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CHAPTER 1
UNIVERSITY OF DEBRECEN

Date of Foundation: 1912 Hungarian Royal University of Sciences
2000 University of Debrecen

Legal predecessors: Debrecen University of Agricultural Sciences
Debrecen Medical University
Wargha István College of Education, Hajdúböszörmény
Kossuth Lajos University of Arts and Sciences

Legal status of the University of Debrecen: state university

Founder of the University of Debrecen: Hungarian State Parliament

Supervisory body of the University of Debrecen: Ministry of Education

Accreditation dates and statute numbers:
Debrecen Medical University: 5 July 1996, OAB/1996/6/II/6
University of Debrecen: 3 October 2012, MAB/2012/8/VI/2.

Number of Faculties at the University of Debrecen: 14
- Faculty of Law
- Faculty of Medicine
- Faculty of Humanities
- Faculty of Health
- Faculty of Dentistry
- Faculty of Economics and Business (before 1 August 2014 the predecessors of the Faculty were the Faculty of Applied Economics and Rural Development and the Faculty of Economics and Business Administration)
- Faculty of Child and Adult Education
- Faculty of Pharmacy
- Faculty of Informatics
- Faculty of Agricultural and Food Sciences and Environmental Management (before 1 March 2010 the name of the Faculty was the Faculty of Agriculture)
- Faculty of Engineering
- Faculty of Public Health
- Faculty of Sciences and Technology
- Faculty of Music

Number of accredited programmes at the University of Debrecen: 73 degree programmes with the pre-Bologna 5-year-system university education, 41 supplementary degree programmes offering transfer-degree continuation of studies towards the university degree (MSc), 50 degree programmes with the pre-Bologna 3-year-system college education, 67 BSc and 78 MSc programmes according to the Bologna system, 5 unified one-cycle linear training programmes, 35 specializations offering post-secondary vocational certificates and 159 vocational programmes.

Number of students at the University of Debrecen: 28812
according to time of studies: 22888 full-time students, 5899 part-time students having corresponding classes and 25 part-time students having evening classes or distance education according to education level: 944 students at post-secondary vocational level, 17406 students at BSc, 3112 students at MSc, 21 students at college level, 190 students at university level (MSc), 5320 students at one-cycle linear training, 954 students at vocational programmes, 865 students at PhD, 3741 foreign students.

Full time teachers of the University of Debrecen: 1421
194 full college/university professors and 1055 lecturers with a PhD.
Thank you for your interest in our university with a great past and in our agricultural higher education with approximately 150 year old traditions.

The University of Debrecen is one of the institutions offering a wide range of courses and research activities in Hungary. As one of the most significant think tanks in the country and the knowledge centre of the region, we seek to provide unprecedented opportunities for our students to gain state-of-the-art knowledge and to carry out significant activities.

With excellent infrastructure and high level education, the Faculty of Agricultural and Food Sciences and Environmental Management ensures excellent facilities for its students. In addition to gaining in-depth modern experience, a wide range of opportunities are available to perform professional and scientific activities beyond the scope of academic studies. After obtaining their certificates in higher education vocational training and BSc diploma courses, our students acquire a thorough practical knowledge, they can continue their studies in MSc training and then the best ones in Ph.D. training.

We firmly believe that the variety of trainings and courses we offer are attractive to many students who choose the Faculty of Agricultural and Food Sciences and Environmental Management for academic education.
I wish you every success in your studies and hope to meet you personally in the near future.

Prof. Dr. István Komlósi
Dean
CHAPTER 3

HISTORY OF THE FACULTY

History of the Faculty

Agricultural higher education in Debrecen started in 1868 with the foundation of the National Higher Economic School of Debrecen. This date marks the beginning of agricultural higher education in Debrecen and East Hungary. Between 1876 and 1906 the institute's official name was Secondary Economic School. Then it was run under the name Hungarian Royal Academy of Economy until 1944. Between 1944 and 1949 our institute went on with its work as the Debrecen Department of the Agricultural Sciences at the Hungarian Agricultural University. In 1953 tuition began again at the Agricultural Academy. Training of professionals reached University level between 1962 and 1970 at the Agricultural College. Between 1970 and 1999 the institute got its university title and as the Agricultural University of Debrecen it operated with two branch faculties (Szarvas, earlier Hódmezővásárhely, later Mezőtúr).

The University of Debrecen was established with 5 university-, three college faculties and three research institutes on 1st January, 2000. In 2002 the Faculty of Agriculture and Rural Development was established, and by 2006, the university had comprised 15 faculties.
Mission of the Faculty
The mission of the Faculty of Agricultural and Food Sciences and Environmental Management is the multifunctional development of agriculture and rural development in the North Great Plain Region. Accordingly, the institution deals with regional, national and international research and consultancy, as well as the primary goal of training professionals within the Center for Agricultural and Applied Economic Sciences. Our spectrum of educational, training and research areas have broadened, in compliance with the demands of sustainable agricultural and rural development. The interconnection between the branches of science is strengthening, which is desirable both in the long and the short terms. Our aspiration can be used as a motto, as well: "diverse training and mobility".

Our Faculty provides all the personal and infrastructural conditions of linear training. The structure of our educational programs is flexible and provides students with diverse course contents. Our accredited laboratories provide us with the opportunity to impact sectors of the economy in such a way that these can meet the ever-changing demands on markets. Our purpose is to create high-standard student and research laboratories and to provide the conditions for special high-value machines and measurement processes.

The doctoral schools and doctoral programs operating at the Faculty have an ever-widening base - providing talented young people with a suitable environment for scientific development.
CHAPTER 5

THE ORGANIZATIONAL STRUCTURE OF THE UNIVERSITY

RECTOR OF THE UNIVERSITY OF DEBRECEN

Rector: Zoltán Szilvássy M.D., Ph.D, D.Sc.
Address: 4032 Debrecen, Egyetem tér 1.
Phone: +36-52-412-060
Phone/Fax: +36-52-416-490
E-mail: rector@unideb.hu

FACULTY OF AGRICULTURAL AND FOOD SCIENCES AND ENVIRONMENTAL MANAGEMENT

Dean: Prof. Dr. habil. István Komlósi
Address: 4032 Debrecen, Bőszörményi út 138.
Phone: +36-52/508-412; 88438
Fax: +36-52/486-292
E-mail: komlosi@agr.unideb.hu

Vice Dean for Educational Affairs: Dr. habil. Csaba Juhász
Address: 4032 Debrecen, Bőszörményi út 138.
Phone: +36-52/508-454 88454
Fax: +36-52/508-454 88454
E-mail: juhasz@agr.unideb.hu

Vice Dean of Scientific Affairs: Dr. László Stündl
Address: 4032 Debrecen, Bőszörményi út 138.
Phone: +36-52/508-444 88226
Fax: +36-52/486-292
E-mail: stundl@agr.unideb.hu

DEAN’S OFFICE
Head of Dean’s Office: Dr. Mrs. Julianna Fricz Mocsári
Address: 4032 Debrecen, Bőszörményi út 138.
Phone/Fax: +36-52/508-412, +36-52/508-489
E-mail: friczj@agr.unideb.hu

REGISTRAR’S OFFICE
Registrar: Dr. Mrs. István Kovács
Address: 4032 Debrecen, Bőszörményi út 138.
Phone/Fax: +36-52/508-409, +36-52/508-317
E-mail: ktunde@agr.unideb.hu

Officers
Mrs. Gizella Kerekes Guthy
Mrs. Mónika Bátori Pintye
Ms. Zsuzsanna Házi
László Lévai
CHAPTER 6
THE DEPARTMENTS OF THE FACULTY

INSTITUTE OF AGRICULTURAL CHEMISTRY AND SOIL SCIENCE
Böszörményi út 138., Debrecen, 4032

Full Professor, Head of Institute
János Kátai C.Sc.

Associate Professor
Ms. Andrea Balláné Kovács Ph.D.
Ms. Mária Micskeiné Csubák C.Sc.
Imre Vágó C.Sc.

Assistant Professor
Ms. Rita Erdei Kremper Ph.D.
Ms. Sándorné Kincses Ph.D.
Zsolt Sándor Ph.D.

Secretary
Ms. Gizella Szász

Research Assistant
Ms. Magdolna Tállai Ph.D.

INSTITUTE OF ANIMAL SCIENCE, BIOTECHNOLOGY AND NATURE CONSERVATION
Böszörményi út 138., Debrecen, 4032

Full Professor, Head of Institute
István Komlósi D.Sc.

Department of Animal Husbandry
Böszörményi út 138., Debrecen, 4032

Full Professor, Dean, Head of Department
István Komlósi D.Sc.

Professor Emeritus
Imre Bodó D.Sc.
Sándor Mihók C.Sc.

Professor
János Gundel C.Sc.

Technical Assistant
Ms. Beáta Babka
Ms. Gabriella Gulyás
Attila Sztrik

Associate Professor
Béla Béri C.Sc.
Károly Magyar C.Sc.
Ms. Gabriella Novotniné Dankó Ph.D.
József Prokisch Ph.D.
László Stüdl Ph.D.
CHAPTER 6

Department of Nature Conservation, Zoology and Game Management
Böszörményi út 138., Debrecen, 4032

Head of Department
Lajos Juhász Ph.D.

Assistant Research Fellow
László Kövér Ph.D.

Professor
Károly Rédei D.Sc.

Technical Assistant
Norbert Tóth

Assistant Professor
Péter Gyüre Ph.D.
Lajos Kozák Ph.D.
László Szendrei Ph.D.

Department of Animal Nutrition and Food Biotechnology
Böszörményi út 138., Debrecen, 4032

Head of Department
László Babinszky Ph.D.

Associate Professor
Csaba Szabó Ph.D.

Senior Lecturer
Ms. Judit Gálné Remenyik Ph.D.

Animal Genetics Laboratory
Böszörményi út 138., Debrecen, 4032

Head of Department
András Jávor C.Sc.

Professor
András Kovács D.Sc.

Assistant Lecturer
Ms. Zsófia Rózsáné Várszegi Ph.D.

Senior Research Fellow
Ms. Szilvia Kusza Ph.D.
INSTITUTE OF FOOD SCIENCE
Böszörményi út 138., Debrecen, 4032

Full Professor, Head of Institute  Béla Kovács Ph.D.
Professor                  János Csapó D.Sc.
Technical Assistant      Ms. Éva Bacskainé Bódi
                        Ms. Andrea Tóthné Bogárdi
Associate Professor      Ms. Erzsébet Karaffa Ph.D.
                        Péter Sipos Ph.D.
Assistant Lecturer        Ms. Diána Ungai Ph.D.
Assistant Professor      Ms. Nikolett Czipa Ph.D.
                        Ferenc Peles Ph.D.
Secretary                 Ms. Tünde Simon

INSTITUTE FOR LAND UTILISATION, TECHNOLOGY AND REGIONAL DEVELOPMENT
Böszörményi út 138., Debrecen, 4032

Head of Institute          János Nagy D.Sc.
Professor                Béla Baranyi D.Sc.
                        Gyula Horváth D.Sc.
Associate Professor      Zoltán Hagymássy Ph.D.
                        Endre Harsányi Ph.D.
                        Tamás Rátomy Ph.D.
Assistant Professor      Imre Andorkó Ph.D.
                        Ms. Adrienn Széles Ph.D.
                        András Vántus Ph.D.
Senior Research Fellow   Attila Csaba Dobos Ph.D.
Secretary                 Ms. Zsuzsanna Dorogi
                        Ms. Sándorné Széles

INSTITUTE OF HORTICULTURE
Böszörményi út 138., Debrecen, 4032

Head of Institute          Imre Holb D.Sc.
Assistant Research Fellow  Ferenc Abonyi
Associate Professor       Ms. Mária Takácsné Hájos C.Sc.
<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant Lecturer</td>
<td>Ádám Csihon</td>
</tr>
<tr>
<td></td>
<td>Péter Dremák Ph.D.</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>Nándor Rakonczás Ph.D.</td>
</tr>
<tr>
<td>Secretary</td>
<td>Ms. Andrea Gátiné Laskai</td>
</tr>
</tbody>
</table>

**INSTITUTE OF CROP SCIENCES**  
Bőszörményi út 138., Debrecen, 4032

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of the Institute</td>
<td>Péter Pepó D.Sc.</td>
</tr>
</tbody>
</table>

**Department of Landscape Ecology**  
Bőszörményi út 138., Debrecen, 4032

<table>
<thead>
<tr>
<th>Position</th>
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</thead>
<tbody>
<tr>
<td>Head of Institute</td>
<td>Péter Pepó D.Sc.</td>
</tr>
<tr>
<td>Professor</td>
<td>Mihály Sárvári D.Sc.</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>József Csajbók Ph.D.</td>
</tr>
<tr>
<td>Assistant Lecturer</td>
<td>Ms. Adrienn Novák Ph.D.</td>
</tr>
<tr>
<td></td>
<td>Ms. Enikő Vári Ph.D.</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>Lajos Fülöp Dóka Ph.D.</td>
</tr>
<tr>
<td></td>
<td>Ms. Erika Kutasy Ph.D.</td>
</tr>
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<td></td>
<td>András Szabó Ph.D.</td>
</tr>
<tr>
<td>Secretary</td>
<td>Ms. Gyöngyi Kovács</td>
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<td>Ms. Endréné Szendrei</td>
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</tbody>
</table>

**Department of Plant Biotechnology**  
Bőszörményi út 138., Debrecen, 4032

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
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</thead>
<tbody>
<tr>
<td>Professor</td>
<td>Miklós Gábor Fári D.Sc.</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Ms. Szilvia Veres Ph.D.</td>
</tr>
<tr>
<td>Assistant Lecturer</td>
<td>Ms. Szilvia Kovács</td>
</tr>
<tr>
<td></td>
<td>Ms. Brigitta Tóth Ph.D.</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>Ms. Éva Domokosné Szabolcsy Ph.D.</td>
</tr>
<tr>
<td></td>
<td>Ms. Zsuzsanna Lisztes-Szabó Ph.D.</td>
</tr>
<tr>
<td></td>
<td>Péter Makleit Ph.D.</td>
</tr>
</tbody>
</table>
THE DEPARTMENTS OF THE FACULTY

Genetics Group
Böszörményi út 138., Debrecen, 4032

Head
Pál Pepó C.Sc.

INSTITUTE OF PLANT PROTECTION
Böszörményi út 138., Debrecen, 4032

Head of Institute
György János Kővics C.Sc.
Associate Professor
András Bozsik C.Sc.
László Radócz C.Sc.
Assistant Professor
Antal Nagy Ph.D.
Senior Research Fellow
Gábor Tarcali Ph.D.
Secretary
Ms. Tünde Szabóné Asbolt

AGRICULTURAL LABORATORY CENTRE
Böszörményi út 138., Debrecen, 4032

Assistant Research Fellow
Ms. Nóra Őri
Technical Assistant
Ms. Nóra Bessenyei Tarpay
Csaba Kiss
Ms. Hajnalka Pákozdy
Ms. Istvánne Sőrés
Gábor Tóth M.D.
Associate Professor
Ms. Tünde Pusztahelyi Ph.D.

INSTITUTE OF WATER AND ENVIRONMENTAL MANAGEMENT
Böszörményi út 138., Debrecen, 4032

Deputy Head
Csaba Juhász Ph.D.
Head of Institute
János Tamás D.Sc.
Assistant Research Fellow
Péter Riczu
Ms. Nikolett Szöllősi
Professor
Lajos Blaskó D.Sc.
Technical Assistant
Ms. Kamilla Berényi-Katona
Ms. Katalin Bőkfi
Associate Professor
Ms. Elza Kovács Ph.D.
Assistant Lecturer
Ms. Tünde Fórián Ph.D.
### FACULTY OF ECONOMICS AND BUSINESS

Bőszörményi út 138., Debrecen, 4032

<table>
<thead>
<tr>
<th>Rank</th>
<th>Name</th>
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<tbody>
<tr>
<td>Assistant Research Fellow</td>
<td>Zoltán Győri Ph.D.</td>
</tr>
<tr>
<td>Professor</td>
<td>Csaba Berde C.Sc.</td>
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<td></td>
<td>Miklós Herdon Ph.D.</td>
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<tr>
<td></td>
<td>András Nábrádi MBA, C.Sc.</td>
</tr>
<tr>
<td></td>
<td>Géza Nagy C.Sc.</td>
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<tr>
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<td>József Popp D.Sc.</td>
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<td>Zoltán Szakály C.Sc.</td>
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<tr>
<td>College Professor</td>
<td>Ferenc Kalmár Ph.D.</td>
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<tr>
<td>Assistant Professor</td>
<td>Edit Gizella Szűcs Ph.D.</td>
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<tr>
<td>Associate Professor</td>
<td>Péter Balogh Ph.D.</td>
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<td></td>
<td>Zsolt Csapó Ph.D.</td>
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<td></td>
<td>Wiwczaroski Dr. Troy B. Ph.D.</td>
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<tr>
<td></td>
<td>János Felföldi Ph.D.</td>
</tr>
<tr>
<td></td>
<td>István Grigorszky Ph.D.</td>
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<tr>
<td>Assistant Lecturer</td>
<td>Ms. Csilla Juhász Ph.D.</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>Levente Karaffa Ph.D.</td>
</tr>
<tr>
<td></td>
<td>István Kuti C.Sc.</td>
</tr>
<tr>
<td></td>
<td>László Lakatos Ph.D.</td>
</tr>
<tr>
<td></td>
<td>Ilona Nagyné Polyák Ph.D.</td>
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<td>Miklós Pakurár Ph.D.</td>
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<td>Károly Pető C.Sc.</td>
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<td>István Szűcs Ph.D.</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>Ms. Mónika Harangi-Rákos</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>Ms. Andrea Bauerné Gáthy Ph.D.</td>
</tr>
</tbody>
</table>
THE DEPARTMENTS OF THE FACULTY

Zoltán Csiki M.D., Ph.D.
Ms. Zita Hajdu Ph.D.
Ms. Judit Katonáné Kovács Ph.D.
Sándor Kovács Ph.D.
Ms. Ildikó Tar Ph.D.

Research Fellow
Ferenc Buzás Ph.D.
## UNIVERSITY CALENDAR

### Academic calendar
2015/2016

<table>
<thead>
<tr>
<th>Events</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening Ceremony</td>
<td>September 6 (Sunday)</td>
</tr>
<tr>
<td>Enrolment week</td>
<td>September 7 - 11</td>
</tr>
<tr>
<td>Study period for not final year students</td>
<td>September 14 - December 18 (14 weeks)</td>
</tr>
<tr>
<td>Study period for final year students</td>
<td>September 14 - November 13 (9 weeks)</td>
</tr>
<tr>
<td>Deadline for thesis submission</td>
<td>October 30</td>
</tr>
<tr>
<td>Examination period for final year students</td>
<td>November 16 - December 4 (3 weeks)</td>
</tr>
<tr>
<td>Examination period for not final year students</td>
<td>December 21 – February 5 (7 weeks)</td>
</tr>
<tr>
<td>Defending of the thesis</td>
<td>November 30 – December 1</td>
</tr>
<tr>
<td>Final exam</td>
<td>December 10 - 11</td>
</tr>
<tr>
<td>Graduation ceremony</td>
<td>December 19</td>
</tr>
<tr>
<td>Enrolment week</td>
<td>February 8 - 12</td>
</tr>
<tr>
<td>Study period for not final year students</td>
<td>February 15 – May 20 (14 weeks)</td>
</tr>
<tr>
<td>Study period for final year students</td>
<td>February 15 - April 22 (10 weeks)</td>
</tr>
<tr>
<td>Deadline of the thesis</td>
<td>April 22</td>
</tr>
<tr>
<td>Examination period for final year students</td>
<td>April 25 – May 20 (4 weeks)</td>
</tr>
<tr>
<td>Examination period for not final year students</td>
<td>May 23 - July 8 (7 weeks)</td>
</tr>
<tr>
<td>Defending of the thesis</td>
<td>May 26 - 27</td>
</tr>
<tr>
<td>Final exam</td>
<td>June 6 - 7</td>
</tr>
<tr>
<td>Graduation ceremony</td>
<td>June 18</td>
</tr>
</tbody>
</table>
AGRICULTURE ENGINEERING MSc PROGRAMME

About the course:
The MSc in Agricultural Engineering is designed to develop your undergraduate knowledge and improve it through application and research. The field of Agricultural Engineering is broad and the programme reflects this diversity, with emphasis on Applied Biochemistry, Applied Plant Physiology, Applied Genetics and Biotechnology, Applied Soil Science, Production Physiology, Nutrient Management are the key research areas of the Faculty. Throughout your stay at Debrecen University, which is the second largest university in Hungary, with 30000 students, as a postgraduate student of Agricultural Engineering, you will have a personal academic tutor to guide you through your studies and to meet your individual goals and interests. We offer you a 4 week field practice in summer.

Requirements:
Application requirements: BSc degree or higher in Agricultural Science. BSc degree or higher in a biologically-related degree. Other approved accreditation or professional qualification. Upper-intermediate English language certificate.

Length of the Study programme: Two year full-time taught programme plus dissertation. presently no part-time options are available.

Number of ECTS credits: 120

The course consists of lectures and seminars. Attendance at lectures is recommended, but not compulsory. Participation at practice classes is compulsory. A student must attend the practice classes and may not miss more than three times during the semester. In case a student does so, the subject will not be signed and the student must repeat the course. A student can’t make up a practice class with another group. The attendance at practice classes will be recorded by the practice leader. Being late is equivalent with an absence. In case of further absences, a medical certificate needs to be presented. Missed practices should be made up for at a later date, being discussed with the tutor. Active participation is evaluated by the teacher in every class. If a student’s behavior or conduct doesn’t meet the requirements of active participation, the teacher may evaluate his/her participation as an absence because of the lack of active participation in class.

The knowledge of the students will be tested several times depending on the class types during the entire course. The training ends in a Final Exam (FE) of the whole semester material and a minimum of four FE dates will be set during the examination period. Unsuccessful students may repeat.

During the semester there are two tests: the mid-term test in the 8th week and the end-term test in the 15th week. Students have to sit for the tests.

Tests are evaluated according to the followings:
Score Grade
0-59 fail (1)
60-69 pass (2)
70-79 satisfactory (3)
80-89 good (4)
90-100 excellent (5)

absence for any reason counts as 0%.

If the score of any test is below 60, the student can take a retake test in conformity with the EDUCATION AND EXAMINATION RULES AND REGULATIONS.

An offered grade: It may be offered for the students if the average of the mid-term and end-term tests is at least good (4). The offered grade is the average of them.

Careers:
CHAPTER 8
Postgraduates may progress to a PhD or find employment in agricultural science research, crop science research, lecturing, consultancy or other science based sectors of crop production, animal husbandry, and agriculture or food industry. Our faculty has a good relationship with agricultural enterprises of the region.
<table>
<thead>
<tr>
<th>Neptun code</th>
<th>Course name</th>
<th>Credit</th>
<th>Exam</th>
<th>ESE</th>
<th>Prerequisites of taking the subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTMAME047</td>
<td>Academic language skill I.</td>
<td>1</td>
<td>S</td>
<td>2</td>
<td>None</td>
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<tr>
<td>MTMAME029</td>
<td>Alternative land use</td>
<td>2</td>
<td>S</td>
<td>1</td>
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<tr>
<td>MTMAME010</td>
<td>Animal husbandry I.</td>
<td>3</td>
<td>S</td>
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<td>MTMAME008</td>
<td>Animal nutrition</td>
<td>2</td>
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<tr>
<td>MTMAME003</td>
<td>Applied biochemistry</td>
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</tr>
<tr>
<td>MTMAME001</td>
<td>Applied plant genetics and biotechnology</td>
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<td>P</td>
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<tr>
<td>MTMAME002</td>
<td>Applied plant physiology</td>
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<tr>
<td>MTMAME004</td>
<td>Applied soil sciences</td>
<td>3</td>
<td>P</td>
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<tr>
<td>MTMAME028</td>
<td>Feedstuffs and feed processing</td>
<td>3</td>
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<td>MTMAME012</td>
<td>Horticulture</td>
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<td>MTMAME009</td>
<td>Integrated crop production I.</td>
<td>3</td>
<td>P</td>
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</table>

**Chapter 9: Curriculam of the Full Time Programme**

<table>
<thead>
<tr>
<th>L. year</th>
<th>1st semester</th>
<th>2nd semester</th>
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<tr>
<td>Credit</td>
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<td>Credit</td>
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<tr>
<td>1 year</td>
<td>2</td>
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The table outlines the curriculum of the full time programme, detailing subjects, their Neptun codes, and credits, along with prerequisites and exam details.
<table>
<thead>
<tr>
<th>Neptun code</th>
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<th>2nd semester</th>
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<tbody>
<tr>
<td>MTMAME046</td>
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<td>MTMAME045</td>
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<td>MTMAME007</td>
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<td>MTMAME006</td>
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<td>ESE</td>
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<td>MTMAME026</td>
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<td>MTMAME005</td>
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<td>MTMAME048</td>
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<td>MTMAME011</td>
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<td>MTMAME027</td>
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<table>
<thead>
<tr>
<th>Subjects</th>
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<tbody>
<tr>
<td>Intercultural communication</td>
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<td>Intercultural communication (lecture)</td>
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<tr>
<td>Irrigated farming</td>
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<tr>
<td>Plant nutrition management</td>
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</tr>
<tr>
<td>Population genetics</td>
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</tr>
<tr>
<td>Production physiology</td>
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<tr>
<td>Professional language skill I.</td>
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<tr>
<td>Soil cultivation and land development</td>
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<tr>
<td>Soil ecology</td>
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<tr>
<td>Thesis project work I.</td>
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<td>Subjects</td>
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<tr>
<td>Academic language skill II.</td>
<td>MTMAME049</td>
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<tr>
<td>Alternative crop production strategies</td>
<td>MTMAME030</td>
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<tr>
<td>Animal husbandry II.</td>
<td>MTMAME014</td>
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<td>Animal husbandry III.</td>
<td>MTMAME022</td>
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<td>Animal keeping technologies</td>
<td>MTMAME031</td>
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<td>Communication</td>
<td>MTMAME020</td>
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<tr>
<td>Environmental and landscape management</td>
<td>MTMAME015</td>
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<td>Integrated crop production II.</td>
<td>MTMAME013</td>
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<td>Marketing</td>
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<td>Professional language skills II</td>
<td>MTMM0017</td>
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<tr>
<td>Product quality, crop processing</td>
<td>MTMM0050</td>
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<td>Quality assurance</td>
<td>MTMM0024</td>
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<td>Regional farming</td>
<td>MTMM0032</td>
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<td>Research methodology</td>
<td>MTMM0019</td>
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<td>Sectoral economy L</td>
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<td>Sectoral economy II</td>
<td>MTMM0023</td>
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### Required Elective Courses

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<th>Subjects</th>
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<tbody>
<tr>
<td>Goats breeding</td>
<td>MTMAME034</td>
<td>L S P Exam</td>
<td>L S P Exam</td>
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<td>Medical and spice crops</td>
<td>MTMAME035</td>
<td>L S P Exam</td>
<td>L S P Exam</td>
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<td>Subjects</td>
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<td>1&lt;sup&gt;st&lt;/sup&gt; semester</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; semester</td>
<td>Prerequisites of taking the subject</td>
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<td></td>
<td>L</td>
<td>S</td>
<td>P</td>
<td>Exam</td>
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<tr>
<td>Animal breeding</td>
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<td>Biometrics</td>
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<td>ESE</td>
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<tr>
<td>Etology</td>
<td>MTMAME039</td>
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<td>ESE</td>
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<tr>
<td>EU knowledge</td>
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<td>ESE</td>
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<td>Extension in crop</td>
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<td>production</td>
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<td>Integrated plant</td>
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<td>protection</td>
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<td>Milk and meat processing</td>
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<td>Organic farming</td>
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<td>Project management</td>
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</tr>
</tbody>
</table>
Agricultural Laboratory Centre

Subject: INTERCULTURAL COMMUNICATION
Year, Semester: 1st year/1st semester
Lecture: 2

Requirements

Short course description:
This course introduces students to the problems of culture and interculturality, as well as cultural and ethnic conflict areas and stereotypes to be avoided, when conducting professional business activities. Additionally, there is the question of identity and the problem of national identity vs. otherness. Other areas of study include globalization, non-verbal communication and business etiquette.

Required reading materials

*James Neuliep: Intercultural Communication: A Contextual Approach*

*Milton J. Bennett: Basic Concepts of Intercultural Communication: Selected Readings*

*Bridging the Cultural Gap: A Practical Guide to International Business Communication*

*William B. Gudykunst and Young Yun Kim: Communicating with Strangers: Approach to Intercultural Business Communication*

*Lillian H. Chaney and Jeanette S. Martin: Intercultural Communication: A Reader*

*Linda Beamer and Iris Varner: Intercultural Communication in the Global Workplace*

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Subject: INTERCULTURAL COMMUNICATION (LECTURE)
Year, Semester: 1st year/1st semester
Lecture: 2

Requirements

Short course description:
To help them to be aware of the national and international cultures and values around, the students learn about cultural stereotypes and realities, national reputations in business and otherwise, as well as cultural values and the respect for them. The effects of globalization and localization, and the conflicts arising thereof are also taken into consideration. Multiculturalism, its successes and failures. Cultural identity and global conflicts, ethics and related conflicts are also discussed.
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Required reading materials

*James Neuliep: Intercultural Communication: A Contextual Approach*

*Milton J. Bennett: Basic Concepts of Intercultural Communication: Selected Readings*

*Bridging the Cultural Gap: A Practical Guide to International Business Communication*

*William B. Gudykunst and Young Yun Kim: Communicating with Strangers: Approach to Intercultural Business Communication*

*Lillian H. Chaney and Jeanette S. Martin: Intercultural Communication: A Reader*

*Linda Beamer and Iris Varner: Intercultural Communication in the Global Workplace*

Department of Animal Husbandry

Subject: **ANIMAL NUTRITION**
Year, Semester: 1st year/1st semester
Lecture: 1
Practical: 1

Requirements

Short description course:
Feedings possibilities to modify of composition, quality and safety of meat of several animal species as animal origin foods
Feedings possibilities to modify of composition, quality and safety of eggs of several poultry species as animal origin foods
Feedings possibilities to modify of composition, quality and safety of milk of several animal species as animal origin foods
Processing of feeds in the interest to increasing efficiency of nutrient transformation
Nutrigenomics as a new method in the nutrition

Required reading materials

*Fekete, S. Gy. (Ed.): Veterinary Nutrition and Dietetics. Foundation for the Hungarian Veterinary science*

*W. G. Pond: Basic Animal Nutrition and Feeding*

Subject: **PRODUCTION PHYSIOLOGY**
Year, Semester: 1st year/1st semester
Lecture: 1
**Requirements**

Short course description:

**Required reading materials**

*Biotechnology in Animal Husbandry (I. kötet)*  
*Biotechnology in Animal Husbandry (II. kötet)*  
*William O Reece: Physiology of Domestic Animals.*  
Lippincott Willims and Wilkins, ISBN: 0683072404  
*P. L. Senger: Pathways to Pregnancy and parturition*  
*Cronjé, P. B.: Ruminant Physiology*  

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**Department of Landscape Ecology**

Subject: **APPLIED BIOCHEMISTRY**  
Year, Semester: 1st year/1st semester  
Lecture: 1  
Practical: 1

**Requirements**

Short course description:

**Required reading materials**

*Marschner, H.: Mineral nutrition of Higher Plants*  
*Squires, E. J.: Applied Animal Endocrinology*  
*Christopher K. Mathews, K.E. van Holde: Biochemistry*  
*Baldi, P.: DNA Microarrays and gene expression*  
*K. Mengel and E. A. Kirkby: Principles of plant nutrition*  
Requirements

Short course description:
During the time of course students receive scientific information about the topic of plant physiology: photosynthesis, respiration, water management, minerals assimilation, nitrogen metabolism, bioregulators, seed germination, plant development, flowering, fruit formation and ageing. Both of basic knowledge and practical application will received by the instructor during the course. Moreover students learn about the influence of environmental factors to the vital processes and stress physiology also.

Required reading materials

Lincoln Taiz and Eduardo Zeiger: Plant Physiology fourth edition ONLINE
M. Pessarakli: Handbook of Plant and Crop Stress
Marcel Dekker, 1999.
Marschner, H.: Mineral nutrition of Higher Plants

Requirements

Short course description:
Macro, mezo and micro elements fertilization. Correlation between crop productivity and the level of supply.
Role of different tillage systems in nutrition management. Protecting of soil fertility in conventional systems. Principles and methods of nutrient balance. Principles and methods of field experiments

Required reading materials

J. Antal: Crop production I-II.
Crop production booklets I-VIII. (university books)
P. Pepő-M. Sárvári: Basic knowledge of crop production (university book)
1999.
Caroly Fry: The impact of climate change: The world's greatest challange in the twenty-first century
Faculty of Economics and Business

Subject: PROFESSIONAL LANGUAGE SKILL I.
Year, Semester: 1st year/1st semester
Lecture: 2

Requirements

Short course description:
This course introduces students to the norms and expectations of professional presentation styles in the following areas: company introduction, product description and sales, convincing an audience to accept change and how to give a presentation in a team. Rhetorical methods, use of technologies and argumentation systems, as well as logic, are incorporated into the course.

Required reading materials

Rodgers, Drew: English for International Negotiations
Wiwczaroski, Troy B.: Writing and Professional Communication

Genetics Group

Subject: APPLIED PLANT GENETICS AND BIOTECHNOLOGY
Year, Semester: 1st year/1st semester
Lecture: 2
Practical: 1

Requirements

Short course description:

The main objective of the course is to provide a theoretical and practical introduction to the scientific principles of plant genetics, biotechnology. Applied plant molecular genetics and biotechnology including the hormonal and developmental regulation of gene expression, in vitro and tissue culture techniques, and transformation strategies. Marker-assisted breeding, risk assessment for Genetically Modified Organisms, Genetically Modified Organism certification protocols and Arabidopsis genetics. Genetic transformation in crop, Genetic transformation by particle bombardment In vitro regeneration and genetic transformation Microprojectile-mediated Agrobacterium-mediated transformation. Regeneration and genetic transformation. In vitro and recombinant DNA technologies for the improvement of grain, in vitro morphogenesis, biotic and abiotic stress tolerance, genomics, nitrogen fixation and utilization, nutritional improvement, and biodiversity in vitro regeneration and genetic transformation expression and stability of transgenes modification of traits in almost all the important crops area. Molecular players in nitrogen use efficiency, DNA markers and molecular plant breeding, genetics of plant defense signaling and genetic engineering of crop plant. Describe important techniques in molecular breeding. Genetics of molecular markers in plants. Molecular breeding for drought tolerance. Plant diseases and
CHAPTER 10
resistance. Tolerance to abiotic stresses. Tissue culture and other in vitro techniques.

Required reading materials

Bernard R. Glick and Jack J. Pasternak: Molecular biotechnology: principles and applications of recombinant DNA
Bruce Alberts et al: Molecular biology of the cell
Frederick M. Ausubel et al: Current protocols in molecular biology

Subject: POPULATION GENETICS
Year, Semester: 1st year/1st semester
Lecture: 1
Practical: 1

Requirements

Short course description:
This course will serve as an introduction into the field of population genetics. Of primary importance is an understanding Mendel’s laws and other genetic principals as they affect entire populations of organisms. Moreover, this class will focus on how to estimate population parameters that are important descriptors of genetic variation. These concepts will necessarily be based on genetic models and require a quantitative approach to genetics. Overall, the aim of this class is to enable you to apply insights gained from classic and modern genetic techniques to understand how genetic variation is produced, maintained, and distributed within and among populations.

Required reading materials

John H. Gillespie: Population genetics
Philip W. Hendrick: Genetic of population
Daniel L. Hartl: A Primer of Population Genetics
Institute of Agricultural Chemistry and Soil Science

Subject: APPLIED SOIL SCIENCES
Year, Semester: 1st year/1st semester
Lecture: 2
Practical: 1

Requirements

Short course description:
First of all varied functions of soil have been introduced. Physical and chemical features of soil and correlations among them have been summarized. Biological processes in soil have been presented. Other important points of the course are soil biodiversity, effects of ecological parameters and soil features on soil fertility. Favourable and unfavourable influences of applied technological methods from the point of environmental protection have been emphasized. Nutrient management in the precision agriculture, soil degradation processes and possibilities of their improving, soil information system, principles of soil protection strategy in EU are important topics of the course.

Required reading materials

Prentice-Hall, 1996.
Paul, A. D.: Soil microbiology, Ecology and Biochemistry
Stolp, H.: Microbial ecology: organisms, habitats, activities, Cambridge studies in ecology
1997.

Subject: SOIL ECOLOGY
Year, Semester: 1st year/1st semester
Lecture: 1
Practical: 1

Requirements

Short course description:
CHAPTER 10

Required reading materials

Prentice-Hall, 1996.

Academic Press USA, 1996.

*Killham, K.: Soil Ecology*
1994.

*Lavelle P.-Spain, V.A.: Soil Ecology*

*Paul, A. D.: Soil microbiology, Ecology and Biochemistry*


*Filep Gy.: Soil Chemistry, processes and constituents.*

Agricultural Laboratory Centre

Subject: **ACADEMIC LANGUAGE SKILL I.**
Year, Semester: 1st year/2nd semester
Lecture: 2

Requirements

Short course description:
The pedagogical goals of the subject are to equip students with the essential receptive skills of reading and understanding high standard technical texts and to prepare them to be able to acquire subject knowledge and read scientific literature in English.

Required reading materials

*Wallace, M.: Study skills in English*

*Glendening, E.: Study Reading. A course in reading skills for academic purposes.*

Department of Animal Husbandry

Subject: **ANIMAL HUSBANDRY I.**
Year, Semester: 1st year/2nd semester
Lecture: 2
Practical: 1

Requirements

Short course description:
Determination of breeding aims. Animal performance measurements. Estimation of genetic

Required reading materials

W. M. Muir, S. E. Aggrey: Poultry Genetics, Breeding and Biotechnology.

Subject: FEEDSTUFFS AND FEED PROCESSING
Year, Semester: 1st year/2nd semester
Lecture: 1
Practical: 1

Requirements

Short course description:
Knowledge of methods to improvement of feedstuffs by feed processing in connection with the practical animal feeding. To solve problems based on former acquired knowledge in the field of animal nutrition and feeding, and on the different basic sciences. Food safety risks of feeds and feeding. Feeds and feeding on the production of functional foods.

Required reading materials

Fekete, S. Gy. (Ed.): Veterinary Nutrition and Dietetics. Foundation for the Hungarian Veterinary science
W. G. Pond: Basic Animal Nutrition and Feeding

Department of Landscape Ecology

Subject: INTEGRATED CROP PRODUCTION I.
Year, Semester: 1st year/2nd semester
Lecture: 2
Practical: 1

Requirements

Short course description:
The roles, targets and issues of crop production in domestic economics. The positions of crop production in the world, in EU and in Hungary. Targets, issues, developing trends. Multifunctional crop production. Sustainable crop production. Alternative crop models. The agroecological,
CHAPTER 10

Required reading materials

Allen V. Barker, David J. Pilbeam: Handbook of Plant Nutrition
Milkha Aulakh., Cyntia A. Grant: Integrated Nutrient Management for Sustainable Crop Production

Subject: IRRIGATED FARMING
Year, Semester: 1st year/2nd semester
Lecture: 1
Practical: 1

Requirements

Short course description:

Required reading materials

Burton, M.: Irrigation Management: Principles and Practice
Brebbia, C.A, Marinova, M, Bjornlund, H: Sustainable Irrigation Management, Technologies and Policies III.
Wit Pr/Computational Mechanics, Billerica, USA, 2010.

Subject: THESIS PROJECT WORK I.
Year, Semester: 1st year/2nd semester
Institute for Land Utilisation, Technology and Regional Development

Subject: ALTERNATIVE LAND USE  
Year, Semester: 1st year/2nd semester  
Lecture: 1  
Practical: 1

Requirements
Short course description:  
Providing land use knowledge supplementing the body of basic natural science, forming the approach of students. They have to be able to effectively utilise natural, artificial and social resources provided for crop production and to protect the balance of the natural environment by planning land use methods.

Required reading materials
Birkás, M. (ed.): Soil Management and Land Use  
Agricultural University, Gödöllő, 1996.
Filep, Gy. (ed.): Land Use and Soil Management  
Agricultural University, Gödöllő, 1997.
Nagy, J., Rajkai K. (eds.): Environmental problems and results in under transition agriculture  
Debrecen Agricultural University, Debrecen, 2001.
Nagy, J. (ed.): Maize production  
International Visegrad Fund, Nyíregyháza,

Subject: SOIL CULTIVATION AND LAND DEVELOPMENT  
Year, Semester: 1st year/2nd semester  
Lecture: 1  
Practical: 1

Requirements
Short course description:  
Students acquire the knowledge needed for the maintenance and improvement of soil fertility and the rational utilisation of energy that can be connected into land use by means of the soil. They also have to be able to practically apply the processes and methods that improve soil fertility.

Required reading materials
Catena Verlag, Reiskirchen, 2000.
Farkas, Cs., Gyuricza, Cs., László, P., Birkás, M.: Study of the influence of soil tillage on soil water
Institute of Horticulture

Subject: **HORTICULTURE**
Year, Semester: 1\textsuperscript{st} year/2\textsuperscript{nd} semester
Lecture: 1
Practical: 2

**Requirements**

Short course description:
Definition and importance of horticulture. Production are and economic situation of horticulture in Hungary and all over the world. Braches of horticulture: including the disciplines of fruit and grape production, vegetable growing, ornamental production. Fundamentals of fruit production technology, Introduction to grape and wine production and basics of production technological elements, Basics of vegetable growing, Clastering ornamental plants, basic ornamental production technology.

**Required reading materials**

*U. Banerjee, M. Deep: A Handbook of Practical Horticulture*
2002.

*N. Rai and D. S. Yadav: Advances in Vegetable Production*
2005.

*K. V. Peter: Basics of Horticulture*
2009.

Agricultural Laboratory Centre

Subject: **ACADEMIC LANGUAGE SKILL II.**
Year, Semester: 2\textsuperscript{nd} year/1\textsuperscript{st} semester
Lecture: 2

**Requirements**

Short course description:
This course introduces students to the mechanics of more formal academic writing. Organization, tone, stylistics, thesis statements, proper methods of citation and documentation are included for such types of writing as: abstracts, paraphrasing, summarizing, lab report writing and basic grant writing skills.
COURSE DESCRIPTIONS

Required reading materials

Reid, Joy M.: The Process of Composition
Wiwczaroski, Troy B.: Writing and Professional Communication

Subject: COMMUNICATION
Year, Semester: 2nd year/1st semester
Lecture: 1
Practical: 1

Requirements

Short course description:

Required reading materials

John Fiske: Introduction to communication studies
Western College, 2005.
Philip G. Clampitt: Communicating for managerial Effectiveness

Subject: MARKETING
Year, Semester: 2nd year/1st semester
Lecture: 1

Requirements

Short course description:
The main aim the course is to make students capable to understand the basics of marketing, marketing concepts and practical implementation of the theoretical knowledge. Main topics of the course are as follows: basics of marketing, market segmentation, positioning, consumer behaviour, product policy, pricing policy, channel policy and promotion.

Required reading materials

Philip Kotler-Gary Armstrong: Principles of Marketing
Stanley-William-E. Jerome: Basic Marketing
CHAPTER 10
Subject: PROFESSIONAL LANGUAGE SKILLS II.
Year, Semester: 2nd year/1st semester
Lecture: 2

Requirements

Short course description:
Written correspondance, report writing, case study preparation for use in a business setting, as well as an introduction to the problems of business negotiation are all the foci of this course.

Required reading materials

Rodgers, Drew: English for International Negotiations
Wiwczaroski, Troy B.: Writing and Professional Communication

Subject: SECTORAL ECONOMY I.
Year, Semester: 2nd year/1st semester
Lecture: 2
Practical: 1

Requirements

Short course description:

Required reading materials

T. K. Wolfe: Production of field Crops: A Textbook of agronomy
Kent D. Olson: Farm management, Principles and Strategies
Nábrádi A.-Takácsné Gy. K.-Pupos T.: Üzemtan I, Üzemtan II.
Animal Genetics Laboratory

Subject: ANIMAL HUSBANDRY II.
Year, Semester: 2nd year/1st semester
Lecture: 2
Practical: 1

Requirements


Required reading materials

WJA Payne and RT Wilson: Introduction to Animal Husbandry in the Tropics
Acker, Duane&Tour, Mickey La&Cunningham, Merl: Animal Science and Industry
James Blakely, David H. Bade: Science of Animal Husbandry

Department of Animal Husbandry

Subject: ANIMAL KEEPING TECHNOLOGIES
Year, Semester: 2nd year/1st semester
Lecture: 1
Practical: 1

Requirements

Short course description:
Animal keeping technologies of poultry, sheep, horse, pig, cattle. Determination of special requirements about environmental conditions (area, comfort, temperature, humidity) of species and aim of production. Differences on animal requirements at different biological status and age of animal.
CHAPTER 10
Technologies at extensive and intensive animal productions. Technologies at different production levels. Technologies at a farm and a large industry-like system.
Evaluation of animal keeping technologies at the point of view of production level, profitability, adaptability of animal.

Required reading materials

*C. M. Wathes D. R. Charles: Livestock Housing*

Department of Landscape Ecology

Subject: **ALTERNATIVE CROP PRODUCTION STRATEGIES**
Year, Semester: 2nd year/1st semester
Lecture: 1
Practical: 1

Requirements

Short course description:

Required reading materials

*Jr., J. Benton Jones: Agronomic Handbook: Management of Crops, Soils and Their Fertility*
*Allen V. Barker, David J. Pilbeam: Handbook of Plant Nutrition*
*Milkha Aulakh., Cyntia A. Grant: Integrated Nutrient Management for Sustainable Crop Production*

Subject: **INTEGRATED CROP PRODUCTION II.**
Year, Semester: 2nd year/1st semester
Lecture: 2
Practical: 1

Requirements

Short course description:
Elements of integrated cereal crop models and their interactive effects. Sustainable crop technology of small grain cereals. Wheat production for quality. Site-and hybrid specific crop models in maize production. Environmental friendly technological systems in other small grain cereals. Role of

**Required reading materials**

*Jr., J. Benton Jones: Agronomic Handbook: Management of Crops, Soils and Their Fertility*

*Allen V. Barker, David J. Pilbeam: Handbook of Plant Nutrition*

*Milkha Aulakh., Cyntia A. Grant: Integrated Nutrient Management for Sustainable Crop Production*

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**Subject:** PRODUCT QUALITY, CROP PROCESSING  
**Year, Semester:** 2nd year/1st semester  
**Lecture:** 1  
**Practical:** 1

**Requirements**

Short course description:

**Required reading materials**

*Kent N. L.: Technology of cereals*
BPCC Wheatons Etd., 1983.

*Pomerant Y.: Wheat chemsitry and technology*

*Olson, R.A.-Frey, K. J.: Nutritional quality of Cereal greins*
ASA, CSSA, 1990.

*D. K. Salunkhe: Storage, Processing and Nutrional Quality of Fruits and Vegetables*
1976.

*Hoveland, C. S.: Crop quality, storage, and utilization.*
CHAPTER 10
Subject: RESEARCH METHODOLOGY
Year, Semester: 2nd year/1st semester
Lecture: 2
Practical: 1

Requirements
Short course description:
Basic definitions of experiments. In vitro, in vivo experiments, field experiments. Experimental methods, planning field experiments. The aims of the field experiments, factors, variables, plots, treatments, repetitions. The accuracy of the experiment data, the determinant factors, homogeneity. Estimating the experimental error, and the difference between the treatments. Real and hidden replications. Computing the required repetition number. Design variations of single and multi factor experiments, randomization.

Subject: THESIS PROJECT WORK II.
Year, Semester: 2nd year/1st semester
Practical: 15

Subject: THESIS PROJECT WORK III.
Year, Semester: 2nd year/2nd semester
Practical: 15

Institute of Water and Environmental Management
Subject: ENVIRONMENTAL AND LANDSCAPE MANAGEMENT
Year, Semester: 2nd year/1st semester
Lecture: 1
Practical: 1

Requirements
Short course description:
The main aim of the course is to get the basic knowledge of environmental management and agri-environmental protection and beside this is to get the learning of theoretical and practical landscape management. Moreover, the goal is to use this knowledge readiness in the agricultural engineer practices. The development of the environment protection and environmental management. Natural resources and its types: the continual, the non renewable and the renewable resources. The concept and filch of the environment, the sources, reasons and forms of the environment pollution. The pollution of the air, and the protection against that pollution. The contamination and degradation of the soil: pollution and pollutants of the soil. Water quality, water quality defense. Water administration. Waste management: the concept, types, sources and effects of the waste. International and Hungarian practice of the agricultural environment management. The impacts of the agricultural production on the environment: effects of the crop production and animal breeding. Environmental Impact Assessment. The environmental state of Hungary: the state of the air, the water and the soil. State of the settlement environment. Basis of the landscape management. The

Required reading materials

Miller, T. G.: Living in the environment
Watts, S., Halliwell, D.: Essential Environmental science
Goodchild, M., Parks, B., Steyaert, L.: Environmental Modelling with GIS

Agricultural Laboratory Centre

Subject: MANAGEMENT
Year, Semester: 2nd year/2nd semester
Lecture: 2
Practical: 1

Requirements

Short course description:
Introduce MSc students to the history, development, most important schools, trends and theories of management science. Beside we aim to present most important relations, managerial methods and procedures. Main topics: development of management, managerial schools, trends, group management, organizational development, oragnizational culture, change management, motivation, conflict management, managerial method, managerial style, innovation management.

Required reading materials

Management Science Journal
University of Pennsylvania, USA,
Mintzberg, H.: Managing
South-Western College Pub, USA, 2004.

Subject: QUALITY ASSURANCE
Year, Semester: 2nd year/2nd semester
Lecture: 2
Practical: 1
CHAPTER 10

Requirements

Short course description:

Required reading materials

Luning, P. A.-Devlieghere, F.-Verhé, R.: Safety in the agri-food chain
Evans J. R. -Lindsay W. M.: The management and Control of Quality.

Subject: SECTORAL ECONOMY II.
Year, Semester: 2nd year/2nd semester
Lecture: 2
Practical: 1

Requirements

Short course description:

Required reading materials

T. K. Wolfe: Production of field Crops; A Textbook of agronomy
Kent D. Olson: Farm management, Principles and Strategies
Nábrádi A.-Takácsné Gy. K.-Pupos T.: Üzemetan I, Üzemetan II.
Animal Genetics Laboratory

Subject: ANIMAL HUSBANDRY POLITICS
Year, Semester: 2nd year/2nd semester
Lecture: 1
Practical: 1

Requirements

Short course description:

Required reading materials

Geers, R.: Livestock production and society
Wageningen, 2006.

Department of Animal Husbandry

Subject: ANIMAL HUSBANDRY III.
Year, Semester: 2nd year/2nd semester
Lecture: 2
Practical: 1

Requirements

Short course description:

Required reading materials

H. Tyler, M. E. Ensminger: Dair Cattle Science
Department of Landscape Ecology

Subject: INTEGRATED CROP PRODUCTION III.
Year, Semester: 2nd year/2nd semester
Lecture: 2
Practical: 1

Requirements

Short course description:

Required reading materials


Allen V. Barker, David J. Pilbeam: Handbook of Plant Nutrition

Milkha Aulakh., Cyntia A. Grant: Integrated Nutrient Management for Sustainable Crop Production

Subject: REGIONAL FARMING
Year, Semester: 2nd year/2nd semester
Lecture: 1
Practical: 1

Requirements

Short course description:
Learning of such professional knowledge, which makes possible the effective, economical crop production, adapting to the site region. Agroecological regions. Adapting to the region and the site. Possibilities, conditions to improve the site circumstances. To develop the species and variety structure adapting to regional production. Role and possibilities of nutrient management, land cultivation, soil protection, crop protection in regional production.

Required reading materials


John Martin, Warren Leonard, David Stamp, Richard Waldren: Principles of field Crop Production