of biodiversity and related ecosystem services,
- interpret the influence and contribution of political, social and legal framework requirements on organic agriculture,
- understand the connections and interrelations between the production of organic products and food quality,
- make use of the knowledge and abilities gained during the academic study programme for professional occupations in the private and public sector.

The study programme accounts for that as graduates are equipped with the following personal competences:

- intercultural communication and teamwork,
- inter- and transdisciplinary teamwork,
- practical experience due to project modules and a Master's Thesis in cooperation with enterprises and science.

In addition to the above mentioned qualifications, students of the Master programme EUR-Organic also undergo a specialisation at the respective partner universities.

#### 1b) Professional Qualifications

#### (a) Scientific fields

Graduates of the Master programme EUR-Organic are equipped with qualifications relevant for occupations and activities with a technical, natural science or social science / socio-economic emphasis. In relation to this, students also acquire necessary research skills for careers in public and private, national and especially international research establishments and international organisations with focus on organic agriculture; such careers may include:

- qualification for a doctorial study programme,
- research in the fields of organic agriculture / agriculture in the Tropics and Subtropics,
- research in organic agriculture-related fields of expertise,
- development and evaluation of regulation measures to maintain biodiversity and related ecosystem services,
- research in organic agriculture-related inter- and transdisciplinary research contexts
- creation of a scientific basis for developing furtherance and steering measures in agriculture for maintaining biodiversity.

#### (b) Non-scientific fields

Graduates are equipped with qualifications in the following fields of occupations:

• running of an organic business (production, processing, market), especially across company borders and with a social objective (e.g. interlinking with tasks in social areas, rural areas, market initiatives across company borders),

- administrating organic agriculture (e.g. organic organisations, environmental associations, chamber of agriculture, controlling and certification authorities, administrative offices, EU, media, international organisations),
- project management and regional development,
- marketing of organic produce, especially foods.

#### § 2 Admission Requirements

#### 2a) Deadlines

The deadline for application is March 15<sup>th</sup> for non-European Union citizens and June 1<sup>st</sup> for European Union (EU) citizens.

When applying for the Master programme EUR-Organic the applicant must choose a home university. The person will be enrolled at his/her home university and pay the tuition fee only at this university during the entire two years programme (also when studying at the host university).

For a more detailed description of admission criteria and procedures please refer to the homepage of the Master programme EUR-Organic.

#### 2b) Admission Criteria

Admission and application within the Master programme EUR-Organic are conducted in a consortium procedure by all partner universities<sup>iv</sup>. At each university, the following criteria have to be fulfilled by the students: Students must have a Bachelor of Science (BSc) or an equivalent degree in Agriculture or a related discipline (e.g. Biology, Food Technology, Nutrition Sciences, Environmental Sciences, Environment and Bio-Resources Management, Forestry, International Development Studies) with a programme duration of at least three years. Students who hold a Bachelor degree in Economics are admissible at UHOH and can choose AU as their host university for the second year of their studies. These admission criteria apply to all EUR-Organic partner universities. Admission at one consortium university (as home university) is automatically accepted at the other universities (as host university) of the consortium (restrictions - see § 3b).

For the admission at BOKU, knowledge in technology and engineering, natural sciences and socio-economic sciences according to the Three-pillar principle at BOKU (see § 3e; page 34), are required.

For graduates of BSc programmes other than Agriculture, the following learning outcomes are required:

(4) Basics in natural sciences in the disciplines: Statistics, physics, chemistry, soil science, botany, zoology, agroecology, microbiology, genetics

 $<sup>^{</sup>m iv}$  Consortium admission and application do not abrogate general rules and regulations for admission and application at each partner university.

- (5) Basics in production engineering sciences in the disciplines: Agricultural engineering or agricultural process engineering, crop sciences, plant protection, plant nutrition, crop breeding, animal nutrition, animal husbandry, organic farming
- (6) Basics in socio-economics and law in the disciplines: Basics of economy, general business administration, agricultural business administration, agricultural markets, regional planning, general and agricultural sociology

Upon proof of 20 ECTS credits in each of these three categories, applicants will be admitted.

Over and above these general entry requirements, selection will be based upon grades, educational background and relevant professional experience. Additional professional qualifications may also be considered. The degree must have been obtained at an acknowledged institution.

Admission criteria also comprise English language skills at level B2 of the Common European Framework of Reference for Languages (CEFR)<sup>v</sup>.

#### 2c) Choosing Specialisation

In the Master programme EUR-Organic students must choose the host university for their second year of studies and their specialisation semester package (SSP) for the 3<sup>rd</sup> semester. Students can choose between several SSP. The host university and field of specialisation must be chosen at the end of the 1<sup>st</sup> semester and the form has to be sent to the programme coordinator of the home university. The specialisation form can be found on the homepage of the Master programme EUR-Organic, but will also be sent to the enrolled students. The status of SSP as well as courses – compulsory or elective – follows individual rules at each university.

#### § 3 Programme Structure

#### 3a) Duration, Total ECTS Credits and Structure

The Master programme EUR-Organic comprises a total of 120 ECTS credits corresponding to a study period of four semesters (3000 hours with 60 minutes).

The study programme is structured in

Compulsory courses: 30 ECTS credits in BOKU HOME<sup>vi</sup>

2 ECTS credits for Master's Thesis seminar in BOKU HOST

Master's Thesis: 30 ECTS credits (excluding Master's Thesis seminar) in

**BOKU-HOST** 

v Equivalent tests and their required minimum scores are listed on the homepage of the Master programme EUR-Organic. An official proof of language skills is not requested from applicants whose native language is English or who have already completed a study programme in English.

vi BOKU-HOME: BOKU as home university; BOKU-HOST: BOKU as host university

Elective courses: 30 ECTS credits in BOKU HOME

16 ECTS credits in BOKU HOST

Free elective courses: None in BOKU HOME

12 ECTS credits in BOKU HOST

The Master programme EUR-Organic is a double degree Master programme and when §8 resp. §10 is fulfilled, it is completed with an academic title at the home university as well as at the host university.

#### 3b) Structure of the Double Degree Master Programme EUR-Organic<sup>vii</sup>

The Master programme EUR-Organic is divided into two "Basic Semester Packages" (BSP – 2 x 30 ECTS credits), a specialisation semester package" (SSP) with a total of 30 ECTS credits and the Master's Thesis (30 ECTS credits).

	1 <sup>st</sup> Term	Basic Semester	Compulsory Course: Joint Start-Up Module + e-learning (min. 5 ECTS credits)
Home - University	i ierm	(30 ECTS credits)	Compulsory and Elective Courses (min. 24 ECTS credits)
	2 <sup>nd</sup> Term	Basic Semester (30 ECTS credits)	Compulsory and Elective Courses
			Elective Course: Summer School
			(min. 5 ECTS credits)
Host - University	3 <sup>rd</sup> Term	Specialisation (30 ECTS credits)	Compulsory, Elective and Free Elective Courses
riost - Oniversity	4 <sup>th</sup> Term	Master's Thesis (30 ECTS credits)	Master's Thesis

A jointly held "Start-up Module" (minimum 5 ECTS credits) offered by the partner universities has to be completed at the beginning of the Master programme EUR-Organic.

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 $vii\ The\ detailed\ format\ of\ the\ BSP\ at\ the\ partner\ home\ universities-UHOH\ and\ AU-of\ the\ ELLS\ Master's\ programme\ "Organic\ Agriculture\ and\ Food\ Systems"\ (EUR-Organic)\ can\ be\ found\ on\ the\ respective\ home\ pages.$ 

## 3c) Structure of the Double Degree Master Programme EUR-Organic with BOKU as Home University

Students of the Double Degree Master's programme EUR-Organic are either allowed to choose BOKU as their home university (1<sup>st</sup> and 2<sup>nd</sup> semester) or as their host university (3<sup>rd</sup> and 4<sup>th</sup> semester).

If BOKU is chosen as the home university, students have to successfully complete 60 ECTS credits within the BSP of the 1<sup>st</sup> and 2<sup>nd</sup> semester. The BSP includes 30 ECTS credits as compulsory courses (see § 4a), the "Start-up Module" (6 ECTS credits) and additional elective courses comprising 24 ECTS credits (see § 5a).

Home – University	1 <sup>st</sup> Term	Basic Semester (30 ECTS credits)	Elective Course with Obligatory Character: Joint Start-Up Module + e-learning (6 ECTS credits)	
BOKU		,	Compulsory Courses (30 ECTS credits)	
	2 <sup>nd</sup> Term	Basic Semester (30 ECTS credits)	Elective Courses (24 ECTS credits)	
			Elective Course: Summer School	
			(min. 5 ECTS credits)	
Host - University UHOH, AU, WULS	3 <sup>rd</sup> Term	Specialisation (30 ECTS credits)	Elective Courses	
or ISARA	4 <sup>th</sup> Term	Master's Thesis (30 ECTS credits)	Master's Thesis	

If BOKU is chosen as the home university, students have to successfully complete courses to the extent of 30 ECTS credits and the Master Thesis (30 ECTS credits) within the 3<sup>rd</sup> and 4<sup>th</sup> semester at their host university (UHOH, AU, WULS or ISARA – The agreement with ISARA is only valid for the period mentioned in the operational agreement starting with winter semester 2016/17. Only a limited number of students will be accepted). The detailed format of the SSPs at the partner host universities of the ELLS Master EUR-Organic can be found at the EUR-Organic homepage (www.eur-organic.eu).

## 3d) Structure of the Double Degree Master Programme EUR-Organic with BOKU as Host University

If UHOH is chosen as the home university, students have to successfully complete 42 ECTS credits (7x6 ECTS credits) as compulsory modules for the BSP and elective modules comprising 12 ECTS credits (2x6 ECTS credits; see § 4b).

If AU is chosen as the home university, students have to successfully complete 20 ECTS credits (2x10 ECTS credits) from compulsory modules in the BSP, 20 ECTS credits (2x10 ECTS credits) from compulsory optional modules (see § 4c) and elective modules to the extent of at least 15 ECTS credits.

	1 <sup>st</sup> Term	Basic Semester	Compulsory Courses: Joint Start-Up Module + e-learning (min. 5 ECTS credits)
Home – University UHOH or AU		(30 ECTS credits)	Compulsory Courses and Elective Courses (min. 24 ECTS credits)
	2 <sup>nd</sup> Term	Basic Semester (30 ECTS credits)	Compulsory Optional and Elective Courses
			Elective Course: Summer School (min. 5 ECTS credits)
Host – University BOKU	3 <sup>rd</sup> Term	Specialisation (30 ECTS credits)	Compulsory Courses (2 ECTS credits)  Elective Courses (16 ECTS credits)  Free Elective Courses (12 ECTS credits)
	4 <sup>th</sup> Term	Master's Thesis (30 ECTS credits)	Master's Thesis (30 ECTS credits)

If BOKU is the host university for the 3<sup>rd</sup> and the 4<sup>th</sup> semester, students have to select the master seminar as a compulsory course with 2 ECTS credits, elective courses to an extent of 16 ECTS credits (see § 5) and 12 ECTS credits of free elective courses. Furthermore, a Master's Thesis, which counts for 30 ECTS credits, has to be successfully submitted. The Master's Thesis must be completed and defended at the host university, and will be jointly supervised by a main supervisor from the host university and a co-supervisor from the home university. The elective courses for the specialisation offered by BOKU are listed in § 5c.

#### 3e) Three-Pillar Principle (see also 4a)

The three-pillar principle is one of the central identifying characteristics of both the Bachelor and Master programmes offered at BOKU. In the Master 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, (elective) internship and free electives are excluded from the three-pillar rule.

#### 3f) Limitation of Participants in Courses

In courses with a limited number of participants, the lecturer can accept students in the following order of the student's required course: compulsory course, elective course, free elective course.

#### § 4 COMPULSORY COURSES

#### **Used Abbreviations:**

ECTS = European Credit Transfer System WS = Winter Semester SS = Summer Semester

#### Notes:

- 1) In English
- <sup>2</sup>) In English and German
- <sup>3</sup>) Courses not offered in the academic year 2018/19
- <sup>4</sup>) Courses only offered in even academic years
- <sup>5</sup>) Courses only offered in uneven academic years

The Master programme EUR-Organic comprises different modules/courses at the different partner universities.

#### 4a) Home University BOKU

For students who choose BOKU as their home university compulsory courses within the BSPs comprise 30 ECTS credits.

Compulsory courses within the BSP (P):

Course Number	P Basics Organic Agricultural Systems and Agroecology	Course Type	Semester	ECTS Credits
	Course Title			
933308	Soil fertility and soil ecology in organic agriculture <sup>1</sup>	VU	SS	3
933307	Crop production systems in organic agriculture <sup>1</sup>	VU	WS	3
932302	Animal production in organic agriculture <sup>2</sup>	VO	WS	4
933310	System analysis and scenario technique - methods and practises <sup>1</sup>	SE	WS	5
831304	Ecology and population biology of plants in agro-ecosystems 1	VX	WS	5
833301	Soil ecology <sup>1</sup>	VO	WS	3
831312	Plant and environment <sup>1</sup>	VO	WS	3
833311	Farmland ecology <sup>1</sup>	VO	WS	1
912339	Vegetation dynamics and fire ecology <sup>1</sup>	VS	SS	3
	Sum			30

#### 4b) Home University UHOH or Home University AU

For detailed information please refer to the homepage of UHOH, of AU and the homepage of the ELLS Master programme EUR-Organic: www.eur-organic.eu

#### 4c) Host University BOKU

For students who choose BOKU as their host university, compulsory courses comprise at least 2 ECTS credits.

Course Number	MA Master's Thesis Seminar	Course Type	Semester	ECTS Credits
	Course Title			
830301	Master's thesis seminar <sup>2</sup>	MA	WS or SS	2
930300				

## 4d) Host University UHOH, Host University AU, Host University WULS and Host University ISARA

For detailed information please refer to the homepage of UHOH, AU, WULS, ISARA and the homepage of the ELLS Master programme EUR-Organic: www.eur-organic.eu

#### § 5 ELECTIVE COURSES

#### 5a) Home University BOKU

For students who choose BOKU as their home university, courses within the BSP comprise 30 ECTS credits and consist of the "Joint Start-up Module" (6 ECTS credits) and the W-1 Organic Agriculture (24 ECTS credits) in which 8 ECTS credits have to be completed from the courses marked with \*.

Course Number	Joint Start-up Module - Compulsory	Course Type	Semester	ECTS Credits
	Course Title			
933300	Start-up module <sup>1</sup>	PJ	WS	6
	Sum			6

Course	W-1 Organic Agriculture	Course	Semester	ECTS
Number		Type		Credits
	Course Title			
933306	Ethics in organic agriculture* 1	SE	WS	3
931322	Technology in organic agriculture* 1	VS	WS	3
933312	Interdisciplinary excursion on organic agriculture* 1	EX	SS	2
911300	Soil physics and chemistry <sup>1</sup>	VO	WS	3
911312	Rhizosphere processes and application to agriculture and soil protection <sup>1</sup>	VO	WS	3
933330	Conversion to organic agriculture - interdisciplinary project <sup>1</sup>	PJ	SS	4
933331	Procedures of plant production in organic agriculture I <sup>1</sup>	VX	WS	1
933332	Procedures of plant production in organic agriculture II <sup>1</sup>	SX	SS	1
933326	Case studies in organic grassland management <sup>1</sup>	SE	SS	2
953324	Ecological plant protection <sup>1</sup>	VU	WS	3
933302	Protection of natural resources by organic farming <sup>1,4</sup>	VS	WS	3

931300	Agricultural engineering in plant production - seminar <sup>1</sup>	SX	SS	4
931362	Production systems and atmospheric pollution 1,3	VO	SS	3
933333	Local knowledge and ethnobiology in organic farming - methods seminar <sup>1</sup>	VS	WS	3
933320	The global organic control and certification system <sup>1</sup>	VS	SS	3
933316	Organic farming and regional development <sup>1</sup>	PJ	SS	6
933334	Local knowledge and ethnobiology in organic farming - methods seminar <sup>1</sup>	SE	WS	3
933329	Agroecology, cultural ecology and ethnoecology - the interdisciplinary discourse in natural resource management <sup>1</sup>	SE	SS	3
958317	Organic fruit production and organic viticulture <sup>1</sup>	VX	WS	3
952333	Organic horticulture (vegetables and ornamentals) 1	VX	WS	3
933303	European regulatory framework for organic production <sup>1</sup>	VO	SS	3
933331	Procedures of plant production in organic agriculture I <sup>1</sup>	VX	WS	1
933332	Procedures of plant production in organic agriculture II <sup>1</sup>	SX	SS	1
933317	Organic farming in the public debate	VS	SS	3

#### 5b) Home University UHOH and Home University AU

For detailed information please refer to the homepage of UHOH, of AU and the homepage of the ELLS Master programme EUR-Organic.

#### 5c) Host University BOKU

For students who choose BOKU as their host university, a total of 16 elective ECTS credits from the list of elective courses within the SSP (W-5) must be completed. Courses from different specialisation semester packages can be combined.

Course Number	W-5 Soil Fertility, Water Management and Ecology	Course Type	Semester	ECTS Credits
	Course Title			
933308	Soil fertility and soil ecology in organic agriculture <sup>1</sup>	VU	SS	3
911300	Soil physics and chemistry <sup>1</sup>	VO	WS	3
911312	Rhizosphere processes and application to agriculture and soil protection <sup>1</sup>	VO	WS	3
815340	Lecture series in soil, water and atmosphere <sup>1</sup>	VO	WS	3
815320	Soil water management <sup>1</sup>	VO	WS	3
815321	Soil conservation and soil protection <sup>1</sup>	VU	WS	3

Course	W-5 Organic Agricultural Production	Course	Semester	ECTS
Number		Type		Credits
	Course Title			
933307	Crop production systems in organic agriculture <sup>1</sup>	VU	WS	3
933331	Procedures of plant production in organic agriculture I <sup>1</sup>	VX	WS	1
933332	Procedures of plant production in organic agriculture II <sup>1</sup>	SX	SS	1
932302	Animal production in organic agriculture <sup>2, 3</sup>	VO	WS	4

933330	Conversion to organic agriculture - interdisciplinary project <sup>2</sup>	PJ	SS	4
933326	Case studies in organic grassland management <sup>1</sup>	SE	SS	2
933302	Protection of natural resources by organic farming <sup>1,4</sup>	VS	WS	3
958317	Organic fruit production and organic viticulture <sup>1</sup>	VX	WS	3
952333	Organic horticulture (vegetables and ornamentals) 1	VX	WS	3
958318	Research project in viticulture and fruit science <sup>1,3</sup>	PJ	SS	4
953324	Ecological plant protection <sup>2</sup>	VU	WS	3
953335	Phytomedicine in pomology <sup>1</sup>	VU	SS	3
953306	Laboratory diagnosis of plant damages <sup>1</sup>	UE	WS	3
953336	Global change and pest management <sup>1</sup>	VO	WS	3
831302	Methods of measuring stress resistance in plants <sup>1</sup>	VU	SS	3
931322	Technology in organic agriculture <sup>1</sup>	VS	WS	3
931300	Agricultural engineering in plant production - seminar <sup>1</sup>	SX	SS	4
931305	Post-harvest technology <sup>1</sup>	VO	SS	3
931362	Production systems and atmospheric pollution 1,3	VO	SS	3
933303	European regulatory framework for organic production <sup>1</sup>	VO	SS	3
933312	Interdisciplinary excursion on organic agriculture <sup>1</sup>	EX	SS	2

Course Number	W-5 Local Knowledge and Ethnobiology	Course Type	Semester	ECTS Credits
	Course Title			
933333	Local knowledge and ethnobiology in organic farming - introduction <sup>1</sup>	VS	WS	3
933334	Local knowledge and ethnobiology in organic farming - methods seminar <sup>1</sup>	SE	WS	3
933329	Agroecology, cultural ecology and ethnoecology - the interdisciplinary discourse in natural resource management <sup>1</sup>	SE	SS	3
834321	Biocultural diversity in rural landscapes <sup>1</sup>	VS	SS	3
933337	Ethnobotany - introduction <sup>1</sup>	VO	SS	2
933338	Ethnobotany - research and application <sup>1</sup>	SE	SS	3

Course Number	W-5 Systems, Scenarios, Sociology and Ethics	Course Type	Semester	ECTS Credits
	Course Title			
933310	System analysis and scenario technique - methods and practises 1	SE	WS	5
933306	Ethics in organic agriculture <sup>1</sup>	SE	WS	3
731383	Principles of empirical research methods in the social sciences <sup>1</sup>	VS	SS	3
991301	Foresights - what future to expect? (Late lessons from early warnings) <sup>1</sup>	VO	WS	2
933316	Organic farming and regional development <sup>1</sup>	PJ	SS	6
735322	Global networking <sup>1</sup>	SE	SS	6
753318	Decision support systems <sup>1</sup>	SE	WS	3
733321	Organisational behaviour and gender issues <sup>1</sup>	VU	SS	3
933317	Organic farming in the public debate <sup>1</sup>	VS	SS	3

Course Number	W-5 Organic Agriculture in Subtropical and Tropical Environments	Course Type	Semester	ECTS Credits
	Course Title			
933319	Global case studies on organic agriculture1	VS	WS	1.5
933320	The global organic control and certification system1	VS	SS	3
933321	Development processes of organic agriculture in tropical and subtropical regions 1, 5	SE	SS	3
933323	Project: Organic farming in tropical and subtropical regions 1	PJ	SS	6
911324	Soil management in tropical and subtropical developing regions1	VO	SS	3
932324	Animal husbandry in tropical and subtropical regions 1	VO	SS	3
931312	Mechanization of agriculture in developing countries 1, 3	VS	SS	4
169317	Participatory methods in development research and practice1	SE	SS	3

## 5d) Host University UHOH, Host University AU, Host University WULS and Host University ISARA

For detailed information please refer to the homepage of UHOH, AU, WULS, ISARA and the homepage of the ELLS Master programme EUR-Organic: www.eur-organic.eu.

#### § 6 FREE ELECTIVES

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.

If BOKU is chosen as the host university, students have to successfully complete at least 12 ECTS credits of free elective courses. The Joint summer school can be chosen as a free elective course.

A list of recommended free electives at BOKU can be found on the website of the Academic Programme Committee for Agricultural Sciences (Fachstudienkommission Agrarwissenschaften).

#### §7 MASTER'S THESIS

A Master's Thesis is a paper on a scientific topic, to be written as part of a Master 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 Thesis, students demonstrate their ability to independently address a scientific topic, both thematically and methodologically (§ 51 [8] UG 2002 BGBI. I no. 81/2009).

The topic of a Master's Thesis has to 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 each individual student can be assessed (§ 81 [2] UG 2002 BGBI. I no. 81/2009).

Students are recommended to already start working on their Master's Thesis in the winter term and to also take courses in the summer term parallel to their Thesis work (The total amount of ECTS credits from courses in the winter and summer semester should be a minimum of 30m plus 30 ECTS credits for the Master's Thesis).

In the Master programme EUR-Organic the Master's Thesis must be written in English. This also applies for the defensio. Another language may only be chosen with a confirmation from the supervisor. The Master's Thesis has to be completed and defended at the host university and will be jointly supervised by a supervisor from the host university and one supervisor from the home university.

#### § 8 COMPLETION OF THE MASTER PROGRAMME

The Master programme EUR-Organic is completed when the student has passed all required modules and courses – at the home university as well as at BOKU as host university – and received a positive grade on the Master's Thesis and defensio.

At the respective home university (BOKU, UHOH or AU), courses (Basic Semester Packages) to an extent of at least 60 ECTS credits have to be completed successfully. For the graduation at BOKU, UHOH, AU, WULS or ISARA as host universities, courses (Specialisation Semester Package) to an extent of at least 30 ECTS credits as well as the Master's Thesis (30 ECTS credits) must be completed successfully.

Upon successful completion of the Master programme EUR-Organic students are awarded a double diploma: by the home and by the host university as well as a diploma supplement.

#### § 9 ACADEMIC DEGREE

At BOKU graduates of the Master programme in EUR-Organic are awarded the academic title Master of Science, abbreviated as MSc or M.Sc.

The academic title MSc (M.Sc.), if used, is to follow the bearer's name (§ 88 [2] UG 2002 BGBI. I no. 81/2009).

#### § 10 Examination Regulations

(1) For the Master programme EUR-Organic the respective examination regulations of the partner universities must be adhered to in addition to the BOKU examination regulations termed here.

Evaluation of course activities can take a variety of forms: written exams, oral exams, oral project presentations, reports, posters, laboratory and theoretical exercises all following the local institutional regulations. If a student fails in exams and changes between the home and host university before re-examination, the home and the host university is obliged to make

the re-examination possible for the student. The assessment of the courses is in accordance with the "European Credit Transfer System", where 60 ECTS credits represent one year of full study.

- (2) The Master programme EUR-Organic with BOKU as home university is completed successfully when the following requirements (corresponds to components in § 9 below) have been met:
  - positive completion of the compulsory courses of the Basic Semester Packages to the extent of 30 ECTS credits (§ 4),
  - positive completion of elective courses of the Basic Semester Packages (including the Joint Start-Up Module with 6 ECTS credits) to the extent of 30 ECTS credits (§ 5),
  - positive completion of the Specialisation Semester Packages at the respective host university UHOH, AU, WULS or ISARA (30 ECTS credits),
  - a positive grade on the Master's Thesis and the defensio at the host university (30 ECTS credits).
- (3) The Master programme EUR-Organic with BOKU as host university is completed successfully when the following requirements (corresponds to components in § 9 below) have been met:
  - positive completion of all Basic Semester Packages (including the Joint Start-up Module to the extent of minimum 5 ECTS credits) at the respective home university – UHOH or AU – to the extent of at least 60 ECTS credits (§ 4a/ § 4b),
  - positive completion of the elective courses within the Specialisation Semester
     Package to an extent of 16 ECTS credits (§ 5b)
  - positive completion of free electives to an extent of 12 ECTS credits (§ 6)
  - a positive grade on the Master's Thesis and the defence examination at BOKU (30 ECTS credits).
- (4) 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 are to be listed in § 4 under the respective course/module.
- (5) Student evaluation in modules: Module evaluation is based on the grades given the students in the individual courses that make up the module. The total evaluation for the module is calculated as the average of the grades of all module courses, weighted by ECTS credits. Average values of 5 or lower are rounded to the better (numerically lower) grade; values of over 5 are rounded to the worse (numerically higher) grade. If deemed necessary, the Dean of Students may require a module examination at his/her discretion.

- (6) The choice of the examination method is to be based on the type of course: Lectures are to 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 to be determined by the course instructor. For all other course types, the examination type is at the instructor's discretion.
- (7) The topic of the Master's Thesis is to be selected from one of the subjects of the Master's programme subjects.
- (8) After the successful completion of all the courses and examinations required in the Master programme, the completed Master's Thesis, after it has been given a positive evaluation by the Thesis supervisor, shall be publically presented by the student and defended in the form of an academic discussion (defensio). The committee has to consist of a committee chair and two additional university teachers with a *venia docendi* or equivalent qualification. The student's total performance (Thesis and defence examination) will be assigned one final overall grade. Both Thesis and defensio must receive a passing grade for the student to complete the programme. The written evaluations stating the grounds for the Thesis grade and the defensio grade are included in calculating the final overall grade and are documented separately.

The final overall grade is calculated as follows:

- Master's Thesis: 70%
- Defensio (incl. presentation): 30%
- (9) A final overall evaluation of the student's performance on the entire programme is to be assigned. A "passed" final overall evaluation means that each individual component of the programme was completed successfully. If individual components of the programme have not been successfully completed, the final overall 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).

#### § 11 Transitional Regulations

For students who change to the new Master's curriculum, already completed exams on courses of the former Master's curricula are acknowledged based on the equivalence list. The equivalence list can be found on the homepage of the Academic Programme Committee for Agricultural Sciences (*Fachstudienkommission Agrarwissenschaften*).

#### § 12 EFFECTIVE DATE

This curriculum takes effect on October 1<sup>st</sup>, 2018.

#### ANNEX A TYPES OF COURSES

#### 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.

#### **Compulsory Internship Seminar (PP)**

The compulsory internship seminar is a class in which students deal independently with topics related to their internship placements, 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.

#### Field Trips (EX)

Field trips are courses in which students have the opportunity to experience relevant fields of study in real-life practical application, to deepen their knowledge of the respective subject. Field trips can be taken to destinations both in Austria and abroad.

#### Master's Thesis Seminar (MA)

Master's Thesis seminars are seminars intended to provide students with academic support during the thesis writing process.

#### Mixed-Type Courses:

Mixed-type courses combine the characteristics of the courses named above (with the exception of project-type courses). Integration of different course-type elements improved the didactic value of these courses.

#### **Project Course (PJ)**

Project courses are characterized by problem-based learning. Under instruction, students work (preferably in small groups) on case studies, applying appropriate scientific methods.

Lecture /Seminar (VS) Lecture/Lab (VU) Lecture/Field Trip (VX) Seminar/Field Trip (SX) Lab/Seminar (US) Lab/Field Trip (UX)