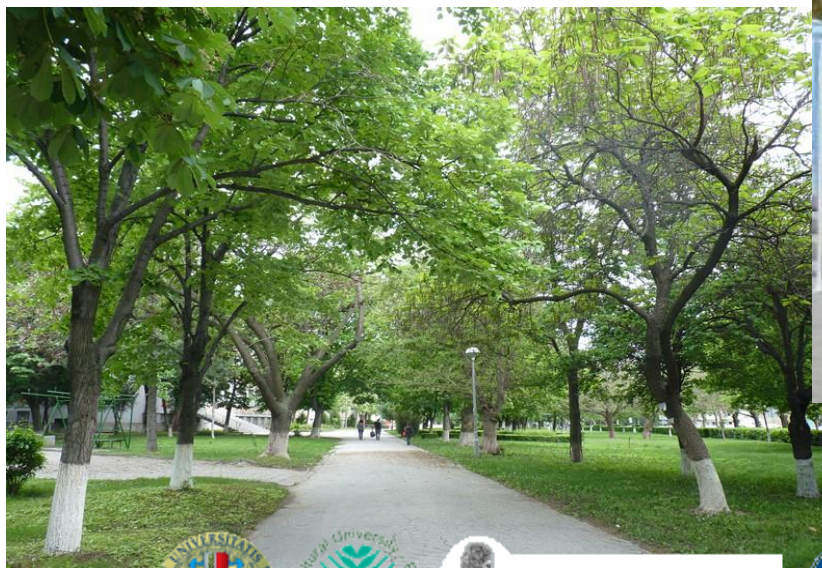


4 faculties:

- Faculty of Agronomy
- Faculty of Horticulture and Viticulture
- Faculty of Plant protection and Agroecology
- Faculty of Economics



ΓΕΩΠΟΝΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ





The Agricultural university-Plovdiv (AU) provides training for three academic degrees – Bachelor’s, Master’s and Doctoral.

Established	1945
Lecturing Staff	220
Administrative and supporting staff	160
Enrolled students	4000
Degrees awarded	BSc, MSc, PhD
BSc Study Programs	12
MSc Study Programs	32
PhD Scientific Majors in Bulgarian	26





Erasmus+

FACULTY OF AGRONOMY

Departments:

- Botany and Agrometeorology
- Plant Genetics and Breeding
- Animal Sciences
- Farming and Weed Science
- Crop Science
- Plant Physiology and biochemistry
- Agrochemistry and Soil Science



ΓΕΩΠΟΝΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ



Harmonization and Innovation in PhD Study Programs for Plant Health in Sustainable Agriculture – HarISA is a Erasmus+ project funded with the support of the European Union. Project Number: 598444-EPP-1-2018-1-HR-EPPKA2-CBHE-JP (2018-2472 / 001-001)

BSc Programs:

- Agronomy
- Plant Biotechnologies
- Zooengineering

MSc Programs:

- Crop production
- Plant breeding and seed production
- Plant biotechnologies
- Agribusiness
- Phytoregulation and plant nutrition
- Animal breeding and reproduction
- Evaluation and control in animal breeding

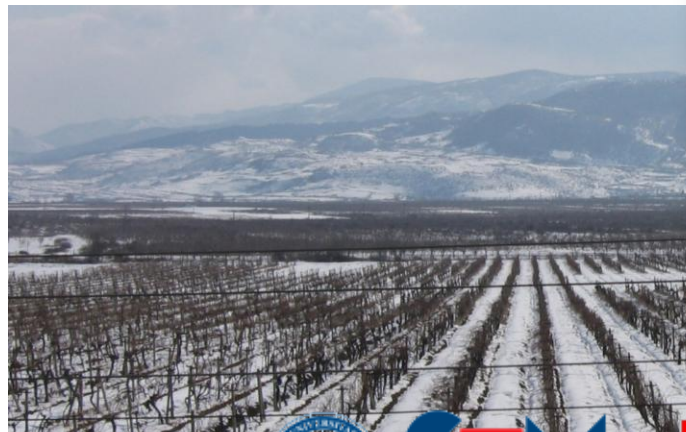


FACULTY OF HORTICULTURE AND VITICULTURE

The Faculty was founded in 1950.
Until now it is unique in Bulgaria and in South-Eastern Europe.

Departments:

- **Viticulture**
- **Horticulture**
- **Fruit Growing**
- **Agricultural Machinery**
- **Melioration with Geodesy**



ТЕΧΝΟΛΟΓΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ
HORTICULTURAL UNIVERSITY OF ATHENS



FACULTY OF HORTICULTURE AND VITICULTURE



BSc Programs:

- Horticulture and Viticulture
- Tropical and Subtropical Agriculture
- Agricultural Engineering
- Ornamental Gardening

MSc Programs:

- Viticulture and Horticulture
- Viticulture with basis of oenology (wine production)
- Agricultural Machinery
- Seed and planting material production
- Ornamental plants and landscape design



ΓΕΩΠΟΝΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ



The Faculty was founded in 1983.



Departments :

- Entomology
- Phytopathology
- Agroecology & Environmental Protection
- Microbiology & Ecological Biotechnologies
- General Chemistry



BSc Programs

- **Plant Protection**
- **Ecology and Environmental Protection**

MSc Programs

- **Plant Protection**
- **International Master Degree Plant medicine**
- **Agroecology and Plant protection**
- **Organic Farming**
- **Ecology of Settlement Systems**
- **Preserving of biological diversity**
- **Information systems and technologies in Plant protection**
- **Management of Plant protection**



LABORATORY COMPLEX

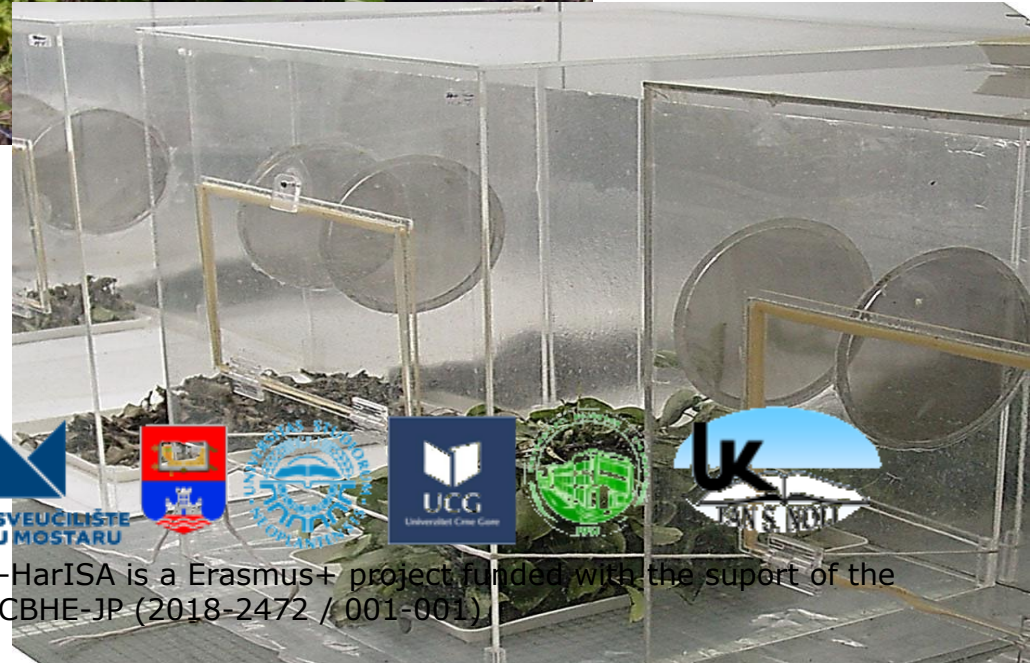


The Laboratory Complex of the Agricultural University, certified by Bulgarian State Standard EN ISO/IEC 17025/2001, carries out analyses on fruits and vegetables and the products after their processing, cans – from fruits and vegetables, sterilized; meat-and-vegetable, fish; juices and nectars; fat-free foods; cereals and products of processed grain; oil-bearing seeds; confectioneries; eggs and egg products; beverages – soft drinks, fizzy drinks; milk and dairy products; cosmetics; tobacco and tobacco products; wines and spirits; water and soil, etc.









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There is a modern experimental and research wine cellar with a wine collection with samples since 1968.





Erasmus+

AGROECOLOGICAL CENTRE



The Agroecological Centre was founded in 1989 with the aim of coordinating the efforts of researchers, students, farmers and consumers to carry out research and provide education for the development of organic agriculture in Bulgaria.



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CENTRE OF INTEGRATED MANAGEMENT OF PLANT DISEASES



The Centre was officially opened on 20 May 2014. Its establishment was realized with the kind assistance of the US Embassy in Sofia and the financial support of ‘America for Bulgaria’ Foundation.



The Centre was established in 2012 and in 2015 it was certified by the Bulgarian Food Safety Agency for carrying out biological testing of plant protection products.

The Certificate provides quality assurance of the conducted experiments on the efficacy of plant protection products in compliance with good experimental practices.



DISTANCE –LEARNING CENTRE



The Distance-learning Education Centre was founded and equipped in the frames of the project ‘Development of electronic forms of distance education’, financed by Human Resource Development Operational program. A Web-based university system for distance learning was created, providing conditions for the organization of distance learning at the Agricultural University.





STAFF TEACHING SUBJECTS IN AGRICULTURE – 160

TEACHING SUBJECTS RELATED TO PLANT HEALTH - 26

Students per cycle – 520 in BSc course in Plant protection

180 in MSc courses in Plant protection

PhD students in Plant protection – 10



Thank you for your attention!

Agricultural University – Plovdiv
12, Mendeleev Str., 4000 Plovdiv

www.au-plovdiv.bg



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PhD study program in Plant protection

Agricultural university-Plovdiv



Bulgaria has been a full member of the Bologna Process / European Higher Education Area since 1999.

- The Three-Cycle Structure for Higher Education
- The European Credit Transfer and Accumulation Systems (ECTS)
- The Diploma Supplement



As a result of the active participation in the Bologna process the following key characteristics have been introduced in Bulgaria:

- 3-degree higher education system:
 1. **Bachelor** – comprises two levels – “professional bachelor in ... ”-180 credits, and “bachelor”-240 credits;
 2. **Master** -60-120 credits;
 3. **Doctor** -180 credits;
- A credit accumulation and transfer system;
- European diploma supplement.



PhD study program in Plant protection Agricultural university-Plovdiv



General information

- **Title:** *Plant protection; Duration: 3-year course*
- **Structure:**

Number of credits: 180

Number of obligatory and elective courses:

Obligatory – 1 course depending on the specific topic of the PhD thesis (entomology; plant pathology; herbology, etc.) -20 credits

Elective – 5 credits per course: Statistics and experimental design; Databases with application in Plant protection; Teaching methods in agricultural studies



PhD study program in Plant protection Agricultural university-Plovdiv



- *Research work – 50 credits*
- *Annual reports 3x10 credits -30 credits*
- *Teaching experience with BSc students in subjects related to the PhD topic– up to 7 credits*
- *Publications in scientific journals – 5 to 30 credits related to the national scientific qualification criteria*
- *Participation in a conference/seminar – 5 credits*
- *Pre- Defense at the department – 50 credits*



Compliance with the European Qualification Framework



On 1 February 2012, the Bulgarian government approved the National Qualifications Framework (NQF) as an integrated framework of qualifications and is in full compliance with the Qualifications Framework for the European Higher Education Area and the European Qualifications Framework for Lifelong Learning.

The NQF contains 9 levels in total, including preparatory (zero) level covering the pre-school education. The upper three levels of the NQF numbered from 6 to 8 correspond to the three cycles of the Bologna process (the degrees Bachelor, Master and Ph. D.). The expected learning outcomes described in the NQF are generic knowledge, skills and competences.



Learning outcomes

Knowledge

- ✓ has and uses specialized and systematic knowledge to make a critical analysis and synthesize new ideas
- ✓ proficiently employs the methods of scientific research in the field of Plant protection
- ✓ ability to broaden and improve current knowledge in the field of Plant protection as well as its interaction with close scientific areas
- ✓ demonstrates knowledge with the highest degree of complexity and carries out original research
- ✓ demonstrates knowledge and understanding at the highest possible degree not only in Plant protection but also in related scientific areas



Learning outcomes



Skills

- ✓ ability to find solutions to complicated problems by employing new technological methods and instruments
- ✓ quickly gathers, extracts, classifies, synthesizes and assesses the required data both from detailed and scarce sources
- ✓ ability to solve and overcome serious problems in the field of Plant protection, improve standard models and approaches, develop innovative solutions by combining a variety of original strategies and technologies, manage unsuccessful attempts and continue developing, improve standard models and approaches
- ✓ has methods and means to foresee changes and problems, and think innovatively, develop and propose reasonable plans, put into effect new ideas, acquire quickly new skills and qualities, foresee technological and creative development, write and present new scholarly and technical documents (scientific articles, summaries, reports, figures, graphs, etc.)
- ✓ has the following skills: resilience, entrepreneurial spirit, strictness, adaptability and intellectual flexibility



Learning outcomes



Competences

Autonomy and Responsibility

- ✓ creates and interprets new knowledge on the basis of own research or other scholarly activity
- ✓ ability to evaluate the merits of own research
- ✓ ability to make up, design, implement and adapt a contemporary research process in conformity with scholarly norms



Learning outcomes



Competences

Learning Competences

- ✓ has a capacity for a systematic acquisition and understanding of a considerable amount of knowledge about the latest scientific achievements in Plant protection or a field of professional practice



Learning outcomes



Competences

Communicative and Social Competences

- ✓ shows qualities and transferable skills which require an enhanced sense of personal responsibility and self-initiative in complex and unpredictable circumstances as well as in professional or similar contexts
- ✓ can communicate effectively in some of the most common European languages



Learning outcomes



Competences

Professional Competences

- ✓ has a profound understanding of the techniques used for scientific and complex academic research in the field of Plant protection
- ✓ makes a thorough evaluation of complex issues in the field of study, often in the absence of extensive data, and presents one's own ideas and conclusions clearly and effectively
- ✓ capacity to continue conducting fundamental or applied scientific research at increasingly complex levels, contributing to the development of new techniques, ideas or approaches



List of 5 already completed PhD thesis

- ✓ The Tomato borer, *Tuta absoluta* Meyrick (Lepidoptera: Gelechiidae) – distribution in Bulgaria, biology and control options.
- ✓ Root-knot nematodes of the genus *Meloidogyne* Goeldi on potatoes in southern Bulgaria.
- ✓ Aphid species (Hemiptera: Aphididae) on stone fruit species - spreading, harmful activity and control.
- ✓ Peach leaf curl disease (*Taphrina deformans* (Berk) Tul.) in Bulgaria.
- ✓ Fungal diseases on lavender in Bulgaria.
- ✓ Comparative study of weed control systems in the sunflower in the conditions of Central South Bulgaria.



List of 5 PhD thesis that are in the process (approved topics)

- ✓ Biology of the southern stink bug *Nezara viridula* (Linnaeus) (Hemiptera: Pentatomidae) and control options.
- ✓ Parasitic species of nematodes of the genus *Aphelenchoides* Fischer on rice in southern Bulgaria.
- ✓ Epidemiology and control of Cherry leaf spot (*Blumeriella jaapii*) on cherry and sour cherry.
- ✓ Exploration of microorganisms that accelerate the degradation of plant residues.
- ✓ Isolation and characterization of microorganisms stimulating growth and development in cereals.



SWOT analysis



STRENGTHS

- ✓ 78 year-long traditions in agricultural education and science, including 35 in Plant protection.
- ✓ Traditionally strong contacts in the area of Plant protection with leading scientists and experts worldwide.
- ✓ Close contacts and good communication with leading national research institutions.
- ✓ Experimental fields and glasshouses, certified laboratory complex.
- ✓ Facilitated and fast communication among researchers in solving interdisciplinary scientific tasks.
- ✓ Well-stocked university library serving teaching/training/learning activities. Access to international online databases.
- ✓ Significant financial resources for research activities attracted by international scientific and operational programs through bilateral agreements with EU countries, China, etc. and the National Science Fund, stimulating the scientific work of young scientists.



SWOT analysis

WEAKNESSES

- ✓ Insufficient or outdated research equipment and laboratory appliances and resources at some departments (research units).
- ✓ Outdated infrastructure of insufficient capacity to meet present-day demands.
- ✓ Insufficient funding for research activity strongly dependent on government funding.
- ✓ Still low scientific capacity to participate in European scientific networks and applied research projects.
- ✓ Demographic crisis and low remuneration for young people are a barrier to academic and scientific careers.
- ✓ Self-confidence deficit of academic staff to break out of routine research and search for innovative solutions.



ΓΕΩΠΟΝΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ



SWOT analysis



OPPORTUNITIES

- ✓ Opportunities for developing Plant protection projects related to State priorities.
- ✓ Opportunities for selecting among undergraduates and attracting the best of them for enrolment in doctoral study programs, including Plant protection.
- ✓ Possibilities for international knowledge exchange within joint projects.
- ✓ Growing interest in training foreign students from countries outside the European Union.
- ✓ Contacts, mobility and exchange of researchers and students in frame of bi- and multilateral co-operations.
- ✓ Enhanced opportunities for the education-science-business relationship and practical contacts.
- ✓ Upgrading existing communication and educational networks.
- ✓ Membership in the EU - facilitated contacts, mobility and exchange of scientists, joint projects.



SWOT analysis

THREATS

- ✓ **Expensive maintenance of the material and technical base.**
- ✓ **Worsening of the economic situation and insufficient funding for research, education and the renovation of the existing infrastructure and equipment.**
- ✓ **Low remuneration, lack of incentives and difficulties in attracting young people into the higher education and research sector.**
- ✓ **Possible demotivation in terms of research, particularly strong in young scientists due to legal and organizational difficulties, slow career development and low payment.**
- ✓ **The frequent changes in the Regulations and Rules lead to re-organisations and reforms. Incompetent interference of politics with science and education. Increased competition.**



Courses of general importance for the study program



Statistics and Experimental Design

This course presents basic elements of the scientific method and currently accepted practices for scientific research. The scientific method rests on data obtained from experiments and/or observational studies, and their analysis. An objective analysis of data is based on certain assumptions (which can be tested) and involves consideration of probabilities. The learning objective of the course « Statistics and Experimental Design» is to provide students with essential knowledge of statistics.

Learning outcomes

After completing the study of the discipline « Statistics and Experimental Design » the student should:

- Know how to design an experiment.
- Be able to visualize, summarize and compare data.
- Know the most widely used probability distributions and recognize them in applications.
- Understand what an estimator is, and the properties it should have.
- Perform inference for a single sample and for two samples.
- Perform an analysis of variance.
- Apply this knowledge in real-life examples from the agricultural science.



Courses of general importance for the study program

Databases with applications in plant protection

This discipline aims to educate the students in basic concepts, functions, types and used technological solutions in contemporary databases and their applications in plant protection. The core of teaching discipline consists of relational databases and relational objects in numerical and text form. The logical model of relational database on pesticides use is based on complex relationships between datasets on “cultures”, “pests” and “pesticides”. Lectures cover also methods, standards and technologies for building Web databases, including opportunities to access and extract useful data from Web databases in the field of crop protection.

Students are trained to work with relational objects and software instruments for processing numerical and text data. Students can also include new elements of the database, build queries and prepare reports. Besides, they can explore Web data and databases on plant protection in Internet concerning: a) country in European Community (site of European and Mediterranean Plant Protection Organization); b) companies producing pesticides (SYNGENTA, BASF, Bayer CropScience); c) PAN Pesticides database in USA.



Courses of general importance for the study program



Teaching methods in agricultural studies

The course is designed to improve students' teaching ability by incorporating a variety of teaching methods into the learning setting. Specifically, this course focuses on various learning theories and teaching methods for both formal and non-formal learning situations.



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