



## ***Curriculum of the Master Degree Programme***

**“Livestock Sciences”**

**Code: 066 456**

**University of Natural Resources  
and Life Sciences, Vienna**

**Center for International Relations**

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.

## Table of Contents

§ 1	Description of Qualification.....	3
§ 2	Format of the Master Degree Programme .....	3
	(1) Compulsory courses (P – “Pflichtfächer”) – 35 ECTS points .....	3
	(2) Elective courses (W – “Wahlfächer”) – 35 ECTS points.....	4
	(3) Free elective courses (FW – “Freie Wahlfächer”) – 20 ECTS points .....	4
	(4) Thesis for the Master degree – 30 ECTS points .....	4
§ 3	Academic Qualification .....	4
§ 4	Types of Courses .....	4
	(1) Lectures (VO): .....	4
	(2) Practical exercises (UE): .....	4
	(3) Seminars (SE): .....	4
	(4) Excursions (EX): .....	4
	(5) Project courses (PJ): .....	4
	(6) Combinations (VU, VX, VZ, VY, VS, UX, UY, SX) .....	5
§ 5	Timetable of Courses .....	5
	Used Abbreviations: .....	5
	(1) Compulsory Courses (P – “Pflichtfächer”) .....	5
	(2) Elective Courses (W – “Wahlfächer”) – 35 ECTS.....	6
§ 6	Thesis for the Master Degree .....	7
§ 7	Graduation Requirements .....	8
§ 8	Admission to the Master Degree Programme .....	8
§ 9	Commencement .....	9
§ 10	Transitional Regulations .....	9

### Impressum

Center for International Relations  
University of Natural Resources and Life Sciences, Vienna  
Peter Jordan Strasse 82a, 1190 Vienna  
Austria, Europe  
Phone:(+43-1)-47654-2600  
Fax:(+43-1)-47654-2606  
e-mail: zib(at)mail.boku.ac.at  
<http://www.boku.ac.at/zib>

Published and printed with support of ERASMUS–OM-funds

Issued in February, 2010

**Curriculum of the Master degree programme  
“Livestock Sciences”**

At the University of Natural Resources and Life Sciences, Vienna

*As at October 1<sup>st</sup>, 2008*

**§ 1 Description of Qualification**

The Master degree programme Livestock Sciences at the University of Natural Resources and Life Sciences in Vienna imparts a deepening and extension of scientific and academic vocational education on the foundation of an agrarian or other professionally related Bachelor degree programme.

Building on the knowledge of Agricultural Sciences, a sound natural scientific basis as well as social sciences and economic sciences are imparted. Students of this Master degree programme acquire knowledge and abilities in the field of animal husbandry sciences. Interdisciplinary courses deepen the understanding, knowledge, abilities and varieties of methods of the students in the field of livestock breeding, feeding and husbandry. Free elective courses (“freie Wahlfächer”) allow students to enlarge their knowledge and variety of methods in the Animal Sciences and to link gained knowledge with other agrarian fields of study such as Applied Plant Sciences, Agricultural Economy, Food Production and Distribution or Organic Farming.

In the course of the Master degree programme Livestock Sciences students acquire the following key competences in respect of their orientation towards professional fields of graduates: analytical, critical and individual thinking; goal-orientated problem solving abilities; applying gained knowledge in accordance to the respective socio-economic and ecologic environment (linked thinking and acting); social competences such as teamwork, communication abilities and an increased sense of responsibility.

Professional knowledge connected with social competence enable activities in various fields of work in private as well as public organisations and on local, national or international level; for instance in the fields of production, sales and supply of services (industrial co-operations, agrarian businesses, commercial producer companionships, breeding organisations), preliminary and downstream areas (trade, industry or other organisations in the field of agricultural economies and agricultural and food industries), counselling and teaching (Chambers for Agriculture, freelance counselling, agrarian schools and education), agrarian administrative office work and politics (provincial governments, ministries, EU-institutions, lobbies, controlling and certifying) as well as research and development (universities, research centres, industry).

**§ 2 Format of the Master Degree Programme**

The Master degree programme in Livestock Sciences comprises four semesters and is made up of 120 ECTS points. Of the total number of credits 35 ECTS points are compulsory courses (according to § 2 (1)), 35 ECTS points are elective courses (according to §2 (2)), and 20 ECTS points are free elective courses. 30 ECTS points are assigned to the thesis for the Master degree.

**(1) Compulsory courses (P – “Pflichtfächer”) – 35 ECTS points**

P-1 Basics in Livestock Sciences	31,5 ECTS points
P-2 Seminar for master degree students and excursion	3,5 ECTS points

## **(2) Elective courses (W – “Wahlfächer”) – 35 ECTS points**

Courses to an extent of 35 ECTS have to be chosen and completed successfully from W-1 to W-6.

## **(3) Free elective courses (FW – “Freie Wahlfächer”) – 20 ECTS points**

Courses to an extent of 20 ECTS have to be completed. These courses may be taken from the entire range of courses of all accredited national and international universities. It is recommended to choose and complete courses from the Master degree programme Livestock Sciences and other agrarian Master degree programmes at the University of Natural Resources and Life Sciences, Vienna, for the free elective courses.

## **(4) Thesis for the Master degree – 30 ECTS points**

The graduation paper is a scientific piece of work which serves the evidence of the students' ability to work on a scientific subject autonomously and in a way that is justifiable regarding content as well as methodology. (§ 51 (1) Z. 8 UG 2002).

## **§ 3 Academic Qualification**

According to § 54 (1) of the university law of 2002 the Master degree programme Livestock Sciences is an engineering degree. In accordance with this classification of engineering degrees, graduates of the Master degree programme Livestock Sciences will be awarded the academic qualification “Diplom-Ingenieur of technical sciences”, shortened to “Dipl-Ing.” or “DI”.

## **§ 4 Types of Courses**

Courses within this degree are defined as follows:

### **(1) Lectures (VO):**

Courses in which portions of an academic discipline and the methods involved are didactically presented.

### **(2) Practical exercises (UE):**

Practical exercises are courses which are in professional connection to a lecture. They serve to apply specific practical abilities and skills presented theoretically during the lectures. Furthermore, these practical exercises also serve the acquisition of specific practical knowledge.

### **(3) Seminars (SE):**

Seminars are courses which assist in the development of academic abilities. They serve to acquire knowledge autonomously and deepen learned course content and scientific discussion.

### **(4) Excursions (EX):**

Excursions are courses held in Austria and abroad and focus on aspects of the Master degree programme which cannot be imparted at the University of Natural Resources and Life Science itself.

### **(5) Project courses (PJ):**

These are characterised by problem-based learning. Within a certain topic, students work, primarily in small groups with assistance, through case studies involving the definition of a problem through realisation of the project to the production of written work.

## **(6) Combinations (VU, VX, VZ, VY, VS, UX, UY, SX)**

Courses in which aspects of courses referred to in (1) to (4) are combined didactically:

Lectures with practical exercises (VU)

Lectures with excursions (VX)

Lectures with seminars and excursions (VSX = VY)

Lectures with practical exercises and excursions (VUX = VZ)

Lectures with seminars (VS)

Exercises with excursions (UX)

Exercises with seminars and excursion (USX = UY)

Seminars with excursion (SX)

**(7)** If necessary courses can also be held out of the University of Natural Resources and Life Science, Vienna.

## **§ 5 Timetable of Courses<sup>1</sup>**

### **Used Abbreviations:**

SST = weekly semester hours

ECTS = European Credit Transfer System points

WS = Winter Semester

SS = Summer Semester

T2 = 2-year rotation 2 = Courses which take place on even academic years (every two years), for example 2008/09 and 2010/11.

T1 = 2-year rotation 1 = Courses which take place on uneven academic years (every two years), for example 2009 and 2011.

### **(1) Compulsory Courses (P – “Pflichtfächer”)**

Courses to an extent of 35 ECTS points have to be completed successfully from P-1 and P-2.

<b>Number</b>	<b>Type</b>	<b>Name</b>	<b>Semester</b>	<b>SST</b>	<b>ECTS</b>
<b>P-1 Basics in Livestock Sciences</b>					
751.306	VO	Advanced Animal Nutrition	WS	4.0	6.0
932.306	VO	Advanced Animal Breeding	SS	4.0	6.0
932.307	VU	Advanced Animal Husbandry	SS	4.0	6.0
932.308	SE	Animal Production Systems	SS	4.0	6.0

<sup>1</sup> A more detailed description of all courses, including objective of the course, course contents, name of lecturer, prerequisites, recommended reading, teaching methods, assessment methods and language of instruction, is found in BOKUonline: <https://online.boku.ac.at>

932.309	VU	Biostatistics in Livestock Sciences	SS	5.0	7.5
---------	----	-------------------------------------	----	-----	-----

### P-2 Master Degree Seminar and Excursion

930.300	SE	Master's Thesis Seminar	WS or SS	2.0	2.0
932.310	EX	Excursion Animal Production	SS	1.5	1.5

### (2) Elective Courses (W – “Wahlfächer”) – 35 ECTS

Courses to an extent of 35 ECTS points have to be chosen and completed successfully from W-1 to W-6.

<i>Number</i>	<i>Type</i>	<i>Name</i>	<i>Semester</i>	<i>SST</i>	<i>ECTS</i>
---------------	-------------	-------------	-----------------	------------	-------------

### W-1 Animal Breeding

932.301	VO	Molecular Animal Genetics	WS	3.0	4.5
932.311	VO	Quantitative Animal Genetics	WS	4.0	6.0
932.312	VO	Genetics of Diversity	SS	2.0	3.0
932.313	VO	Design of Breeding Programs	WS	3.0	4.5
932.314	VO	Estimation of Breeding Values in Cattle	T2, SS	2.0	3.0
932.315	VO	Reproduction Technology in Livestock	T2, SS	2.0	3.0

### W-2 Animal Nutrition

751.303	VO	Advanced Ruminant Nutrition	WS	2.0	3.0
751.304	VO	Advanced Nutrition of Monogastric Livestock	SS	2.0	3.0
751.305	VO	Nutrition of Pet Animals	WS	2.0	3.0
751.307	VO	Feed Science and Technology	WS	4.0	6.0
751.309	UE	Practical Course (Lab) in Animal Nutrition	WS or SS	4.0	6.0
751.310	VO	Metabolism Physiology	SS	2.0	3.0

### W-3 Animal Husbandry

932.303	VS	Animal Health Care in Organic Agriculture	SS	2.0	3.0
932.316	VS	Advanced Livestock Ethology	WS	2.0	3.0
932.317	VS	Animal Welfare Assessment	WS	2.0	3.0
932.318	VO	Animal Hygiene - Ruminants	WS	2.0	3.0
932.319	VO	Animal Hygiene - Pigs	SS	2.0	3.0
932.320	VU	Animal Physiology: Diagnosis and Clinic	WS	2.0	3.0
932.321	VO	Prevention of Cruelty to Livestock	WS	2.0	3.0

<i>Number</i>	<i>Type</i>	<i>Name</i>	<i>Semester</i>	<i>SST</i>	<i>ECTS</i>
<b>W-4 Additional Courses</b>					
835.304	VU	Mathematical Modelling in Agricultural Sciences	SS	3.0	4.5
932.304	VX	Horse Husbandry	SS	2.0	3.0
932.305	VX	Beekeeping	SS	2.0	3.0
932.322	VO	Small Ruminant Science	SS	2.0	3.0
932.323	VO	Poultry Science	WS	2.0	3.0
932.324	VO	Animal Husbandry in Tropical and Subtropical Regions	SS	2.0	3.0
932.326	VO	Alpine Farming	SS	2.0	3.0
951.317	VS	Grassland Management	SS	3.0	4.5
951.318	VO	Manuring and Nutrient Fluxes in Grassland	WS	2.0	3.0

<b>W-5 Animal Products</b>					
751.302	VO	Technology of Meat Production	SS	3.0	3.0
751.308	VO	Milk Technology	SS	2.0	2.0
751.314	VO	Quality Assessment of Animal Products	WS	2.0	3.0
751.315	UE	Quality Assessment of Animal Products	WS or SS	2.0	3.0
754.301	UE	Practical Work in Dairying	SS	3.0	4.5
754.303	VO	Food Microbiology	WS	3.0	4.5
755.302	VU	Milk Analysis	SS	1.0	1.5

<b>W-6 Agricultural Engineering</b>					
931.301	VO	Mechanisation on Grassland	WS	2.0	3.0
931.302	VO	Climate Engineering	T2, WS	2.0	3.0
931.305	VO	Post-Harvest Technology	T2, SS	2.0	3.0
931.309	VY	Seminar on Animal Husbandry Systems	SS	3.0	4.5
931.314	VX	GPS-Based Agriculture	SS	2.0	3.0

## **§ 6 Thesis for the Master Degree**

(1) The graduation paper is a scientific piece of work which serves the evidence of the students ability to work on a scientific subject autonomously and in a way that is justifiable regarding content as well as methodology (§ 51 (1) Z. 8 UG 2002). The thesis for the Master degree is an integral part of the Master degree programme Livestock Sciences. 30 ECTS points are granted for the thesis for the Master degree.

(2) The scientific subject of the graduation paper has to be chosen from a subject relevant and related to the Master degree programme Livestock Sciences.

(3) The supervision and grading of the candidate's work is incumbent upon the university professor who has assigned the chosen subject for the graduation paper.

(4) The thesis for the Master degree has to be presented and defended in a public expert talk before evaluation by the supervisor. The result of this presentation has to be integrated in the grading of the Master degree thesis.

## **§ 7 Graduation Requirements**

(1) The Master degree programme Livestock Sciences is concluded upon the successful completion of the following requirements:

- positive completion of all required compulsory courses to an extent of 35 ECTS points (according to § 2 (1) and § 5 (1)),
- positive completion of all required elective courses to an extent of 35 ECTS points (according to § 2 (2) and § 5 (2)),
- positive completion of free elective courses to an extent of 20 ECTS points,
- positive evaluation of the thesis for the Master degree and its public defence.

(2) Evaluation takes place as course exams. Course examination may be oral and / or written, as defined by the lecturer. Students are granted the right to request a different method of course examination. This can only be done in cooperation with the lecturer and by stating justified reasons.

(3) The course examination has to be in accordance with the type of course: lectures are concluded either orally or in a written, unless they are not evaluated accompanying the lecture. Courses of the types SE, VS, VSX, SX and USX can be concluded by handing in a self-composed, written seminar paper. The amount of this seminar paper has to be defined by the lecturer of the course. With all other types of courses the method of course examination will be defined individually by the lecturer.

(4) The concluded graduation paper has to be presented and defended in a public expert talk. This presentation and defence has to be organised by the supervisor of the thesis. At least one additional university lecturer with respective professional competence has to be nominated. This person also has to participate in the subsequent expert talk. The candidate has the right to suggest this person. This summoned university lecturer has to be informed on the topic of the graduation paper in advance.

(5) Courses held in foreign languages:

Students are explicitly advised to complete study-specific courses held in foreign languages to an extent of at least 6 ECTS points.

## **§ 8 Admission to the Master Degree Programme**

(1) The Master degree programme Livestock Sciences requires the Bachelor degree programme Agricultural Sciences at the University of Natural Resources and Life Sciences, Vienna. Graduates of the Bachelor degree programme Agricultural Sciences at the University of Natural Resources and Life Sciences, Vienna, are therefore admitted to the Master degree programme Livestock Sciences.

(2) Graduates of the Bachelor degree programme Equine Sciences at the University of Veterinary Medicine, Vienna, and the University of Natural Resources and Life Sciences, Vienna, are admitted to the Master degree programme Livestock Sciences.

(3) Graduates of Bachelor degree programmes taken from all professionally adequate fields and equal international studies are admitted to the Master degree programme Livestock Sciences. It has to be stated that knowledge in the fields of natural scientific foundation, socio-economic basics and agrarian, horticultural and market gardening production is required for graduates of other Bachelor degree programmes.

## **§ 9 Commencement**

The Master degree programme Livestock Sciences comes in force on October 1, 2004.

## **§ 10 Transitional Regulations**

(1) Regular students, who are permitted to follow the diploma degree programme “Landwirtschaft” according to their degree course scheme on the basis of the UniStG from 1. 10. 2000, may continue to follow their degree programme.

From the effective date of the new degree programmes for Bachelor and Master degrees, students are permitted to complete their degree within the legal duration period, with the addition of one extra semester, according to § 80 b (2) UniStG. If the degree is not completed within this period, then the student will be required to follow the Bachelor degree programme for the remainder of his / her studies (An admission to the Master degree programme can only take place after the positive completion of a Bachelor degree programme, see § 3).

(2) For students, who continue their degree according to a diploma degree programme there is an equivalence list which shows which courses or groups of courses from the range of the Master degree programme of the respective diploma degree programme are equivalent to the Master degree programme. Courses of diploma degree programmes, which are no longer offered or no longer assessed have to be completed according to the equivalence list of the Master degree programme.

Equal footing in this equivalence list do not need any further confirmation. Credentials, which were issued for diploma degree programmes after the effective date of the new degree programmes for Master degree programmes count for diploma degree programmes without any further confirmation.

(3) After admission to the Master degree programme according to § 12 (7) of the Bachelor degree programme Agro Sciences (acknowledgements after switching from the diploma degree programme “Landwirtschaft”) all successfully completed exams for the third part of the diploma degree programme “Landwirtschaft” according to UniStG for subjects of the chosen Master degree programme will be accredited. This does only apply to subjects which are covered and equal; otherwise they can be claimed as free elective courses for the chosen Master degree programme.