



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 2014-2015

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GENERAL INFORMATION

Faculty of Horticultural Sciences
website: www.kerteszettudomany.uni-corvinus.hu

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.

Department of

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

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

MSC IN HORTICULTURE

- 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 Superieures 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:

www.kerteszettudomany.uni-corvinus.hu/

LIST OF COURSES – SAMPLE CURRICULUM

Winter Semester (Number 1)		
Course title	Contact hours/ week	credit
Biological resources and phytotechnics of viticulture	2+1	4
Up-to date technologies of medicinal plant production	2+1	4
Plant physiology and plant molecular biology	2+1	3
Geobotany and plant ecology	2+1	3
Propagation biology of plants	2+1	3
Forcing in soilless systems	2+1	4
Thesis preparation (I)	0+4	6

Spring Semester (Number 2)		
Course title	Contact hours/ week	credit
Evaluation of fruit cultivars	2+1	4
Information systems in horticulture	1+2	3
Biology and cultivation of fungi	2+1	4
Molecular genetics and gene technology of plants	2+1	3
Special plant compounds in nutrition and therapy	2+1	4
Thesis preparation (II)	0+4	6

Winter Semester (Number 3)		
Course title	Contact hours/ week	credit
Biological bases of plant pathology	2+1	3
Up-to date methods in fruit growing	2+1	4
Modern systems in production and commerce of ornamentals	2+1	4
Special technical knowledge	1+2	3
Biological bases of entomology	2+1	3
Consultation systems in horticulture	1+1	3
Production ecosystems and forms of their regulation	2+1	3
Thesis preparation (III)	0+4	6

Spring Semester (Number 4)		
Course title	Contact hours/ week	credit
Agrarian law and law in economic life	3+0	3
Agro management	3+0	3
Wine production	2+1	4
History of horticulture and agriculture	2+0	2
Natural resources and nature protection	3+0	3
Thesis preparation (IV)	0+6	12

COURSES ACCORDING TO SPECIALISATION

„Special production technologies“

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

Title	Contact hours/ week	Credit
Horticultural dendrology	2+1	3
Physiology of temperate zone fruit plants	2+1	4
Quality oriented viticulture, production-development	2+1	4
Cultivation of special medicinal plants and spices	2+1	4
Production of propagation material of vegetables	2+1	4

“Special professional knowledge“

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

Title	Contact hours/ week	Credit
Applied plant biotechnology and resistance breeding	1+1	2
Biological plant protection	1+1	2
Bio effective materials in horticultural species	2+1	3
Experimental design and evaluation	0+2	2

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=14052>

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!