



CORVINUS
UNIVERSITY of
B U D A P E S T

Faculty of Horticultural Science

MASTER OF SCIENCE IN HORTICULTURE

Detailed programme description

Academic Year 2015-2016

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HISTORY

This is one of the oldest high schools specialised for horticultural training in Europe. It had been established in 1853 by Dr. Ferenc Entz, a medical doctor. The School for Practical Gardening became famous, enjoyed the support of the government and in 1894 it was raised to the rank of Royal School of Horticulture, with three years of training. Since the 19th century, the level of training at the institution has been continuously developing, along with its structure and name.

EDUCATIONAL PROFILE

The aim of the education is to provide excellent skills in each branches of sustainable horticulture, based on up-to-date knowledge in natural sciences. The graduating students are specialists, familiar with the foreign and Hungarian horticulture, their latest scientific results and practical skills. A special role is given to the ecological approaches, quality aspects and integrated technologies.

We have a unique department structure with focus on special horticultural areas.

Departments:

- Department Biometrics and Agricultural Informatics
- Department of Botany
- Department of Ecological and Sustainable Production Systems
- Department of Entomology
- Department of Floriculture and Dendrology
- Department of Horticultural Economics
- Department of Genetics and Plant Breeding
- Department of Medicinal and Aromatic Plants
- Department of Plant Physiology and Plant Biochemistry
- Department of Plant Pathology
- Department of Pomology
- Department of Soil Science and Water Management
- Department of Vegetable and Mushroom Growing
- Technical Department
- Institute of Viticulture and Oenology
 - Department of Oenology
 - Department of Viticulture

Research activities at the faculty are carried out in co-operation with Hungarian and foreign partners in the following main topics:

- Genetic and chemical diversity of important horticultural species, reservation and utilization of valuable genotypes;
- Development and maintenance of biological resources, evaluation of cultivars, molecular technologies supporting breeding and varieties rights;
- Studies on plant characteristics determining biotic and abiotic resistance, their markers, detection of the protection mechanisms in tolerant genotypes, development of resistant cultivars;
- Study of the Hungarian ecological potential, modelling climatic changes, effects for the horticulture, methods for overcoming them, optimalization of ecological factors, ecosystem and nature protection;
- Development of sustainable and ecological technologies in horticultural protection, post- harvest methods, quality assurance, quality control of horticultural products;
- Biologically effective constituents of plants and horticultural products, their role in human nutrition and methods for increasing their accumulation

A full degree programme (4 semesters, 120 credits) (with offer of multiple degree)

Horticulture is the most dynamic and colourful sector of agriculture. The tasks of horticultural engineers have been broadening and consist not only of cultivation and primary processing of plants but also includes management, consulting, organizing activity, quality assurance, marketing and services. After graduation, students will be able organising and leading the production and marketing of horticultural enterprises of different size and character, carry out the tasks of managers, counsellors, engineers, take part in research and education.

To fulfil these requirements, the master programme offers knowledge in horticultural and natural sciences, interdisciplinary aspects, an up-to-date basic knowledge and practical skills. Beside the special horticultural modules (ornamentals, fruits, medicinal plants, vegetables, grape and wine), the study programme includes genetics, physiology, ecology, biometrics and related subjects.

During the study, the students have theoretical lectures, laboratory and farm practices, field visits. There is a quite large freedom of the students in choosing courses according to the personal interest. During preparation of the thesis, they learn experimental design, research skills and biometrical data analysis, thus, a possible PhD study is also grounded. The study courses are completed by a 4 weeks' farm practice period.

The programme offers courses in the topics of breeding and biotechnology, plant and soil biochemistry, crop management, economics, crop ecophysiology and additional subjects. The curriculum consists of lectures, laboratory and farm practices. Students may choose a thesis topic – after the first semester – connected to one of the 5 horticultural sectors (fruits, vegetables, medicinal plants, ornamentals and viticulture) or their interdisciplinary aspects. The thesis work is based on individual research work and have to be defended at the end of the 4th semester.

According to the Joint Degree agreement, the students of this programme – when fulfilling the requirements of partial foreign education – may get the master degree also of the partner universities (TUM – Munich, BOKU – Vienna, UNIBO – Bologna, Humboldt – Berlin, Free University of Bolzano – Bozen, Institute Supérieur des Sciences agronomiques, agroalimentaries, France, Centre International d'études Supérieures en Sciences, France)

Requirements:

- academic BSc/MSc or equivalent degree in agricultural/life or related sciences,
- English language (reading, writing, speaking, listening) knowledge.

Candidates are expected to have basic knowledge (demonstrated by the transcript) in life sciences, natural resources, agriculture, economics. Based on the credits of the applicants obtained in former graduation, additional maximum 24 credits from missing disciplines may be required during the study.

Candidates from countries where English is not the language of instruction need to have an internationally accepted English exam: TOEFL iBT min. 65, PBT 500, CBT 200 or IELTS at least a score of 5,5 or Cambridge CAE Certificate). These can be replaced by documentation of at least 2 years closed higher education study in an English programme.

Each application will be evaluated by the Credit Transfer Committee. The Credit Transfer Committee forms its decision in 30 days after receiving the necessary documents, but at latest till the 31st of May. The process is free of charge.

Tuition fee: **EUR 1800 / semester** (2 semesters must be paid in advance)

It includes the expenses of education and practices, using libraries, computers and internet at the Faculty rooms; all the advantages of a Student Card. The tuition fee does not include local travel, board, insurance and accommodation.

The application procedure is **100 EURO** (non refundable but deduced from 2nd year's fee).

Milestones of the study

Semesters: Mid September – Mid December

Exams: Mid December – End January

Firm practice: 4 weeks after the 2nd semester

Final exam: June of second year

Application package includes:

- application form
- diploma of previous studies (official English translation)
- detailed demonstration of former studies
(English diploma supplement or official English copy of learning documents demonstrating the obtained credits and skills)
- motivation letter in English;
- copy of passport with photo;
- documents demonstrating English skills.

Schedules of the selection procedure (the up-to date schedules will be announced in the website):

- Deadline for sending the application package: 30 April each year
- Notification on admission/rejection/sending of the Contract for Tuition (e-mail): End of April
- Deadline for sending back the Contract for Tuition and Payment of fee for the first 2 semester: End of May
- Confirmation of the registration and possible start of visa application: Early July
- Start of courses: beginning of September

Documents should be posted to the following address:

Corvinus University of Budapest Faculty of Horticultural Sciences Dean's Office
H-1518 Budapest P.O. Box 53. Hungary

Further information: zsuzsa.kothencz@uni-corvinus.hu

Application form, up-to date information on the programme are found at our website: <http://hort.uni-corvinus.hu>

SAMPLE CURRICULUM AND COMPULSORY SUBJECTS

Course					
CODE	TITLE	INSTRUCTOR	CONTACT HOURS/ WEEK	CREDIT	REQUIREMENT
Fall Semester (Number 1)					
3SZ22NAK12M	Biological and fitotechnical resources of viticulture	Tamás Deák	2+1	4	Exam
3ME13NAK37M	Up-to date technologies of medicinal plant production	Zsuzsanna Pluhár	2+1	4	Exam
3MN24NAK06M	Plant physiology and plant molecular biology	István Papp	2+1	3	Exam
3NT20NAK08M	Geobotany and plant ecology	Mária Höhn	2+1	3	Exam
3GN18NAK06M	Molecular genetics and gene technology of plants	Attila Hegedüs	2+1	3	Exam
3ZT14NAK40M	Forcing in soilless systems	Katalin Slezák	2+1	4	Exam
3DD02NBK73S	Thesis preparation (I) at Specialized classes of floriculture	Péter Honfi	0+4	6	Term mark
3ME13NBK38S	Spec. in medicinal plant production	Szilvia Sárosi			
3GY15NBK45S	Specialization in Fruit Growing	Magdolna Tóth			
3SZ22NBK33S	Spec. in Viticulture and Enology	Gábor Zanathy			
3ZT14NBK42S	Specialization in Vegetable Growing	Katalin Ertsey-Peregi			
Compulsory courses together:			12+10	27	6E1TM
Compulsory choice courses:			2+1	3	Exam/Term mark
ALTOGETHER:			14+11	30	7E1TM
Spring Semester (Number 2)					
3GY15NBV26M	Up-to date methods in fruit growing	László Szalay	2+1	4	Exam
3MI09NAK13M	Horticultural information systems	Márta Gaál	1+2	3	Exam
3ZT14NAK41M	Biology and cultivation of fungi	András Geösel	2+1	4	Exam
3DD02NAK10M	Propagation biology of plants	Károly Hrotkó	2+1	3	Exam
3ME13NBV22M	Special plant compounds in nutrition and therapy	Szilvia Sárosi	2+1	4	Exam
3DD02NBK32S	Thesis preparation (II) at Specialized classes of floriculture	Péter Honfi	0+4	6	Term mark
3ME13NBK28S	Spec. in medicinal plant production	Szilvia Sárosi			
3GY15NBK32S	Specialization in Fruit Growing	Magdolna Tóth			
3SZ22NBK20S	Spec. in Viticulture and Enology	Gábor Zanathy			
3ZT14NBK26S	Specialization in Vegetable Growing	Zoltán Papp			
Compulsory courses together:			9+10	24	5E1TM
Compulsory choice courses:			2+1	4	Exam/Term mark
Free choice courses:			2+1	2	Exam/Term mark
ALTOGETHER:			13+12	30	7E1TM

Course						
CODE	TITLE	INSTRUCTOR	CONTACT HOURS/ WEEK	CREDIT	REQUIREMENT	
Fall Semester (Number 3)						
3NK06NAK03M	Biological bases of plant pathology	László Palkovics	2+1	3	Exam	
3GY15NAK19M	Evaluation of fruit cultivars	Magdolna Tóth	2+1	4	Exam	
3MT17NAK18M	Special technical knowledge	Zoltán Láng	1+2	3	Exam	
3RT07NAK04M	Biological bases of entomology	Béla Péntes	2+1	3	Exam	
3MI09NAK15M	Decision support systems of extension service	Márta Gaál	1+1	3	Exam	
3ME13NAK08M	Production ecosystems and forms of their regulation	Jenő Bernáth	2+1	3	Exam	
1BT33NAK01M	Winemaking	Ildikó Magyar	2+1	4	Exam	
3DD02NBK47S	Thesis preparation (III) at Specialized classes of floriculture	Péter Honfi	0+4	6	Term mark	
3ME13NBK33S	Spec. in medicinal plant production	Szilvia Sárosi				
3GY15NBK37S	Specialization in Fruit Growing	Magdolna Tóth				
3SZ22NBK29S	Spec. in Viticulture and Enology	Gábor Zanathy				
3ZT14NBK28S	Specialization in Vegetable Growing	Noémi Kappel				
Compulsory courses together:			12+12	29	7E1TM	
Free choice courses:			2+1	2	Exam/Term mark	
ALTOGETHER:			14+13	31	8E1TM	

Spring Semester (Number 4)						
3MM11NAK29M	Agrarian law and law in economic life	Zoltán Kator	3+0	3	Exam	
3MM11NAK01M	Agromanagement	Gábor Gyarmati	3+0	3	Exam	
3GY15NAK18M	History of horticulture and agriculture	György Végvári	2+0	2	Exam	
3DD02NAK64M	Modern systems in production and commerce of ornamentals	Andrea Tillyné Mándy	2+1	4	Exam	
3KT23NAK11M	Natural resources and nature protection	György Végvári	3+0	3	Exam	
3DD02NBK49S	Thesis preparation (IV) at Specialized classes of floriculture	Péter Honfi	0+6	12	Term mark	
3ME13NBK35S	Spec. in medicinal plant production	Szilvia Sárosi				
3GY15NBK39S	Specialization in Fruit Growing	Magdolna Tóth				
3SZ22NBK31S	Spec. in Viticulture and Enology	Gábor Zanathy				
3ZT14NBK30S	Specialization in Vegetable Growing	Noémi Kappel				
Compulsory courses together:			13+7	27	5E1TM	
Free choice courses:			2+1	2	Exam/Term mark	
ALTOGETHER:			15+8	29	6E1TM	

CHOICE COURSES

SPECIAL PRODUCTION TECHNOLOGIES

At least one course is compulsory during the study. Others can be fulfilled as free choice courses.

CODE	TITLE	INSTRUCTOR	CONTACT HOURS/ WEEK	CREDIT	REQUIREMENT	SEMESTER
3DD02NBV27M	Horticultural dendrology	Magdolna Sütöriné Diószegi	2+1	3	Exam	Spring
3GY15NBV25M	Physiology of temperate zone fruit plants	László Szalay	2+1	4	Exam	Fall
3SZ22NBV18M	Quality oriented viticulture, production-development	György Dénes Bisztray	2+1	4	Exam	Spring
3ME13NBV23M	Cultivation of special medicinal plants and spices	Krisztina Szabó	2+1	4	Exam	Fall
3ZT14NBV43M	Production of propagation material of vegetables	Katalin Ertsey-Peregi	2+1	4	Exam	Spring

SPECIAL PROFESSIONAL KNOWLEDGE

At least 3 credits are compulsory during the study. Others can be fulfilled as free choice courses.

CODE	TITLE	INSTRUCTOR	CONTACT HOURS/WEEK	CREDIT	REQUIREMENT	SEMESTER
3GN18NAK02M	Applied plant biotechnology and resistance breeding	Andrzej Pedryc	1+1	2	K	Spring
3RT07NAK08M	Biological plant protection	József Fail	1+1	2	K	Spring
3ME13NAK16M	Biologically active substances	Éva Zámboriné Németh	2+1	3	K	Fall
3MI09NCS05M	Experimental design and evaluation	Márta Ladányi	0+2	2	gy.j.	Fall

SPECIALIZATION

Specialized classes of floriculture

Instructor: **Dr. Péter Honfi**

Specialization in medicinal plant production

Instructor: **Dr. Jenő Bernáth**

Specialization in Fruit Growing

Instructor: **Dr. Magdolna Tóth**

Specialization in Viticulture and Enology

Instructor: **Dr. Gábor Zanathy**

Specialization in Vegetable Growing

Instructor: **Dr. István Terbe**

DESCRIPTION OF COURSES

The detailed description and requirements of all courses are available at the following website: <http://horticulturalscience.uni-corvinus.hu/index.php?id=49482>

Please note that all course descriptions are subject to change and It is always the course syllabus handed out in the first class of the given course that is valid for the given semester!