



UNIVERSITY of
DEBRECEN
HUNGARY



AGRICULTURAL PROGRAMS

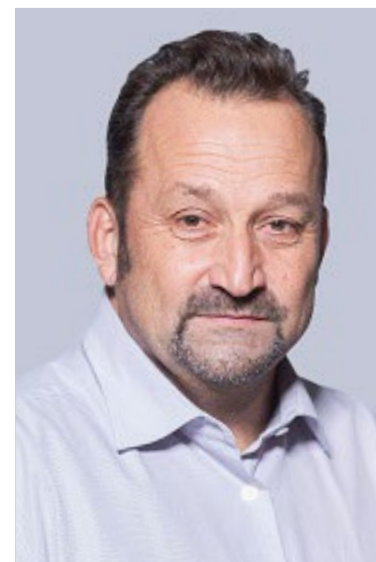
OF THE FACULTY OF AGRICULTURE,
FOOD SCIENCE AND ENVIRONMENTAL
MANAGEMENT



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Dear Prospective Students,

Agriculture, food science, and environmental management lie at the heart of today's most pressing global challenges. Climate change, water scarcity, soil health, food safety, animal welfare, digital transformation, and rural development all call for professionals who can think across disciplines and apply their knowledge in practice.

At the Faculty of Agricultural and Food Sciences and Environmental Management of the University of Debrecen, we prepare our students to meet these challenges with confidence. Our English-language programs cover the full agri-food and environmental value chain—from crop production, animal husbandry, precision agriculture, and water management to food engineering, food safety, plant protection, and rural development.

Our approach to education is strongly practice-oriented. Students gain hands-on experience in laboratories, experimental farms, demonstration sites, and through collaboration with professional partners. They are encouraged to work on real-world problems using modern analytical, digital, and decision-support tools. Our goal is to graduate professionals who are not only academically well-prepared, but also confident in their skills and ready to contribute to sustainable and competitive agri-food systems.

By joining our Faculty, you become part of an international academic community in Debrecen—one of Hungary's most vibrant university cities. We invite you to study with us, to explore new ideas, to innovate, and to build a meaningful professional future.

Welcome to the Faculty of Agricultural and Food Sciences and Environmental Management.

Prof. Dr. László Stündl

Dean

Faculty of Agricultural and Food Sciences
and Environmental Management
University of Debrecen

Faculty Overview

The Faculty of Agricultural and Food Sciences and Environmental Management covers the entire agricultural, food, and environmental value chain. Its institutes and centres bring together a wide range of fields, including crop production, horticulture, plant protection, soil science, animal science, biotechnology, food science and technology, nutrition, precision agriculture, engineering, water and environmental management, genomics, and laboratory analytics.

This diverse academic environment allows students to connect biological, technological, environmental, and economic perspectives in a meaningful and integrated way.

Education is strongly practice-oriented. Students learn not only in classrooms, but also in laboratories, demonstration sites, experimental farms, field trials, research facilities, and through collaborations with professional partners. They are encouraged to work with real-world challenges and develop practical solutions for agriculture, food production, environmental management, and related industries.

OUR ACADEMIC FOCUS

- Climate-resilient agriculture, soil health, sustainable nutrient management, and efficient water use
- Digital, data-driven, and precision agriculture, including robotics, sensors, geoinformatics, and spatial data analysis
- Sustainable animal production, animal welfare, aquaculture, molecular livestock research, and biodiversity conservation
- Food quality and safety, functional foods, nutrition science, microbiology, and advanced analytical testing
- Circular bioeconomy, environmental technologies, waste utilisation, and responsible natural resource management

VALUE FOR INTERNATIONAL STUDENTS

The Faculty offers a uniquely integrated learning environment. Students can move across disciplines—from soil and crop systems to animal production, food processing, nutrition, water management, environmental protection, and rural development—within a single academic ecosystem.

This holistic approach provides a strong foundation for international careers, doctoral studies, and applied innovation projects in Central Europe and beyond.



„The University of Debrecen is my second home, and studying here is the best part of my life. With excellent education, multicultural environments, and a tranquil city. This place is ideal for learning. My past two years at this university as a food engineering student played a key role in my overall development. Since coming here, I have acquired numerous opportunities and experiences in both academic and non-academic fields, which has helped me become so much more sure of what I am passionate about. I am thankful to all my professors, classmates, and friends for their support and encouragement throughout my journey. So if you are ready for an adventure of a lifetime, this university is highly recommended by me!”

Key Research Areas: Soils, Crops, Animals and Biodiversity

SOIL, CROP AND PLANT SYSTEMS

Research in agricultural chemistry and soil science focuses on the soil–plant system, soil fertility, nutrient dynamics, biostimulants, soil conditioners, and plant responses to climate-related stress. Key topics include drought and excess-water stress, crop productivity, nutrient uptake, soil chemical properties, and soil microbiological processes, investigated through controlled greenhouse experiments and soil-profile studies.

Crop production and plant technology research addresses arable farming systems, plant breeding, crop physiology, quality assessment, landscape ecology, and environmental protection. Long-term, multifactorial field experiments with wheat, maize, and soybean, along with genotype and production technology studies, provide evidence for sustainable intensification, improved stress tolerance, and practical agronomic innovation.

Applied plant biology connects botany, plant physiology, and biotechnology with sustainable crop production and bioeconomy development. Research areas include plant nitrogen utilisation, fibre biology, stress physiology, alternative protein and nutrient sources, bioindustrial applications, and even emerging topics such as plant-in-space research. They are encouraged to work with real-world challenges and develop practical solutions for agriculture, food production, environmental management, and related industries.



ANIMAL SCIENCE, AQUACULTURE AND CONSERVATION

The animal science profile integrates breeding, genetics, physiology, reproduction, nutrition, aquaculture, wildlife management, and conservation zoology. Research covers molecular markers of economically important traits, functional feed additives, indigenous breed evaluation, dairy and poultry production systems, fish nutrition and reproduction, animal welfare, environmental footprint assessment, avian ecology, mammalian population genetics, and habitat monitoring.

This strong interdisciplinary approach creates a close link between research and teaching in Animal Husbandry, Nature Conservation, Wildlife Management, and related programmes. It also supports industry-oriented work in sustainable livestock production and biodiversity conservation.



“Choosing the University of Debrecen was one of the most meaningful decisions of my life. UD became more than just a place to study; it turned into a home where I discovered myself, made warm friendships, and met supportive professors. Debrecen’s charm, especially Nagyerdei Park, became my favorite spot to unwind and daydream. UD gave me confidence, meaningful experiences, and memories I’ll cherish forever.”

PLANT PROTECTION AND PRECISION AGRICULTURE

Plant protection research combines plant pathology, plant protection zoology, weed biology, biological and precision plant protection, integrated pest management, and decision-support systems. The Faculty's profile in this area includes biological and precision technologies, pest monitoring, population dynamics of pest communities, biological invasions, agrobiodiversity, and environmentally friendly production methods.

Land use, engineering, and precision technology focus on automation, robotics, sustainable land management, soil conservation, sensors, digital technologies, and geoinformatics. Research and training are supported by precision plant imaging systems, agricultural drones, soil-mapping scanners, advanced sensor technologies, a dedicated geoinformatics laboratory, and specialised software for spatial and agronomic data analysis.



"Studying at the University of Debrecen has been a transformative experience that shaped both my academic journey and personal growth. The supportive learning environment, combined with the university's international community, has encouraged me to think globally and challenge myself in new ways. Debrecen's calm atmosphere and vibrant student life offer the perfect balance for focusing on studies while building meaningful connections. I am truly grateful for the opportunities, guidance, and friendships I have gained here, and I am proud to call the University of Debrecen my academic home."

FOOD SCIENCE, FOOD TECHNOLOGY AND NUTRITION

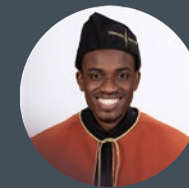
Food science research is organised around product quality assessment, elemental analysis, and microbiology. Key topics include cereal and legume quality, processing technologies, brewing parameters, functional sprouts, honey quality, toxic elements, trace-level analytics, food contaminants, plant pathogenic fungi, fungicide resistance, and probiotic microorganisms in fish nutrition.

Nutrition and food technology link food innovation, molecular biology, plant protein science, data-driven assessment, and health-oriented product development. Current research directions include sourdoughs, gemmotherapy extracts, fruits and fruit-based products, plant protein sources, phytonutrient profiling, nutraceutical development, extraction technologies, postbiotics, and novel plant-based ingredients.

WATER, ENVIRONMENT AND CIRCULAR ECONOMY

Water and environmental management research focuses on agricultural water use, climate adaptation, environmental engineering, and circular economy solutions. Core topics include drought mitigation, inland excess water management, irrigation systems, urban hydrology, biodegradation processes, and aerobic and anaerobic fermentation of agricultural by-products.

This research profile directly supports the MSc programmes in Agricultural Water Management Engineering and Agricultural Environmental Management Engineering.



"What I love about the University of Debrecen is the opportunity to have Industrial exposure, because it's like the grease to the gear of academics. Each time I see how things work in the industrial sphere, it changes my perspective and my thought about the subject matter, it opens me up to new ideas about changing the world through effective water management engineering."

INFRASTRUCTURE AND PARTNERSHIPS IN PRACTICE-BASED EDUCATION

The Faculty's infrastructure provides students and partners with access to field, laboratory, digital, and technological platforms spanning the entire agri-food and environmental value chain. The most brochure-relevant elements are summarised below.

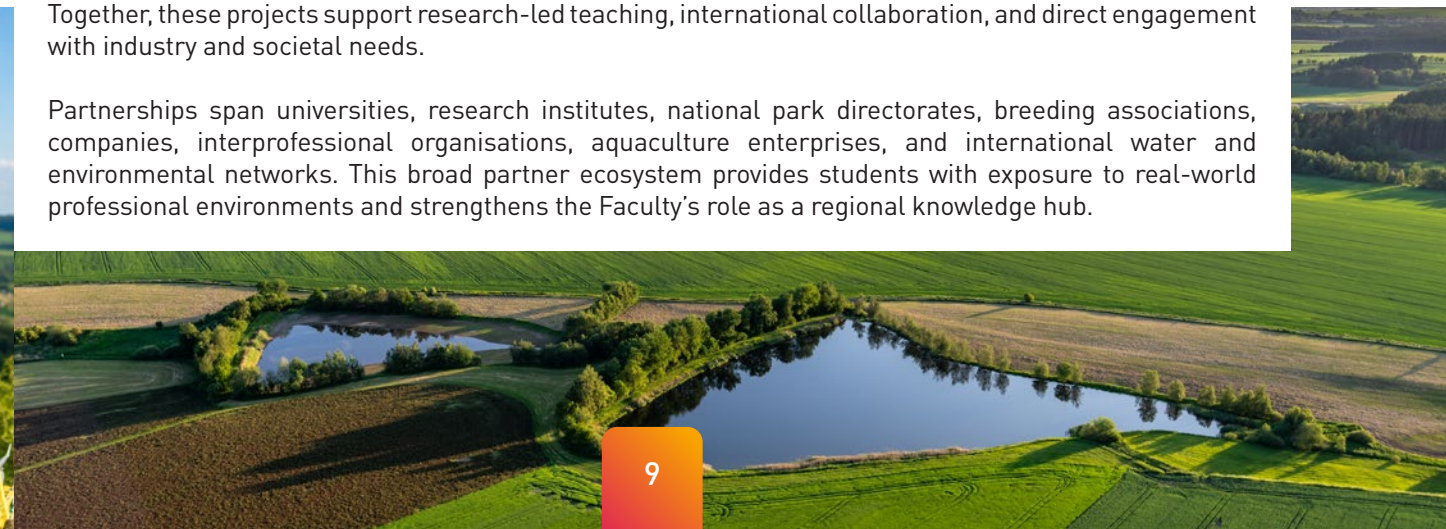
KEY INFRASTRUCTURE HIGHLIGHTS

- **Advanced soil, plant and environmental analytics**
Atomic absorption spectrometry, high-performance liquid chromatography, carbon and nitrogen fraction analysis, gas chromatography, microbiological platforms, and soil physics laboratories.
- **Plant and crop research platforms**
Long-term field experiments, plant diagnostic systems, greenhouse and semi-controlled facilities, LICOR photosynthesis and soil CO₂ flux analysers, NIR instruments, NDVI tools, canopy analysers, LAI and SPAD devices, and soil moisture sensors.
- **Animal and aquaculture facilities**
Animal genetics and proteomics laboratories, assisted reproduction facilities, recirculating aquaculture systems, aquaponics units, aquarium systems, digestibility facilities for pigs and poultry, hatchery capacity, and experimental resources for equine and small ruminant research.
- **Precision agriculture infrastructure**
Agricultural drones, precision plant imaging systems, soil mapping scanners, sensor technologies, a geoinformatics laboratory, and spatial and agronomic data analysis software.
- **Food and feed analysis**
Accredited analytical systems for protein, oil, fibre, grain quality, rheology, chromatography, amino acid and mycotoxin analysis, ICP-OES, and multi-matrix testing.
- **Water and environmental technology**
Climate-controlled aeroponic chambers, hydrological and water quality field equipment, anaerobic and multifunctional bioreactors, GC-MS, CNS analysis, and calorimetric systems.

PROJECT AND PARTNERSHIP PROFILE

The Faculty is actively involved in a wide range of national and international research, education, and innovation projects. These include long-term crop system experiments, Erasmus+ precision agriculture curriculum development, water management and climate adaptation initiatives, Horizon 2020 WATERAGRI, TKP2021-NKTA-32 precision water management projects, and Recovery and Resilience Facility activities. Together, these projects support research-led teaching, international collaboration, and direct engagement with industry and societal needs.

Partnerships span universities, research institutes, national park directorates, breeding associations, companies, interprofessional organisations, aquaculture enterprises, and international water and environmental networks. This broad partner ecosystem provides students with exposure to real-world professional environments and strengthens the Faculty's role as a regional knowledge hub.



Why choose the University of Debrecen?

The University of Debrecen in Hungary is one of Central Europe's top educational and research institutions. It offers a wide range of internationally recognized academic courses in Medical, Engineering, Business, IT, and Agricultural fields among many degree to its 30,000 students. Debrecen is a charming and fast-developing school town in the heart of Europe.

WE ARE HIGHLY RANKED BY THE MOST PRESTIGIOUS HIGHER EDUCATION RANKINGS:

574 in QS WUR 2025

222 in QS Europe 2025

351-400 in QS WUR by Subject Medicine 2024

201-250 in QS WUR by Subject Agriculture & Forestry 2024

801-1000 in THE World University Rankings 2025

327 in RUR World University Rankings 2024

101-200 in THE Impact Rankings Quality Education 2024

85 in THE Impact Rankings Decent Work and Economic Growth 2024

	32,000+ students 24% international students		7,625+ international students from over 140 countries
	13 Faculties on 8 campuses		1,524 academic staff
	19:1 student/academic staff ratio		189 international academic staff
	100+ lecture halls		363 university buildings
	500+ research labs		530+ practice and seminar rooms
	7 libraries		135 laboratories and language labs
	15 gyms		6,000,000+ library documents

WE OFFER:

- A wide range of academic fields: Medical and Health Sciences, Agriculture, Business, Engineering, Humanities, IT, Law, Music, Natural Sciences
- Sophisticated and student-focused classes
- Research projects: students are encouraged to join ongoing research projects.

WE OFFER YOU MEDICAL PROGRAMS WITH WORLDWIDE ACCREDITATION:

- World Federation for Medical Education (WFME)
- World Health Organization
- New York State Education Department
- Medical Board of California
- Medical Councils of Israel, Ireland, Iran and Norway

 The latest information about our programs including the most up-to-date curricula can be found online at www.edu.unideb.hu. For more information please contact us at info@edu.unideb.hu.

Agricultural Engineering, BSc

In the agricultural engineering undergraduate course, students learn about different areas of the agricultural sector, gain insight into crop production, animal husbandry, and also gain unique agrotechnical knowledge (e.g., horticultural, fish farming, forestry, environmental, and game management knowledge). Students also acquire knowledge of science, technology, agriculture, and economics, which makes them agricultural professionals with general skills in agricultural production, processing, and farming.

Faculty: Agricultural and Food Sciences and Environmental Management

Academic discipline: Agricultural Science

Qualification: Agricultural Engineer (with Bachelor of Science degree)

Starting date: September

Language requirements: English language proficiency (TOEFL 513 /IELTS 5.5/oral examination)

Academic requirements: high school certificate; entrance examination in mathematics and chemistry/ biology (written and oral)

Duration: 7 semesters

ECTS: 180+30

MAIN SUBJECTS TYPICALLY INCLUDE (this list is indicative and may change):

YEAR	MAIN SUBJECTS
1.	Zoology, Agricultural History, Mathematics, Agricultural Chemistry, Agricultural Botany, Informatics, Animal physiology, Organic and biochemistry, Agricultural and Food industrial microbiology, Rural Development, Basic of Plant Physiology, Soil Science, Water Management, Agricultural Fundamentals, Environmental management
2.	Land use and regional development, Agricultural machinery, Economic Sciences, Crop production, Agrochemistry, Agroecology, Feeding for animals, Animal husbandry, Horticulture, Water management
3.	Plant genetics and plant breeding, Animal husbandry, Horticulture, Environmental management, Economic Sciences, Statistics, Regulation and Administration of Agriculture, Animals Health, Food Technologies, Quality Management System, Farm business management, Forest and game management, Grassland management, Integrated Plant Protection

Internship, practice: Students should complete a 12-week professional practice in the last semester.

Career prospects: Undergraduates may find employment in agricultural enterprises, even in management positions, in the field of agricultural advisory and administration, in research institutes, in your own farms, in advocacy organisations.

Food Engineering, BSc

The BSc in food engineering is aimed at training professionals who are able to operate, supervise and develop food processing technologies. The studies include the physical, chemical and biological fundamentals of engineering with special emphasis on food quality and safety related issues. Besides becoming acquainted with operations and technological processes the students also learn economic, management and analytical subjects. The main goal of the program is to train experts who are able to fully provide services related to the everyday tasks of operation from engineering, biological and chemical work to management duties based on their comprehensive theoretical knowledge.

Faculty: Agricultural and Food Sciences and Environmental Management

Academic discipline: Agricultural Science

Qualification: Food Engineer

Starting date: September

Language requirements: English language proficiency (TOEFL 513 /IELTS 5.5/oral examination)

Academic requirements: high school certificate; entrance examination in mathematics, chemistry or biology (written and oral)

Duration: 7 semesters

ECTS credits: 180+30

MAIN SUBJECTS TYPICALLY INCLUDE (this list is indicative and may change):

YEAR	MAIN SUBJECTS
1.	Agricultural Botany, Economic Sciences, General and Inorganic Chemistry, History of Agriculture and EU Knowledge, Informatics, Mathematics, Raw Materials of Food Processing, Thermodynamics, Zoology, Animal Physiology, Agricultural and Food Microbiology, Analytical Chemistry, Basic Equipment for Food Industries, Environmental Management, Environmental Technology, Introduction to Food Safety, Organic and Biochemistry, Technical Basics of Agricultural Machinery
2.	Agricultural and Food Microbiology, Business Studies and English Language Skills, Economic Sciences, Electrotechnics, Food Chemistry, Food Hygiene, Introduction to Intercultural Communication, Professional Language Skills, Unit Operations in Food Processing, Colloid Chemistry, Grant Proposal Writing in the target language, Measurement and Control, Principles of Food Technology
3.	Basics of Quality Assurance, Business Studies and English Language Skills, Food Industry Technologies and Quality Assurance, Instrumental Analytics, Legal English, Statistics, Unit Operations in Food Processing, English for Environmental Management and Politics, Food Analytics, Food Industry Economics, Intercultural Communication, Principles of Food Technology, Project Work, Agricultural Regulation and Administration
4.	Professional Practice, Thesis

Internship, practice: Students should complete a 14-week professional practice in the last semester.

Career prospects: Graduates may find employment in the food industry, raw material and product qualification, food analysis, inspection, quality assurance or may work for food authorities. Graduates may continue their studies with an MSc in food engineering, an MSc in food quality and assurance, or an MSc in nutrition.



Precision Agricultural Engineering, BSc

Unique in Hungary and Europe, the training includes, in addition to the basic agricultural knowledge, the knowledge of precision agriculture, agricultural digitalisation, the application and operation of precision agricultural equipment, info-communication tools, geoinformatics, data collection and data management, knowledge of the use of software in agriculture, knowledge of agricultural robotics, the basics of operating agricultural drones, knowledge of precision farming technology, the principles, structure, and operation of precision farming advisory systems.

Faculty: Agricultural and Food Sciences and Environmental Management

Academic discipline: Agricultural Science

Qualification: Precision Agricultural Engineer

Starting date: September

Language requirements: English language proficiency (TOEFL 513/IELTS 5.5/oral examination)

Academic requirements: high school certificate; entrance examination in mathematics, chemistry or biology (written and oral)

Duration: 7 semesters

ECTS: 180+30

MAIN SUBJECTS TYPICALLY INCLUDE (this list is indicative and may change):

YEAR	MAIN SUBJECTS
1.	Mathematics, Informatics, Mechanical knowledge, Inorganic and organic chemistry, Agro-chemistry, Botany, Physics, Plant physiology, Microbiology, Soil science, Agricultural basics, Horticulture, Plant pathology, Environmental management, Animal physiology
2.	Statistics, Agrometeorology, Water management, Crop production, Animal husbandry, Land use, Integrated crop protection, Agricultural marketing and prices, Principles of microeconomics, Global food system, Agricultural computer application, Geospatial data analysis, Agricultural mechanics and robotics, Intro to Precision Agricultura and Lab, Farm machinery system management
3.	Hydraulics, pneumatics, Technical writing in engineering, Quality management systems, Management and organisation knowledge, Technical consulting in precision farming, Organisation and economics of precision farming, Precision feeding and animal husbandry, Precision agr data mapping, Use of soil and plant sensors in crop production, Climate risk management and precision agriculture, Crop management with precision farming, Electrical diagnostics for farm machinery, Project work

Internship, practice: Students should complete a 12-week professional practice in the last semester

Career prospects: Undergraduates may find employment in small, medium and large agricultural enterprises, in agricultural integrators, service and trading companies, in consultancy networks, in professional organisations, in educational institutions and research institutes.



Animal Husbandry Engineering, MSc

The MSc in Animal Husbandry Engineering program is designed to develop your undergraduate knowledge and improve it through application and research. The field of animal science is broad and the program reflects this diversity, with emphasis on physiology, nutrition, and genetics, gene conservation, functional food and molecular biology, which are the key research areas of the institute.

Lecture, seminar: 62%
Practice: 38%

Faculty: Agricultural and Food Sciences and Environmental Management

Academic discipline: Agricultural Science

Qualification: Animal Husbandry Engineer

Starting date: September/February

Language requirements: English language proficiency (TOEFL 547 /IELTS 6.0 /oral examination)

Academic requirements: Bachelor's degree in biological or animal science

Duration: 4 semesters

ECTS: 120

MAIN SUBJECTS TYPICALLY INCLUDE (this list is indicative and may change):

YEAR	MAIN SUBJECTS
1.	Applied Genetics, Physiology of Production Traits, Informatics and Computing, Applied Biochemistry, Microbiology, World Animal Husbandry, Aquatic Ecology and Hydrobiology, Livestock Judging, Fodder and Food Chemistry, Reproductive Biology, Biometry, Cytogenetics, Molecular Genetics in Animal Breeding, Animal Nutrition, Feed Preparation, Processing, Mixing and Trading, Ecological Management of Animals, Inland Fisheries Management, Recording and Breeding Programs
2.	Management, Molecular Genetics in Animal Breeding, Application of Biotechnology in Animal Breeding, Feed Analysis, Food Safety, Quality and Auditing, Scientific Writing, Meat and Milk Processing, Nutrition Therapy, Organisation of Breeding, Sectoral Economics and Planning, Management of Local Genetic Resources, Thesis

Internship, practice: Students should complete a 4-week summer field practice.

Career prospects: Postgraduates may progress to a PhD or find employment in animal science research, lecturing, consultancy or other science-based sectors of the animal science industry.

Agricultural Environmental Management Engineering, MSc

The MSc in Agricultural Environmental Management Engineering program is designed to develop your undergraduate knowledge and improve it through application and research. The field of Environmental Management is broad and the program reflects this diversity, with emphasis on natural resource management, environmental impact assessment, environmental technologies and environmental informatics.

Lecture, seminar: 52%
Practice: 48%

1

Faculty: Agricultural and Food Sciences and Environmental Management

Academic discipline: Agricultural Science

Qualification: Agricultural Environmental Management Engineer

Starting date: September/February

Language requirements: English language proficiency (TOEFL 547 /IELTS 6.0 /oral examination)

Academic requirements: Bachelor's degree in environmental science

Duration: 4 semesters

ECTS credits: 120

MAIN SUBJECTS TYPICALLY INCLUDE (this list is indicative and may change):

YEAR	MAIN SUBJECTS
1.	Natural sciences: Soil science - Soil ecology, Water Management: Agrohydrology, Environmental Informatics – Environmental Monitoring, Sustainable Agricultural Systems and Technologies: Crop Production, Sectoral Administration and Environmental Law, Environmental Measurement Techniques, Agro-Environmental Management, Natural sciences - Nature Conservation Ecology, Environmental Impact Assessment and Environmental Modeling, Food Chain Safety, Water Management - excess water management and irrigation techniques, Sustainable Agricultural Systems and Technologies: Animal Breeding, Environmental Technologies: Soil Remediation, Soil Protection, Biotechnology in Agriculture
2.	Agricultural Engineering, Precision Agricultural Systems and Technologies, Research Methodology, Scientific Communication, Agricultural Forestry, Environmental technologies: Water Quality Protection, Waste Water Treatment, Waste Management in Agriculture and Food Industry, Farm Business Management and Project Management, Agro-Environmental Management - Ecotoxicology, Environmental Risk Assessment, Environmental Planning, Land Consolidation, Landscape Conservation, Agricultural and Environmental Policy, Management Systems (EMS, QMS, FSMS), Agricultural and Environmental Economics, Thesis

Internship, practice: Students should complete a 4-week summer field practice.

Career prospects: Postgraduates may progress to a PhD or find employment in environmental management, lecturing, consultancy or other sectors where environmental management is involved.

Agricultural Water Management Engineering, MSc

The aim of the graduate program is to train agricultural water management engineers who, equipped with knowledge and skills acquired over the course of the program, are able to use creative engineering in the field of sustainable integrated water management within the field of agricultural water management. With their qualifications, graduates are able to cooperate with other experts in solving domestic and international problems related to their field of expertise.

Lecture, seminar: 48%
Practice: 52%

1

Faculty: Agricultural and Food Sciences and Environmental Management

Academic discipline: Agricultural Science

Qualification: Agricultural Water Management Engineer

Starting date: September

Language requirements: English language proficiency (TOEFL 547 /IELTS 6.0 /oral examination)

Academic requirements: Bachelor's degree in environmental science, agricultural engineering, horticulture engineering, crop production engineering, agrobusiness and rural development engineering, rural development engineering.

Duration: 4 semesters

ECTS credits: 120

MAIN SUBJECTS TYPICALLY INCLUDE (this list is indicative and may change):

YEAR	MAIN SUBJECTS
1.	Applied Hydrology and Hydraulics, Climatology, Hydrogeograpy, Hidrobiology, Water Chemistry, Soil Physics, Melioration and Land Consolidation, Pond Culture and Fisheries Management, Irrigated Crop Production, Floodplain Management, Irrigation for Horticultural Production, Wastewater and Slurry Management, Management and Utilization of Aquatic Habitats, Water Resource Protection – Environmental Damage Prevention, Remote Sensing and GIS in Hydrology, Farm Irrigation Machines, Irrigation Technology
2.	Precision Agriculture, Drought Management, Integrated Water Management and Monitoring, Water Economics, Excess Water Management, Agricultural Water Supply Systems, Agricultural Water Management Planning and Implementation, Water Policy, Water Law and Sectoral Public Administration, Thesis

Internship, practice: Students should complete a 4-week summer field practice.

Career prospects: Postgraduates are qualified for the design and development of engineering, research and leadership positions. They may continue their studies in doctoral training.

Crop Production Engineering, MSc

In the Crop Production Engineering master course, students learn the basic concepts of natural science, engineering, technology, food chain safety and management that underpin plant production, and become familiar with modern technologies used in crop production and their practical application. The training will focus on plant biotechnology, integrated crop production, integrated pest management, quality assurance in crop production and the sectoral economics of crop production.

Lecture, seminar: 48%
Practice: 53%

Faculty: Agricultural and Food Sciences and Environmental Management

Academic discipline: Agricultural Science

Qualification: Crop production engineer (with Master of Science degree)

Starting date: September

Language requirements: (TOEFL 513 /IELTS 5.5/oral examination)

Academic requirements: Bachelor Degree in Agricultural Science

Duration: 4 semesters

ECTS credits: 120

MAIN SUBJECTS TYPICALLY INCLUDE (this list is indicative and may change):

YEAR	MAIN SUBJECTS
1.	Physiology of Cultivated Plants, Organic and Biochemistry, Applied Soil Science, Agricultural Informatics, Agricultural Microbiology, Genetics of Cultivated Plant, Adaptive Tillage, Plant Biotechnology, Diseases of Cropland Plants, Animal Pests of Crops, Weed Control, Quality Control of Field Crops, Nutrient Supply of Field Crops
2.	Crop Production I., Crop Production II., Crop Production Economics, Introduction to EU Law, Precision Farming, Agrochemistry, Plant Breeding and Transgenic Plants, Land Classification and Regional Development, Quality Assurance in Field Crops, Mechanization of Crop Production, Irrigated Crop Production, Research Methodology and Extension

Internship, practice: Students should complete a 4-week professional practice.

Career prospects: Graduates may find employment in agricultural enterprises, in product development, in trade of agricultural goods, in crop production extension companies, in professional administration, or in scientific research.

Food Safety and Quality Engineering, MSc

The MSc in Food Safety and Quality Engineering is designed to develop your undergraduate knowledge and improve it through application and research. The field of food science is broad and the program reflects this diversity, with emphasis on raw material qualifying, processing technology, quality analysis and quality assurance.

Lecture, seminar: 49%
Practice: 51%

Faculty: Agricultural and Food Sciences and Environmental Management

Academic discipline: Agricultural Science

Qualification: Food Safety and Quality Engineer

Starting date: September/February

Language requirements: English language proficiency (TOEFL 547 /IELTS 6.0 /oral examination)

Academic requirements: Bachelor's degree in food engineering, chemical engineering, biological science, agronomy.

Duration: 4 semesters

ECTS: 120

MAIN SUBJECTS TYPICALLY INCLUDE (this list is indicative and may change):

YEAR	MAIN SUBJECTS
1.	Theory of Measurement and Experimental Designs, Expectations of Foodstuffs, Consumer Protection, Separation Technique, Quality and Safety in Food Technologies (HACCP in practice), Food Marketing, Basics of Food Microbiology, Management and Communication, Spectroscopyc Methods, Nutritional Sciences, Essential Molecular Cell Biology, Microbiological Aspects of Food Quality and Safety, Quality Control, Quality Management
2.	Regulation of Food Production, Quality and Safety, Food Toxicology, Hyphenated Analytical Methods, Quality Management Systems and Audit in the Food Chain, Traceability in the Food Chain, Food Industry Management and Economics, Radiology in the Food Industry, Analytical and Microbiological Rapid Methods, Food Quality and Safety Risk Analysis, Rheology in Food Testing, Thesis

Internship, practice: Students should complete a 4-week field practice.

Career prospects: Postgraduates may progress to PhD studies or find employment in food and dietetics science research, lecturing, consultancy or other science-based sectors of the food science industry.

Plant Protection, MSc

The aim of the Plant Protection MSc Program is to train specialists of plant protection who are able to fulfill directional, managing, organizing, consulting, regulating and marketing tasks, based on their wide theoretical and practical knowledge to prevent losses during crop production. Such experts are able to identify the organisms, which are threatening healthy plants (incl. pathogens, pests and weeds) and they get acquainted with their biology and reproduction, and also with the effects and mechanisms of pesticides concerning even the environment and humane hygiene, moreover apply integrated viewpoints of alternatives of chemical protection. They can prevent harms and damages caused by different pests or environmental effects, and they are applying procedures of ecological and integrated plant protection in order to reduce the pesticide-load of the environment. In their work they are always attentive to the safety of food, processors, consumers and the environment. Having a degree in higher education they are permitted to use restricted chemicals which might be special risks for the environment. The further aim is to prepare the interested and inspired students for research work and PhD training in the fields of plant protection.

Lecture, Seminar: 38%

Practice: 62%

Faculty: Agricultural and Food Sciences and Environmental Management

Starting date: September/February

Language requirements: English language proficiency (TOEFL 547 /IELTS 6.0 /oral examination)

Academic requirements: Applicants intending to join this master programme should hold undergraduate degree (BSc or equivalent) in relevant field of science or related area. Degree qualifications are assessed individually in accordance with the diploma (Degree Certificate) and its attachments, and/or with the Report of Study (Index). Acceptable and preferable courses: natural sciences, technical and social sciences, horticultural production, plant protection, crop production, agricultural economics, according to the comparison determined in the law of higher education and the related ministerial decrees (e.g. 18/2016. /VIII. 5./ EMMI order).

Duration: 4 semesters

ECTS credits: 120

MAIN SUBJECTS TYPICALLY INCLUDE (this list is indicative and may change):

YEAR MAIN SUBJECTS

1. Chemistry of Plant Protection, Environmental Protection and Ecotoxicology, Crop Production, General Plant Pathology and Diagnostics, Plant Protection Zoology and Ecology, Herbiology, Molecular Biology, Plant Protectional Mycology, Plant Protection Entomology I., Plant Protectional Application Technology, Horticulture, Alternative Management and Rural Development, Informatics and Agricultural Extension
2. Applied Plant Biology, Biotechnology and Resistance, Forecasting and Integrated Pest Management, Plant Protection Law and Administration, Food Safety, Outlines of Plant Pathology I., Weed Biology, Pest Management in Eco-farms, Human Hygiene and First Aids, Weed Management, Integrated Pest Management, IPM

Internship, practice: 160 hours of summer practice at a plant doctor practitioner

Career prospects: Graduates with wide-ranging professional knowledge can choose from a wide range of career possibilities. They may be employed at agricultural integrators or at production companies as a plant protection expert/consultant. It is also common that they conduct research in a specific field of plant protection. In addition, it is possible to fill professionally related positions in specialized education and public administration, as well as in other organizations (eg banks, insurance companies).

Application and Admission

THE UNIVERSITY OF DEBRECEN HAS AN ONLINE APPLICATION SYSTEM, WHERE YOU CAN SUBMIT YOUR APPLICATION.

The following documents need to be uploaded during the application procedure:

- Valid, completely filled out application form
- Certificate and transcript of former education
- Passport or National ID
- Short Resume/CV
- Medical Certificate
- Bank receipt certifying the transfer of the application fee of 150 USD (non-refundable) to the university bank account.



Please visit our website for more information about the application and admission procedure, special requirements and additional documents for transfer students: [edu.unideb.hu/p/application-and-admission](https://www.edu.unideb.hu/p/application-and-admission)



You may also contact our local representatives, who can help you in the application process: [edu.unideb.hu/p/representatives](https://www.edu.unideb.hu/p/representatives)

Fees

- Application fee: 150 USD
- Entrance exam fee: 350 USD



Tuition fees:

For current tuition fees, please visit the program's website or scan the QR code. <https://www.edu.unideb.hu/p/tuition-fee-application-entrance-fee>

The costs of health insurance, medical check-up and student card are included in the tuition fee.

Cost of living

A LIST OF LIVING EXPENSES IN DEBRECEN (APPROXIMATE VALUES):

- Books & supplies from 100 USD
- Dormitory from 440 USD/month
- Private accommodation with utilities from 500 USD/month
- Food from 320 USD/month



For additional living costs you may check our website: <https://www.edu.unideb.hu/p/cost-of-living>

Dates and deadlines to remember

APPLICATION DEADLINES

FOR SEPTEMBER ADMISSION

PhD programs	15 May
All other programs	15 June

FOR JANUARY/FEBRUARY ADMISSION

Non-medical programs and PhD programs	15 November
Basic Medicine Course II	1 November

Hungary and the city of Debrecen

COUNTRY INFO:

Hungary is a European Union member country located in Central Europe. The country shares borders with Austria, Slovakia, Ukraine, Romania, Serbia, Croatia and Slovenia. Its population is ca. 10 million.

CITY INFO:

With 204,000 inhabitants, Debrecen is the second-largest city in Hungary. Debrecen has a small-town feel, with all a big city has to offer. A variety of cozy restaurants with local and international cuisine, cafés, wine bars, and ruin pubs add to the “taste” of life in Debrecen.

CITY LIFE:

Debrecen offers year-round high-quality programs including festivals, concerts, and all sorts of sports events.

MAIN ATTRACTIONS AND PLACES TO VISIT:

- Great Forest of Debrecen and Lake Békás
- Aquaticum Spa and Wellness Centre w/ Mediterranean Aqua Park
- Kölcsey Convention Center – the largest conference center of Eastern Hungary (capacity: 1,150 people)
- MODEM (Modern and Contemporary Arts Centre)
- Debrecen Zoo
- Debrecen Ice Rink
- Debrecen Swimming Pool complex
- Déri Museum

Student Life at the University of Debrecen

AT THE UNIVERSITY OF DEBRECEN, STUDENT LIFE IS SHAPED TO SUPPORT NOT ONLY YOUR ACADEMIC PROGRESS BUT ALSO YOUR PERSONAL WELL-BEING. AS A STUDENT OF THE FACULTY OF AGRICULTURAL AND FOOD SCIENCES AND ENVIRONMENTAL MANAGEMENT, YOU WILL JOIN A WELCOMING COMMUNITY WHERE YOU ARE SUPPORTED FROM THE VERY BEGINNING AND ENCOURAGED TO GROW WITH CONFIDENCE.

A key part of this experience is the International Students' Union (ISU), which helps international students navigate everyday university life while organizing popular events such as International Food Day and the Zamat Festival. The Faculty also has its own international student community, further strengthening the sense of belonging within the agricultural field. Prospective students can also turn to the University's Student Ambassadors, who offer friendly, practical advice on everyday matters and help ease the transition to life in Debrecen.

University traditions add a special dimension to student life. The Freshman's Ball marks the beginning of your journey, while the Halfway event offers a chance to celebrate an important milestone during your studies. As graduation approaches, the Graduates' Farewell Week brings students together through shared traditions and memorable moments. At the Faculty, Agriculture Faculty Day provides a relaxed and friendly setting where students and lecturers can connect beyond the classroom.

Student well-being is a clear priority. The Mental Hygienic and Equal Opportunity Centre offers free counselling services to support both students and staff. The University also promotes an active and healthy lifestyle: it was the first—and so far the only—institution in Hungary to receive the highest platinum rating in the FISU Healthy Campus programme. Students can take advantage of excellent sports facilities, physical education courses, and a wide range of recreational and team activities.

Campus life is further enriched by cultural and community programmes. Events like International Food Day, the Folklore Workshop, and the Student Committee on Environmental Protection provide opportunities to meet new people, explore Hungarian and international traditions, and get involved in university life. Everyday comfort is also part of the experience, with student-friendly spaces such as the Agrár Restaurant and popular university venues including Kazánház, HALL, Lovarda, Klinika University Club, and Teniszke. Together, these elements create a vibrant, supportive environment where you can study, build friendships, and truly feel at home.



For additional living costs you may check our website:
<https://edu.unideb.hu/p/student-life>





**UNIVERSITY *of*
DEBRECEN**

**COORDINATING CENTER
—— for ——
INTERNATIONAL EDUCATION**

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