



NATIONAL UNIVERSITY OF LIFE  
AND ENVIRONMENTAL SCIENCES OF UKRAINE

MASTER DEGREE PROGRAMS

2013-2014



LEADING RESEARCH  
UNIVERSITY IN FACTS:

YEARS OF SUCCESSFUL  
WORK

115

STUDENTS

40 000

MASTER DEGREE  
STUDENTS

5 000

PROGRAMS

45

# LOCATION OF SUBDIVISIONS OF NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF UKRAINE



## SCIENTIFIC AND RESEARCH SUBDIVISIONS OF UKRAINIAN EDUCATIONAL AND RESEARCH INSTITUTE OF BIORESOURCES QUALITY AND SAFETY OF LIFE

- 15** Ukrainian laboratory of Quality and Safety of Agricultural Products
- 16** Ukrainian SRI of Agricultural Radiology
- 17** Research and Project Institute of Standardization and Technologies of Ecosafe and Organic Products (Odessa)

## Separated subdivisions (SS) of NULES of Ukraine "TRAINING, INFORMATION AND CONSULTING CENTER"

- 18** SS NULES of Ukraine "Lubny TICC"
- 19** SS NULES of Ukraine "MalynTICC"
- 20** SS NULES of Ukraine "Tarashcha TICC"
- 21** SS NULES of Ukraine "Mukacheve TICC"
- 22** SS NULES of Ukraine "Bobrovytsia TICC"

## SPORT AND RECREATION CENTERS

- 31** Sport and recreation camp "ACADEMICHNYI"
- 32** Recreation center "VOLNA"
- 33** Recreation center of Prybrehzhne Agricultural College
- 34** Sport and recreation center "FOROS"
- 35** Recreation center in Novyi Svit village

# Dear students!

This short edition aims to demonstrate the opportunities of NULESU to those who are eager to obtain master's degree and become highly skilled professionals in order to provide significant growth of biological resources and improve the quality and safety of food in our country, the wellbeing, intelligence and democracy of our society.



Having broad experience in communicating with many colleagues from major world leading universities, I would like to point out that Master programs are a major determinant of a University's prestige. That is why they are rather expensive.

I strongly believe that master's and doctoral degrees are the crucial factors which determine the high level of scientific and technological progress of a nation. They favor the development of spirituality, enhance the intellect and prosperity of the society. This conception is supported by the philosophy of Master studies: a combination of knowledge, skills and continuous readiness to meet the biggest challenges of fast moving life. The contents of master programs are highly flexible, they encourage the young generation to foresee macro-and micro consequences of facts and events, to develop highly effective business models and predict global changes in the nature and society, as well as to educate political and state leaders. Master programs enable future specialists to obtain a global view on the role and place of their profession in the society; they provide graduates with opportunities for comparative analysis of the achievements in Ukraine and abroad, and finding the ways to bring the country to the level of international recognition. At the same time it is important that the students gain up-to-date knowledge about nature protection, economics and law regulation, international standards and technologies, raw resources, ready-made production, etc.

For skeptics, who fear for americanization or europeanization of Ukrainian universities, I would like to note, that our higher education is nourished by its original Ukrainian roots. Our ancestors trained bachelors and masters in the times of Kyiv-Mohyla Academy (the 17th century). This form of training was going on up to the 1920s on the territory of Ukraine and Russia. Thus, as it appears, we are reviving our centuries-old traditions.

Nowadays graduates should not only obtain profound professional competences and skills, but also master foreign languages and gain up-to-date knowledge of information and telecommunication components (computer and geoinformation technologies). The university education promotes developing the world information network and provides those who are engaged directly in production with opportunities to use world information resources and obtain higher education degrees. Under such conditions the process of reforms in higher education system at our university will be a success.

The National University of Life and Environmental Sciences of Ukraine is a world known self-governing higher educational institution with extensive research activity (it offers programs to 40,000 students in 29 fields of study and 44 specialties, and to more than 600 postgraduate and, doctoral students). There are 14 Education and Research Institutes and Centers, numerous scientific and innovation subdivisions. Due to these facts, our University has been recognized by the international academic community of agro industrial, natural, biotechnological and environmental sectors as the one that meets the international requirements of the quality of education, research and innovation systems.

Our achievements demonstrate that we have chosen the right way towards reforms. Now we are looking into the future with confidence, and that is why we invite young people to study here. We always welcome guests, colleagues and friends to cooperate with us or just pay a friendly visit to our university.

Yours faithfully

Rector of National University of Life and Environmental Sciences of Ukraine,  
Full member of the National Academy of Science of Ukraine  
and the Ukrainian Academy of Agrarian Sciences,  
the Hero of Ukraine

A large, stylized handwritten signature in black ink, which appears to read 'Dmytro Melnychuk'.

Dmytro O. Melnychuk

# CONTENT

**National University of Life and Environmental Sciences of Ukraine**  
**Scheme of basic institution of NULES of Ukraine**  
**International cooperation**  
**Student life**  
**Strategy of Master training at NULES of Ukraine**  
**The academic process**

## The list of Master programs at NULES of Ukraine

8.09010101	Agronomy
8.09010105	Selection and Genetics of Agricultural Crops
8.09010102	Agrochemistry and Soil Science
8.09010104	Fruit and Vegetable Science and Viniculture
8.09010501	Plant Protection
8.04010601	Ecology and Environment Protection
8.05140105	Environmental Biotechnology and Bioenergetics
8.09010201	Technologies of Production and Processing of Livestock Products
8.09020101	Water Bioresources
8.11010101	Veterinary Medicine
8.05170104	Technologies Preservation, Conservation and Processing of Meat
8.05170105	Technologies Preservation and Processing of Water Bioresources
8.09010301	Forestry
8.05180101	Wood Processing Technologies
8.09010302	Wildlife Service
8.09010303	Park and Gardening Management
8.05050312	Machinery and Agricultural Equipment
8.05050303	Forest Complex Equipment
8.10010203	Mechanization of Agriculture
8.07010102	Organization of Transportation and Management in Transport
8.07010104	Traffic Organization and Control
8.05020201	Automated Control of Technological Processes
8.05070103	Electrotechnical Systems of Power Consumption
8.10010101	Energetics of Agricultural Production
8.10010103	Electrification and Automation of Agriculture
8.05010101	Information Managing Systems and Technologies
8.03050201	Economic Cybernetics
8.08010103	Land Management and Cadaster
8.03040101	Jurisprudence
8.03050401	Economics of Enterprise
8.03050901	Accounting and Auditing
8.03050801	Finance and Credit
8.03050803	Taxation
8.03060104	Management of Foreign Economic Activities
8.03060101	Management of Organizations and Administration
8.03050701	Marketing
8.01010601	Social Pedagogy

## The list of Master programs ("Specific categories")

8.18010018	Administrative Management
8.18010010	Quality, Standardization and Certification
8.18010021	Pedagogy of Higher School
8.18010020	Management of Educational Institution

## The list of Master programs ("Public Service")

8.15010005	Public Administration
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## International programs

Master programs functioning at NULES of Ukraine in cooperation with foreign universities-partners  
 Master programs to be realized at NULES of Ukraine in cooperation with foreign universities-partners

## Master programs in applied biology in specialization "Laboratory activity" in expert and control sphere of employment (experts-analysts)

**TRC of biology of plants and laboratory diagnostics of quality and safety of plants and environment**  
**TRC of animal biology and laboratory diagnostics of animal health and quality, safety of livestock production**

## The list of Master programs at SF "KATU"( NULES of Ukraine)

8.09010101	Agronomy
8.09010104	Fruit and Vegetable Science and Viniculture
8.11010101	Veterinary Medicine
8.05170106	Technologies of Products of Fermentation and Viniculture
8.05170102	Technology of Fats and Substitutes
8.10010203	Mechanization of Agriculture
8.03050401	Economics of Enterprise
8.03050901	Accounting and Audit
8.03060101	Management of Organizations
8.08010103	Land Management and Cadastre

## Admission to Master courses at NULES of Ukraine



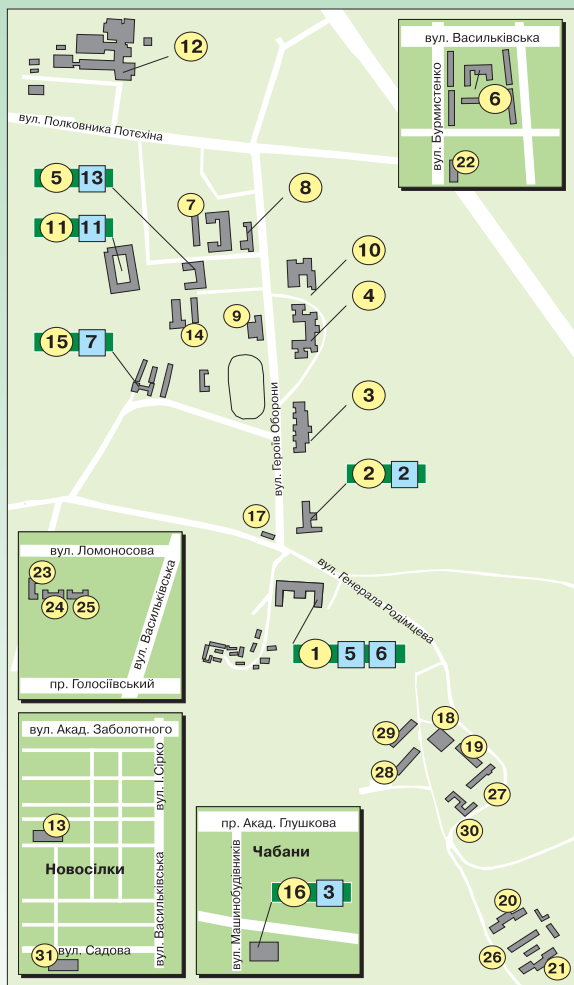
# NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF UKRAINE



National University of Life and Environmental Sciences of Ukraine, founded in 1898, is one of the leading educational, scientific and cultural institutions of Ukraine. Over 40 thousand students and over 600 postgraduate students, doctoral students and PhD degree applicants study at the basic institution of NULES of Ukraine (Kyiv), in the Southern Filial of NULES of Ukraine the "Crimean Agrotechnological University" and at 12 regional higher educational institutions of I–III levels of accreditation.

The academic process and scientific research at university are provided by over 3000 employees (1423 employees work at the basic institution), including 226 – Doctors of sciences and professors, 900 – candidates of sciences and associate professors.

## LAYOUT OF THE BASIC INSTITUTION OF NULES OF UKRAINE



### Educational buildings and other objects of the basic institution of NULES of Ukraine and their address:

1	1th educational building	03041, Kyiv, General Rodymtsev str, 19
2	2th educational building	03041, Kyiv, Heroiiv Oborony str., 17
3	3th administrative building	03041, Kyiv, Heroiiv Oborony str., 15
4	4th educational building	03041, Kyiv, Heroiiv Oborony str.
5	5th educational building	03041, Kyiv, Heroiiv Oborony str. 16
6	6th educational building	03041, Kyiv, Vasytkivs'ka str, 17
7	7th educational building	03041, Kyiv, Heroiiv Oborony str.
8	8th educational building	03041, Kyiv, Heroiiv Oborony str.
9	9th educational building	03041, Kyiv, Heroiiv Oborony str. 11
10	10th educational building	03041, Kyiv, Heroiiv Oborony str. 12
11	11th educational building	03041, Kyiv, Heroiiv Oborony str., 12-в
12	12th educational building	03041, Kyiv, Polkovnyk Potekhin str., 16
13	14th educational building	03027, Kyiv region, Kyivo-Sviatoshynskiy distr., Novosilky, Yermolenko str., 5
14	15th educational building	03041, Kyiv, Heroiiv Oborony str., 18-а
15	17th educational building	03041 Kyiv, Silskogospodarsky lane, 4
16	16th educational building	08162, Kyiv region, Kyivo-Sviatoshynskiy distr., Chabany vil, Mashynobudivnykiv str, 7
17	Botanical garden	03041, Kyiv, General Rodymtsev str., 2
18	Dining-room	03041, Kyiv, General Rodymtsev str., 7
19	Hostel № 1	03041, Kyiv, Blakytynogo str., 10
20	Hostel №2	03041, Kyiv, Blakytynogo str., 8
21	Hostel №3	03022, Kyiv, Lomonosov str., 67
22	Hostel №4	03041, Kyiv, Burmistenko str., 4
23	Hostel №5	03022, Kyiv, Lomonosov str., 63
24	Hostel №6	03022, Kyiv, Lomonosov str., 65
25	Hostel №7	03041, Kyiv, Blakytynogo street, 4
26	Hostel № 8	03041, Kyiv, General Rodymtsev str., 1
27	Hostel №9	03041, Kyiv, General Rodymtsev str., 7-A
28	Hostel №10	03041, Kyiv, General Rodymtsev str., 7-B
29	Hostel №11	03041, Kyiv, General Rodymtsev str., 7-B
30	Hostel №12, Hotel	03041, Kyiv, General Rodymtsev str., 1-B
31	Hostel №13 & 13-A	Kyiv region, Kyivo-Svyatoshynskiy distr., Novosilky, Sadova str., 21

## NULESU APPRECIATES THE SUPPORT OF PROMINENT UKRAINIAN AND FOREIGN SCIENTISTS AND STATESMEN





# INTERNATIONAL COOPERATION



The thorough analysis of the systems of Master training at universities of developed countries in Europe, America and Asia has become the basis for working out the strategy of Master training at National University of Life and Environmental Sciences of Ukraine (NULESU) initiated by Rector Academician D.O. Melnychuk.

Master programmes at NULESU have been successfully developed thanks to active cooperation of our University with Iowa State University of Science and Technology (Martin Zhyshke, David Topel, John Kozak, Gregory L. Goeffroy, Elizabeth Hoffman, David Aker, Denise Byeland), Agrarian Centre of Louisiana State University (Rose Cafy, William B. Richardson, Lida Geitwood, Lecshman Veloupillay), Anhalt University of Applied Sciences (Dither Orcessec, Zigmar Brandt), Wageningen (Tsee M. Karsen, M.J.Kropff, Eric Frederics), Weihenstephan University of Applied Sciences (Yoseph Herts, Herbert Shtriobel), Humboldt University of Berlin (Ernest Lindeman, Adelhund Knyuppel, Christopher Markeshays, Frank Elmer), Ghent University (Andre De Linher, Oswald Van Klimput, George Hoffman), Nitra Agricultural University, Slovakia (Imrikh Okenka, Peter Belik, Helena Horsa), Czech University of Life Sciences, Prague (Yan Hron, Mechislav Svatosh, Vlastimil Cherni), Warsaw University of Life Sciences, Poland (Aloisi Shymanski, Christina Hutkovska, Bohdan Klepatsky), Wroclaw University of Life Sciences, Poland (Roman Kolach, Alina Velichko), Tokyo Agricultural University (Izoya Shynzhy, Akimi Fud Zhymoto) etc.

The Ukrainian party in working out Master Degree System of training was represented by: V. Kalenskyi, M. Melnychuk, N. Ridei, A. Kravchenko, S. Melnychuk, M. Zakharenko, M. Tsvilikhovskyi, P. Lakyda, V. Halushko, A. Kovtun etc.



# NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF UKRAINE



The curricula and programs of Master's Degree training are compiled in accordance with requirements of Law of Ukraine "About higher education". Their adaptation and conformity meet the requirements of U.S. and European systems of higher agricultural education. It is demonstrated by memoranda of mutual recognition with such universities:

- memorandum of Understanding were signed with: Louisiana State University (USA) 1998, 2009; Iowa State University (USA) 1996, 1998, 2011; Humboldt University of Berlin (Germany) 2002; Ghent University (Belgium) 2002;
- memorandum of Double-degree diploma were signed with: Wageningen University (The Netherland), 2006 - "Environmental Sciences", "Biotechnology", "Management Economics and Consumer Studies"; Humboldt University of Berlin (Germany), 2002 - "Process and Quality Management"; Anhalt University of Applied Sciences (Germany), 2006 - "Master of Food and Agribusiness" (MFA); University of Applied Sciences Weihenstephan - Trisdorf (Germany), 2005 - "Masters of Business Administration in Agriculture" (MBA); Russian State Agrarian University - Moscow Timiryazev Agricultural Academy, 2012 - Master program; Warsaw University of Life Sciences (Poland), 2012 - Master program.

At the XXIII International Agricultural Exhibition AGRO-2011-2012 NULESU was awarded a gold medal in the nomination "For development and implementation of modern masters programs in the agricultural sector of Ukraine"

On March 3, 2010, NULESU started to introduce the Quality Management System according to the requirements of international standard ISO 9001:2008 "Systems of Quality Management".

In March 2012, Quality Management System of NULES of Ukraine was certified by the auditors of one of the leading companies which provides independent technical services and is represented at the world markets - TUV Rheinland InterCert (a part of TUV Rheinland). This organization carries out technical supervision, certifies products, management systems and staff in accordance with international standards. The Company was founded in 1872 in Germany and now has about 500 offices in 60 countries.

In April 27, 2012 in Brussels (Belgium) the University received the certificate of conformity of Quality management system at NULES of Ukraine to the requirements of international standard Compliance certificate "Quality Management System" in the section "Education and Research".



## STUDENT LIFE

### Developing student leadership skills at NULES of Ukraine



There is a number of public youth organizations functioning at the university, including the primary trade union organization of students, Ukrainian Youth Public Organization "Association of young farmers of Ukraine", Student organization etc.

**Student Primary Trade Union Organization of NULES of Ukraine** is a public organization of students and postgraduates of the university, aimed at representation, realization and protection of educational, social and economic rights and interests of its members.

According to the charter of trade union of workers of the agroindustrial complex of Ukraine, the student primary trade union organization of the university functions in the following areas:

- social and legal defence of students;
- organizational activities;
- recreation and leisure of students;
- housing and living conditions;
- cultural and sports activities;
- international cooperation.



**Ukrainian Youth Public Organization "Association of young farmers of Ukraine"** (AYFU) brings together more than 40,000 students, young farmers, scientists and progressive public figures from different regions of Ukraine.

The main goal of AYFU is to satisfy and protect legal, social, economic, artistic and spiritual interests of young people of Ukraine, the problems of youth in rural areas.

AYFU organizes and provides constant support in organizing national and international social events, promotes projects of young farmers and scientists of Ukraine.

Since 2000 AFYU has organized and conducted over 100 nationwide and global events with the support of state authorities and international partners. AFYU consolidates and brings together young farmers and scientists of Ukraine to achieve the organizational goals.



Student organization is the body of student government, which provides participation of students in the development, adoption and implementation of managerial decisions concerning the university functioning, involves young people into various kinds of socially important activities at numerous clubs and centers:

- Travel Club "Leopard";
- Photo club;
- Club of experts;
- Science Club,
- Ecological Club,
- Press Club;
- Employment Center;
- Social Center;
- Media Centre



## STUDENT LIFE

### Developing of student leadership skills at NULES of Ukraine



Annually more than 70 different cultural events are held at NULESU. The Day of Knowledge, International amateur festival "Holosiivska Vesna", "Beauty of NULES of Ukraine contest", International Student Day, New Year's Day, Day of Agriculture, International Women's Day, Shevchenko's days, Mother's Day, Victory Day, applied handicraft art exhibition "Hospodarochka", theatre performances, Sports glory parties, Graduation ceremony at National University of Life and Environmental Sciences of Ukraine and its 13 separated regional subdivisions. .

The free time activities of students are organized by the department of Culturology, department of education and student affairs, student and trade union organizations, teaching staff, tutors of academic groups.

Students can develop and realize their creative skills in numerous amateur groups:

- Folk Music and Dance group "Kolos" (choir, dance group, ensemble of folk instruments);
- National Student Theatre "Berezil"
- Academic studio of solo singing, group of bandura players;
- Academic Choir, Vocal Ensemble "Vodohray";
- Choreographic ensemble "Divoche suzirria";
- Studio of pop solo singing, vocal ensemble "Octava"
- Ballroom Dance Club "Charivnist";
- Vocal and instrumental band "Octava";
- Music chamber "Zolota lira";
- Media studio "Ideal";
- Art Studio "Holosiivska palitra", "Decorativna florystyka"
- Theatre "Melpomena".

Students can take up various sports:

- football;
- basketball;
- athletics;
- athletic exercises;
- touristic club "Leopard";
- Kyokushinkai karate;
- sambo;
- aikido;
- weightlifting;
- ski racing;
- callanetics;
- volleyball;
- sport orienteering;
- wrestling;
- dance aerobics;
- table tennis;
- hand-to-hand fighting;
- judo;
- powerlifting;
- weight lifting;
- shaping;
- chess, draughts



One Honored Worker of Physical Culture and Sports of Ukraine, one Honored coach of Ukraine, 3 masters of sports of Ukraine of international level, 11 Masters of sports, one Honorary master of sports contribute to students engagement in 30 sports and health training groups.

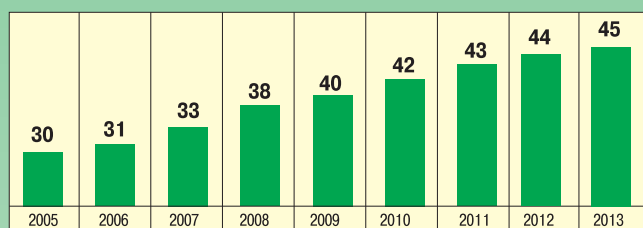
Students and university staff take part in local, regional, national and international competitions. University teams regularly participate in nationwide sports games for students of agricultural universities of Higher Educational institutions of III-IV levels of accreditation.



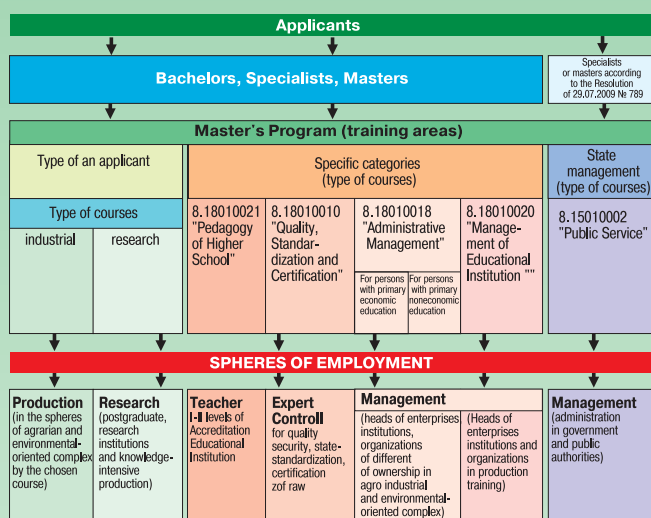


# STRATEGY OF MASTER TRAINING AT NULES OF UKRAINE

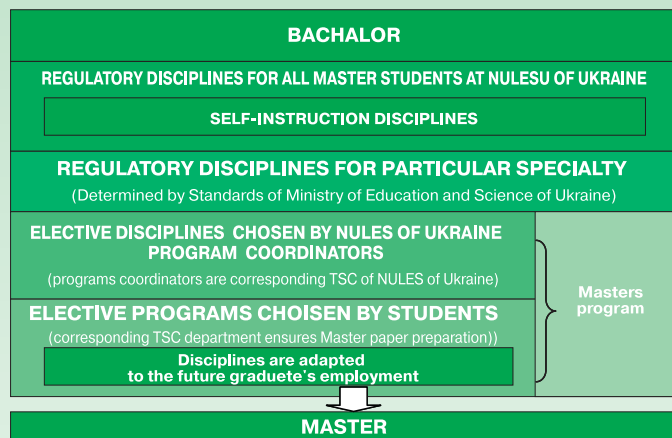
Amount of Master programs



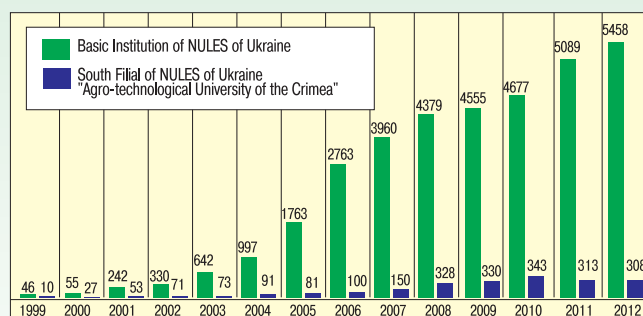
Spheres of graduates employment



THE CONTENT STRUCTURE OF MASTERS PROGRAMS OF NULES OF UKRAINE



UNDERGRADUATES CONTINGENT GROWTH (STUDENTS / YEAR)



NULES of Ukraine offers 45 master specialties, each providing more than 100 different types of Master programs..

Master Degree Programs at NULES of Ukraine are characterized by:

- adherence to graduates employment areas (production, research, teaching, expert controlling and managerial);
- professional content in each of these areas.

Basic principles of developing the program contents are:

- conformity to present and future needs of agriculture, biotechnology, environmental and scientific research complexes and other sectors of Ukrainian economy ;
- adaptability to the system of training accepted in the world (Bologna process);
- flexibility in adapting to rapidly changing requirements of national and international labor markets;
- innovative character of master programs and curricula;
- integration of education, research and innovation according to the model of the world leading research universities;
- logical consistency between masters and bachelors programs

The content of the master program is determined by agreement of the parties' NULES of Ukraine - employer - master student.

At NULES of Ukraine master training is provided in:

- specializations (production and research);
- field of knowledge "Specific Categories", in specialties "Pedagogy of Higher School", "Quality, standardization and certification", "Administrative Management", "Management of educational institution";
- field of knowledge "Public Administration" in specialty "Public Service".

# ACADEMIC PROCESS SUPPORT



## ACADEMIC PROCESS SUPPORT

National University of Life and Environmental Sciences of Ukraine has its own bases for practical training:

- 3 research stations - "Agronomic Research Station" Separated Subdivision of NULES of Ukraine, "Boyarka Forestry Research Station" Separated Subdivision of NULES of Ukraine (Kiev region), Mountain Forestry and Horticulture Research Station "Foros" (Crimea);
- 6 education and research farms (ERF) - Velykosnitynka ERF named after O.V. Muzychenko, Separated Subdivision of NULES of Ukraine; Vorzel ERF, Separated Subdivision of NULES of Ukraine Nemishaevo Agricultural College ERF, Separated Subdivision of NULES of Ukraine (Kyiv region), Training and Research Breeding Plant named after Frunze, TRF Separated Subdivision of NULES of Ukraine; Zalischytsky Agricultural College named after E. Hraplyvyi, Separated Subdivision of NULES of Ukraine; Nizhyn Agricultural Institute, TRF Separated Subdivision of NULES of Ukraine (Chernihiv region);
- practical training bases of regional universities of NULES of Ukraine, I-II levels of accreditation;
- training and research center of subtropical plants biology and ecology and landscape science, NULES of Ukraine (Yalta, Crimea);
- Botanical Garden, NULES of Ukraine.

Practical training is conducted by related departments, their branches, 50 training and research production laboratories, where students are engaged in practical and academic training.

## INFORMATION AND TELECOMMUNICATION SUPPORT

Computer networks of the basic institution NULES of Ukraine and its subdivisions are united into a single corporate network, that includes over 2500 computers, dozens of servers, 14 sites of university structural subdivisions.

The students are provided with computerized single university library network and six filials at education and research institutes. Up-to-date software provides an access to the academic and scientific literature, electronic catalog, the world's electronic resources, FAO (Food Agriculture Organization) UN, the full-text electronic materials - books, textbooks, scientific articles, multimedia materials, etc.

The University provides e-learning for all standard master programs on the platform of distance learning Moodle.



## Agriculture and Forestry

branch of knowledge

**Agriculture and Forestry**

course code

**8.09010101**

Form of study/training period, years

☒ full time **1,5** ☒ part-time **2,0** ☐ externship

credits ECTS

**70**

licensed amount, persons

☒ full time **100** ☒ part-time **100**

### ANNOTATION OF THE PROGRAM

The content of the program meets the requirements of agricultural branches: crop farming and growing.

Master program aims at effective training of professionals, able to use crop growing adaptive technologies, to provide its economic, energy, environmental ecological efficiency. Masters are able to develop and realize efficient methods of biological potential of plant varieties, productivity and yield quality, depending on soil and climatic parameters and crop cultivation technologies, to solve production and scientific problems of post harvest handling and crop storage.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

According to industry higher education standards and state classifier 003:2010, undergraduates obtain qualification 2213.1 - research agronomist, and can be employed in the following industries: agriculture and forestry, crop growing, corn growing, industrial crops, horticulture, landscape gardening and plant nursery growing, cultivation of fruit, berries, nuts, plants for production of beverages and spices, crop growing combined with animal breeding, horticulture services.

Specialist can occupy the following positions: research agronomist, agronomist, airfield agronomist, hydraulic agronomist engineer, agronomy inspector, research officer (agronomy), seed agronomist.

### Production oriented Master programs

#### ORGANIC FARMING

Farming systems analysis, direction of their development on the basis of branch ecologization, solving environmental problem, agricultural production

#### APPLIED HERBOLOGY

Conducting operational, segetal plant level monitoring, mapping weed-infestations.

Methods and skills of seedling probable emergence, field agrophytocenosis optimal weed control system.

#### GRAIN PRODUCTS MARKETING AND PRODUCTION

Grain production involves studying biological characteristics of crops, expanding the range of grain varieties suitable for cultivation in specific soil - climatic zones, technology for growing crops.

#### INDUSTRIAL CROPS MARKETING AND PRODUCTION

Production of industrial crops, including cultivation technology, production quality requirements, that meet national and international standards, economy, marketing and branch management.

#### HERBAL CROPS MARKETING AND PRODUCTION

Herbal crops production involves the study of their biological properties, wild species introduction from other geographical zones, herbal crops growing technology.

#### FODDER CROP MARKETING AND PRODUCTION

Growing of fodder crops as a source of nutritious green fodder for feeding farm animals and materials for storing high-quality preserved fodder.

#### SEED FARMING AND SEED SCIENCE

Quality of seeds basal factor in accordance with the state standards, factors which influence the quality of seed, its germination, physical, biochemical and physiological properties. Seed control. Seed growing scientific basis, quality and yielding properties.

#### PLANT PRODUCTION TRANSPORTATION, PRESERVATION AND PROCESSING.

The graduates study after-harvesting work technologies (sorting, calibration, peeling, drying, aeration, etc.), of grain, fruit and vegetable production, industrial raw material storage and processing.

### Research oriented Master programs

#### THEORY AND PRACTICE OF ARABLE LAND WEED CONTROL

Researchers-agronomist are engaged in scientific work to study and look for ways to solve the current problems of crop infestation under different farming systems.

#### THEORETICAL SUBSTANTIATION AND DEVELOPMENT OF THE SYSTEM OF ENERGY SAVING ECOLOGICAL FARMING IN UKRAINE

Energy saving ecological farming combined with natural soil potential and agro-technical measures to enhance fertility renewal and obtain eco-safe agricultural products.

#### FODDER PRODUCTION ENERGY SAVING TECHNOLOGIES

Development of energy and resource saving technologies of fodder plants growing and fodder production in meadows and pastures.

#### AGRICULTURAL CROPS PRODUCTIVITY MANAGEMENT

Scientifically proved agricultural crops productivity management considering their adaptive capacity and resistance to biotic, abiotic stresses and agrotechnical measures aimed at realization of genetically determined biological potential and obtaining stable yields of agricultural crops with renewed quality.

#### CROP PRODUCTION QUALITY AND AFTER-HARVESTING WORK, PROCESSING AND PRESERVATION FACTORS

Future researchers-agronomists study the methods of growing, after-harvesting work, preservation and modes of production, different purpose grain processing, potatoes, vegetable and fruit products, technical raw material factors, their effect on storage, technical and seed properties.

#### DEVELOPMENT AND ECOLOGICAL TESTING OF HIGH YIELD AND ADAPTABILITY OF CULTIVARS AND HYBRIDS

Applying of varieties resistant to abiotic and biotic environmental factors is the most effective method of increasing productivity of varieties. Fundamental knowledge is important to understand the mechanisms of plant resistance. Study of physiological and biochemical mechanisms which provide morphological plant resistance to stress and pathogens, methods of assessment and a source material adaptive to extreme environmental conditions.





## SELECTION AND GENETICS OF AGRICULTURAL CROPS

branch of knowledge

Agriculture and Forestry

course code

B.09010105

Form of study/training period, years



full time

1,5



part-time



externship

credits ECTS

70

licensed amount, persons



full time

25



part-time

### ANNOTATION OF PROGRAM

Master training aims to develop students' knowledge, practical skills of scientific principles of crops selection and genetics, organization of state scientific and technical expertise of varieties and hybrids in Ukraine, theoretical grounds and organization of seed production, development of resource saving technologies of agricultural seed growing under farm and state control of varieties and sowing seed quality for further increase and stabilization of crop production volumes in Ukraine

A specialist is trained to work in scientific-research institutions of the NAAS and the NAS of Ukraine, sort-testing stations, scientific-research centers of State service system on protection of the right on crop varieties, seed and seed-control inspections of Ministry of Agrarian Policy and Food Production of Ukraine, enterprises of different forms of ownership on growing, preparation, realization of high quality seeds and planting material, and in educational institutions.

### EMPLOYMENT

According to industry higher education standards and state classifier 003:2010, graduates obtain qualification 2213.1 - "Researcher in breeding and crops genetics", and can be employed in the following industries: agriculture and forestry, crop growing, corn growing, industrial crops, horticulture, landscape gardening and plant nursery growing, cultivation of fruit, berries, nuts, plants for production of beverages and spices, crop growing combined with animal breeding, horticulture services.

Specialist can occupy the following positions: researcher in selection and genetics of agricultural crops, specialist in genetics and selection of agricultural crops, scientific worker of a department or laboratory (expert in qualification evaluation of plant varieties on WOS - test), agronomist of selection, sort-experimental station and seed farming, inspector and expert in seed quality, plant material and quarantine, including border services and arbitration courts, heads of centers on sort-studies, sort-experimental stations

### Production oriented Master programs

#### STATE SCIENTIFIC AND TECHNICAL EXPERTISE OF PLANT VARIETIES AND THEIR LEGAL PROTECTION

Formation of national plant variety recourses provides food safety of the country. The main tasks of state qualification expertise of varieties and hybrids of agricultural crops in Ukraine (WOS-test and expertise on suitability for spreading in Ukraine), the main stages, methods and techniques of variety studying. Registration of varieties and hybrids, post-registration study. Legal protection of varieties and hybrids, inspectional supervision during their civic use.



### Research oriented Master programs

#### USE OF BIOLOGICAL DIVERSITY, AS SOURCES OF ECONOMICALLY VALUABLE FEATURES AND DEVELOPING NEW DONORS FOR SELECTION OF MODERN VARIETIES AND HYBRIDS

Genetic and selecting aspects of modern competitive varieties and hybrids of agricultural crops adapted to bio and abiotical factors of environment. Developing and evaluation methods of new source material, technology of selecting process. Peculiarities of modern seed work under agroindustrial reforms

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"



## AGROCHEMISTRY AND SOIL SCIENCE

branch of knowledge

**Agriculture and Forestry**

course code

**8.09010102**

Form of study/training period, years

☒ full time

☐ 1,5

☒ part-time

☐ 2,0

☐ externship

credits ECTS

☐ 70

licensed amount, persons

☒ full time

☐ 50

☒ part-time

☐ 50

### ANNOTATION OF PROGRAM

The program aims to provide the study of soil as a natural substance, development of measures of its conservation, rational use and management, monitoring and agrochemical soil certification. Graduates can occupy the following positions: soil science engineer, agrochemist, head of soil department in agrochemical organizations. Specialist can be engaged in the following activities: conducting geobotanical, agrochemical soil investigations, drawing up soil and agrochemical maps and cartograms; development of fertilizers systems, reproduction of soil fertility and the natural balance of landscapes; realization of soil tillage protection technologies; introduction of technologies for high quality of agricultural crops according to the requirements of national and global systems of standardization and certification; agrochemical service of agricultural enterprises using advanced agrotechnologies in plant growing.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

State Classifier of professions of Ukraine SC 003:2010 determines the position Researcher in Agrochemistry and Soil Science for graduates' of EQL "Master" (code CP 2213.1). These programs provide employment of specialists in the system of design and exploration centers "Obldzhrodyuchist", system of land management organizations, at any agricultural enterprise on the positions of an agronomist, agronomist-agrochemist, at private and state enterprises, producing and trading chemical fertilizers (fertilizers for plant protection) on positions of managers; at environmental inspections, in the sphere of criminalistics, system of soil protection services on positions of engineer-soil scientist; in the banking sector on position of soil evaluating experts, in the system of quarantine and customs control of Ukraine on positions connected with soil quality assessment and ecological conditions of environment.



### Production oriented Master programs

#### AGROCHEMICAL SERVICE OF MODERN TECHNOLOGIES IN PLANT GROWING

The program provides training of specialists with knowledge of methodological and agrotechnical aspects of agrochemical service in crop industry. Analytical and practical use of modern methods of control, energy-saving technologies, distance sensing of plant nutrition, development of agrochemical cartograms, field passports, budget-technological documentation. Specialists can be employed in production sphere of agroindustrial complex, agrarian enterprises, State technology centers of soil fertility protection.

#### SOIL SCIENCE, MONITORING OF SOIL QUALITY, SOIL PROTECTION

Program provides training of specialists with knowledge of content, regimes and soils facilities, with ability to develop measures for their rational use, protection and fertility restoration; defining the ecological and genetic status and potential productivity of soils; defining the character and degree of development of degradation processes; studying recultivation methods of destroyed and remediation of contaminated soils, increasing their potential fertility. Graduates can be employed in the system of design and exploration centers "Obldzhrodyuchist", system of land management organizations, financial enterprises for expert soil assessment and at any agricultural enterprise.



### Research oriented Master programs

#### IMPROVING OF AGRICULTURAL CROPS NUTRITION DIAGNOSTICS AND THEIR FERTILIZATION SYSTEM

The program provides specialists with all-round theoretical knowledge in methodology, methods of plant nutrition diagnostics, particularly nitrogen with the aim of production process rational regulation - formation of yield and some products quality indicators; in detection on the basis of phenological observations and analytical experiments correlation dependencies between plant nutrition regime and future harvest generalization and statistical processing of research results to develop a rational system of fertilization of crops and provision of soil fertility reproduction. Specialists are trained for educational, scientific, scientific-research institutions to deal with plant nutrition, quality of plant products, soil fertility for state technological centers of soil fertility conservation.

#### PROTECTION AND LAND QUALITY IMPROVEMENT BY USING RESOURCES OF TILLAGE MINIMIZATION

The program studies the anthropogenic impact on soil fertility and land quality, agro-ecological assessment of the effectiveness of different farming systems and development of soil protection, recourse saving plants growing technologies on the basis of soil tillage minimization and biologization of agriculture; preparation and use of local fertilizers to maintain the balance of humus and nutrient elements; substantiation of protection and restoration of soil fertility; soil bonitation and soil evaluation on the basis of ecological condition soils' indicators; expert evaluation of soils; developing manufacturing methods and use of soil quality cartograms.

Graduates can be employed as research assistants in research institutions, in the system of regional branches of land management organizations, in the system of design and exploration centers "Obldzhrodyuchist".



## FRUIT AND VEGETABLE SCIENCE AND VINICULTURE

branch of knowledge

Agriculture and Forestry

course code

B.09010104

Form of study/training period, years

☒ full time ☐ 1,5 ☒ part-time ☐ 2,0 ☐ externship

credits ECTS

70

licensed amount, persons

☒ full time ☐ 50 ☒ part-time ☐ 50

### ANNOTATION OF PROGRAM

Training of master's degree students in specialty is focused on modern and perspective directions of development in fruit and vegetable growing and viticulture. Master degree program in specialty involves deep specialized training in the sphere of horticulture, vegetable-growing on the opened and protected soil. Specialists acquire abilities and knowledge of innovative character in this sphere and are able to challenge modern requirements of the society in increasing the range and production of necessary amount of high-quality fruit and vegetable products for internal consumption and export, they are capable to organize and use up-to-date technologies in scientific researches and production.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

In accordance with the state standard of higher education of Ukraine graduates receive qualification "Researcher in fruit and vegetable growing and viticulture" (code 2213.1) and can be employed in: plant growing, vegetable growing, ornamental horticulture and plant nursery growing, cultivation of fruit, berries, nuts, plants for production of beverages and spices, crop growing combined with animal breeding, horticulture services. In accordance with professions Classifier DK003:2010 Specialists can be employed in such primary positions as researcher in fruit and vegetable growing and viticulture, researcher in selection and genetics of agricultural crops, researcher (agronomy).

### Production oriented Master programs

#### GARDENING

Master's degree students study modern technologies in gardening (use of spore varieties, methods of regulation of fruit loading on undersized plants, use of bioactive matters for increase of productivity and resistance to unfavorable factors of external environment) the ability to program and forecast the yield of fruit planting with high accuracy.

#### VEGETABLE-GROWING

Students study the experience of growing vegetable crops in the opened soil, complex technologies of growing modern heterosis hybrids, tiny irrigation system and fertigation, methods of developing varieties and hybrids with timely programmed characteristics.

#### PROTECTED SOIL

Technologies of growing agricultural crops are studied in different types of cultivation buildings, peculiarities of modern assortment of basic crops, recommended for growing in winter-spring, summer-autumn and prolonged crops.

#### MUSHROOM GROWING

Master's degree students study assortment of edible mushrooms which are cultivated according to intensive and extensive technologies. The economic-biological indexes of cultures of field mushroom disporous, oyster mushroom ordinary and other kinds are probed.



### Research oriented Master programs

#### THE ADVANCED AND INNOVATIVE STUDY IN GARDENING

Students study the experience of leading scientific establishments in Ukraine and abroad in order to develop intensive planting of granule and drupaceous breeds using tiny irrigation and fertigation. The most perspective directions in scientific work and progress in gardening and viticulture in a country and world are studied.

#### SCIENTIFIC AND INNOVATIVE WORK IN VEGETABLE-GROWING

Modern experience of leading scientific establishments in Ukraine and abroad is investigated in order to develop hybrids of vegetables and water-melons, melons and gourds for different soil and climatic zones. Normative legal documents which regulate procedure of vegetable approbation are studied.

#### STANDARDIZED TECHNOLOGIES OF PRESERVATION AND PROCESSING OF VEGETABLES AND FRUIT

Master's degree students study the up-to-date methods of processing products of fruit and vegetable growing and viticulture. The students research factors of plant growing that influence vegetables and fruit storage and develop the new modes and methods of storage of fruit and vegetable products.





## PLANT PROTECTION

branch of knowledge

**Agriculture and Forestry**

course code

**8.09010501**

Form of study/training period, years

☒ full time

1,5

☒ part-time

2,0

☐ externship

credits ECTS

90

licensed amount, persons

☒ full time

75

☒ part-time

75

### ANNOTATION OF PROGRAM

Students obtain proficient knowledge in: entomology, plant pathology, herbology and quarantine of plants, biology, ecology, distribution and peculiarities of development, character of plant damage; reproduction of harmful organisms etc.; they ensure phytosanitary control of seed and planting material, plants, soil, air; scientifically substantiate integrated pest-control of agricultural crops; consult specialists, farmers and private owners to apply measures of pest-control.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

In accordance with the state standard of education graduates obtain qualification - a Researcher in plant protection (code CP 2213.1) and according to the state classifier of professions of Ukraine (SC k003:2010) may be employed in state, regional and district inspections of plant protection and quarantine, services of phytosanitary control on positions of an agronomist in plant protection, inspector in quarantine of plants; in research institutions, control-toxicological laboratories and laboratories of biological protection of plants, on positions of junior employee, scientific advisor, entomologist, entomological phytopathologist; at the enterprises of different forms of ownership on positions of agronomist in plant protection, etc. Specialists in plant protection (since 2007) and quarantine of plants (since 2005) are given the status of state employee.

### Production oriented Master programs

#### PHYTOMEDICINE

Provides knowledge about plant pathology: pathogenic and saprotroph microflora of grain of agricultural crops, control of its harmfulness; infection of varieties of agricultural crops by the agents of diseases; study of efficiency of plant protection measures against diseases.

Graduates are able to work in the stations of prognosis and occurrence of harmful organisms, enterprises of different forms of ownership, companies, associations, agricultural societies; in plant protection research institutions; in district and regional plant protection inspections and agronomical and agro-chemical services.

#### PHYTOSANITARY MONITORING AND PROGNOSIS

*Specialists study monitoring and prognosis of population of harmful phytophagous state in agroecosis with the purpose of short- and long-term prognostication of their quantity in order to choose the optimum systems of agricultural crop protection; theoretical principles of prognostication of quantity of insects-phytophagous; up-to-date technologies of monitoring and prognosis of remote sensing of earth and GPS.*

*Graduates can be employed in State regional and district services of signaling and prognosis of harmful and useful biovariety of phytocenosis; plant protection and quarantine inspections; services of phytosanitary control; scientific research institutions; control-toxicological laboratories and laboratories of biological plant protection; at enterprises of different forms of ownership.*

#### QUARANTINE OF PLANTS

*The program provides specialists with knowledge of domestic and European phytosanitary legislation; skills of realization of phytosanitary control of the objects of regulation of internal and external quarantine of plants; careful phytosanitary expertise; analysis of phytosanitary risk of harmful organisms in relation to possibility of their acclimatization within Ukraine; potentially ecological and economic consequences and measures on their localization and liquidation.*

*Graduates be employed on positions of inspectors in State service of plant quarantine of Ukraine and quarantine laboratories, departments of phytosanitary control of plant protection and quarantine; on positions of a researcher, laboratory assistants in scientific-research institutions of Ukraine.*

### Research oriented Master programs

#### BIOLOGICAL SUBSTANTIATION OF CONTROL OF OBLIGATORY AND OPTIONAL PATHOGENS

The graduates acquire theoretical knowledge in relation to substantiation of ecologically safe measures for limitation of development of the most widespread obligatory and optional parasites of main agricultural crops and develop skills practical.

Graduates can obtain the following positions: researcher in scientific-research institutions of Ukraine; heads of laboratories, laboratory assistants, leading specialists in agencies on probation of plant varieties on resistance against harmful organisms, seminal inspections, etc.

#### CONTROL OF INSECT QUANTITY IN AGROECOSIS OF AGRICULTURAL CROPS

The program is directed at control of insects-phytophagous quantity in agroecosis, substantiation of development prognosis, reproduction, and population dynamics as a constituent of the technology of growing agricultural crops. Students study theoretical principles of mechanisms of insect self-government which influence the changing of insects-phytophagous quantity with estimation and analysis of their regulation factors.

Graduates can be employed on position of entomologist and entophytopathologist in scientific-research institutions of Ukraine, Institutes of plant protection, phytophysiology, agriculture, sugar beet, potato growing, etc.



# ECOLOGY AND ENVIRONMENT PROTECTION

branch of knowledge

**Natural Sciences**

course code

**8.04010601**

Form of study/training period, years

☒ full time **1,5**
☒ part-time **2,0**
☐ externship

credits ECTS

**70**

licensed amount, persons

☒ full time **50**
☒ part-time **50**

## ANNOTATION OF PROGRAM

Degree training of ecologists is realized through continuous, integrated program of basic disciplines and fields of study "Specific categories" and "State administration", including adapted to the level of the best world analogues, common training at universities - partners by the way of integration in training and research centers or international university consortia consists in obtaining a complete higher education qualifications - master ecologist, teacher of high school (with basic industry knowledge), experts of standardization, certification and quality management of natural resources (field of study "specific categories") and public servants (branch of knowledge "State administration").

Master programs take into consideration the possibilities: ecological awareness and providing of generally ecological component of training of all professionally-interested; a reflection in the process of training of the social-and-ecological order for sustainable development; favourable environment of education integration, science, innovations, informatization of academic training; formation of skills of the graduates to develop concepts, strategies and programs of socio-economic and ecological development in order to secure quality housing and environment based on environmentally-oriented management decisions by improving the quality of education and research, ensuring the effectiveness of eco-logical policy and management of different levels.

### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

## EMPLOYMENT

After graduation masters get qualifications 2211.2, 2310.2 - an ecologist, teacher of higher educational establishment. According to the profession classifier of Ukraine ДК 003: 2010 they can be employed on such primary positions: ecologist, engineer of technogenic and environmental security, protection of natural ecosystems, the protection of wildlife, management of nature, restoration of natural ecosystems, use of water resources, specialist in the use of water resources, economic modeling of environmental systems, environmental management, environmental education, geosystem environmental monitoring.



## Master's programs of productive type

### ECOLOGY AND AGROSHERE WATER RESOURCES

The program provides analytical and instrumental forming of professional competences in the development and implementation of treatment technologies and observance of quality requirements of water supply sources, environmental assessment methodology for agrosphere water quality, environmental certification of water bodies, providing of ecological safety of water ecosystems, rational use and protection of agrosphere water resources and their quality management, prevention and elimination of environmental problems of irrigated and drained farming, creation of databases for efficient water use terrestrial and aquatic ecosystems.

### ECOLOGICAL CONTROL IN AGROSHERE: MONITORING, CERTIFICATION, EXAMINATION

The program provides the formation of professional and special agro-ecological management competencies to ensure environmental control and security in agrosphere: the development of agroecological monitoring systems of their territories and enterprises; environmental and radiological certification of industrial and agricultural companies, villages, solid waste, land, pastures, natural and recreational facilities; landscape and environmental review and examination of agrosphere activities types, crop production technologies and facilities for business decision-oriented environmental management for sustainable rural development.

## Master's programs of research type

### SOCIO ECOLOGICAL EXAMINATION AND SUSTAINABLE RURAL DEVELOPMENT

The program promotes the learning of professional and applied social ecological competences for diagnosis of the institutional, economic, ecological and social indicators of sustainable development of nature and society, establishing of environmental and socio-economic patterns of development systems at various levels of hierarchy, the definition of socio-ecological-economic indices of human development of agricultural areas, development of formation mechanisms of environmental awareness and culture of social groups, of socio environmental assessment of agrosphere areas.

## International Master's Program

### ENVIRONMENT QUALITY AND SYSTEM ANALYSIS

The program provides expert gaining control of professional and methodological competencies applied systems analysis of properties of anthropogenically-modified agro-, urbo, technoecosystem, qualitative characteristics of diversity, relationships and environmental safety of terrestrial and aquatic ecosystems, in the theory of systems ecology and systems analysis of environmental quality, environmental regulation integrity, function, dynamics and productivity of natural ecosystems, prediction and modeling of ecosystem state and development and migration of biogenous elements under the influence of pollutants, monitoring and quality management of soil and water resources, environmental management of contaminated territories and regions.

### ENVIRONMENTAL MANAGEMENT AND POLICY

The program generates professional managerial and socio-political competences of procedures, processes and resources for the development and implementation of management relations and methods, evaluation of progress testing, improving of environmental management decisions, achieving of the objectives of environmental policy and determination of environmental problems of different levels and types of economic activities - from businesses, industries to national and global economy, resource saving application of measures of natural resources and ecological strategies of economic subjects, forecasting, prevention and elimination of consequences of environmental disturbances; of objectives and actions of the authorities for management aimed at environmental safety of different levels of implementation and satisfaction of the environmental needs of the population.

## ENVIRONMENTAL BIOTECHNOLOGY AND BIOENERGETICS

branch of knowledge

**Biotechnology**

course code

**8.05140105**

Form of study/training period, years

☒ full time

1,5

☐ part-time

2,0

☐ externship

credits ECTS

70

licensed amount, persons

☒ full time

30

☐ part-time

30

### ANNOTATION OF PROGRAM

The program provides theoretical principles and practical skills in researching biological objects taking into account classical and modern scientific approaches that combine perception and understanding of biotechnological and ecological orientation. The special part enables to master the basic techniques in working with the genetic material necessary for training highly qualified specialists of branch subdivisions. The practical part gives an opportunity to use up-to-date biotechnology based on wildlife laws, to create and implement new systems for agricultural complex, power engineering; light, chemical industry, mining, oil-processing complex, quality control of Biotechnological products, legal regulation, management and marketing, biosafety and bioethics.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

According to the classifier of profession of Ukraine, graduates obtain the qualifications: biotechnologist, researcher (biology, agronomy, forestry, environment and reserve business), engineer in natural ecosystems restoration, biologist, biologist- researcher, researcher and consultant (biology), engineer- researcher.

Graduates work at the enterprises of food, chemical and biotechnological industry (enterprises: "Slavutych", "Obolon", "Styrolbiotech", "Kievmedpreparat" etc.), engineering and the design organizations, power producing enterprises (biogas, biodiesel) and solid and liquid waste facilities, at environmental and sanitary control organizations, at production and control-analytical laboratories, centers of certification, commercial firms, research and design institutes, National Academy of Sciences of Ukraine, specialized agencies, government offices, universities and secondary schools, on positions of chief specialist, microbiologist, engineer, head of laboratory, senior laboratory assistant, teacher, engineer-researcher, scientist, bacteriologist, virologist, mycologist etc.



### Master programs of productive type

#### ENVIRONMENT PROTECTION BIOTECHNOLOGIES

The program covers the problems of environment protection by biotechnological methods against industrial, agricultural and domestic waste, using of industrial waste-free processes to produce food and drugs, forage, mineral raw material, energy, environmentally friendly alternative products for industry and agriculture and health protection, overcoming ecological crisis of Earth's biosphere, global environmental pollution prevention, rational environmental management and providing environmental safety, improving the level of social ecological culture.

#### HYDROECOLOGY AND MONITORING OF AQUATIC ECOSYSTEMS

The program aims to the issue of assessment of the aquatic ecosystems state, the study of sources and ways of toxic water pollution, classes and types of toxicants, the processes of its transformation in the environment and aquatic organisms hydrobionts, migration of toxic substances on the links of trophic chains of aquatic ecosystems and patterns of occurrence and development of toxic effects in water bodies of different types; considers the state of aquatic ecosystems in relation to weather factors and changes in these systems, which occur due to human activities; examines the methods of organizing and monitoring of aquatic ecosystems and analysis of the obtained data for decision making and realization of activities in restoration of these ecosystems.

#### BIOLOGICAL PROTECTION OF AGROECOSYSTEMS

The program aims to explore the issues of biological protection of agroecosystems, to study morphological and biological characteristics of biological means of plant protection, biotechnological principles of its production, its safe use to regulate the number of pests in order to obtain high-quality environmentally safe crop production and plant protection from damage - development and application of bio-pesticides and bio-fertilizers, restore soil fertility.

### Research oriented Master programs

#### ALTERNATIVE BIOENERGY

The program aims to study the application of alternative energy in the national economy, principles and processes of accumulation of solar energy, production technologies and use of different types of biofuels, methods of determination of technical-economic and ecological efficiency of energy sources that are based on biotechnological processes, production of alternative fuels from biological raw materials; the program considers the possibility of change of mineral fuels into alternative energy sources; examines qualitative indexes of biofuels (biodiesel, biogas, granular biofuels, etc.), parameters and operation modes of its production.

#### DNA CERTIFICATION AND GENOME MAPPING

Master program explores the basic methods of practical diagnostics and identification of genetically modified organisms in the products of consumption, development of the methods and DNA certification systems of valuable crops using modern biotechnology and molecular-biological methods. The special part of the program gives an opportunity to master the basic techniques to work with genetic material necessary for training highly qualified specialists of branch subdivisions.

#### BIOSAFETY AND BIOETHICS

The program aims to study heredity and changeability of organisms variation with the new artificially created features, as well as their distribution and possible consequences for ecobiospheres. It examines basic legal documents and agreements in the sphere of biosafety, adopted in Ukraine and a number of world leading countries, ethical aspects and problems of biosafety, ethics in manipulation with cells, organs and organisms, principles and mechanisms of manipulation with genomes, achievements in genetic engineering and therapy, as well as a number of modern biotechnologies, their benefit and risks for the planet bioenvironment. The special part of the program gives possibility to master basic methodological approaches for control of genetic state of organisms, up-to-date analytical tools of food quality control.



## TECHNOLOGIES OF PRODUCTION AND PROCESSING OF LIVESTOCK PRODUCTS

Agriculture and Forestry

Agriculture and Forestry

course code

B.09010201

Form of study/training period, years

☒ full time ☐ 1,5 ☒ part-time ☐ 2,0 ☐ externship

credits ECTS

70

licensed amount, persons

☒ full time ☐ 125 ☒ part-time ☐ 125

### ANNOTATION OF PROGRAM

The program provides advanced study of biological and economic characteristics, laws of realization of the inherited inclinations for productivity, reproduction and ontogenesis of agricultural animals, systems of their keeping, features of feeding, technological equipment of enterprises, intensive technologies of sapling raising, principles of management and marketing in stock-raising industry.

Conception of masters training combines theoretical studies, practical training and scientific research in order to develop professional skills to apply in modern energy saving technologies of production of high-quality livestock products.

Training curricula were recognized by leading educational institutions of the United States of America and Europe. High level of academic and practical training enables students to acquire sufficient level of knowledge and abilities to work at production enterprises.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

According to industry standard of higher education in Ukraine (according to classifier of professions CP003: 2010) graduates obtain qualification 2213.2 - a technologist-researcher in production and processing of livestock products.

Future profession: an animal technician, an animal technician of product quality control, an animal technician of livestock breeding, an engineer-technologist, engineer of production and processing of livestock products, work in research institutions, specializing in animal breeding and genetics of livestock, postgraduate training.

### Production oriented Master programs

#### GENETIC RESOURCES OF LIVESTOCK

The program provides future specialists in cattle breeding with knowledge of genetic principles of selection, practical skills of genetics - mathematical analysis in the plant-breeding programs according to kinds and breeds of agricultural animals.

#### HORSE BREEDING AND STUD FARM BUSINESS

The program provides future specialists with scientific, practical and organizational skills to work in the state and private cattle breeding businesses, zonal research institutes and stations, hippodromes, horse-racing and medical centers, tourist bases.

#### DAIRY CATTLE BREEDING

The program provides the students with profound knowledge in dairy cattle breeding in market conditions.

#### MEAT CATTLE BREEDING

The program provides future professionals with thorough knowledge of biology, feeding, keeping, peculiarities of environmentally friendly production of beef, meat productivity and meat breed cattle management.

#### BEEKEEPING

The program provides thorough knowledge of the bee family biology, melliferous plants resources, technologies of keeping and bee colonies reproduction, bee diseases, organization of production, processing and evaluation of beekeeping product quality.

#### PRODUCTION AND PROCESSING OF PIG RAISING PRODUCTS

The program aims to provide future professionals with up-to-date knowledge of new technologies of production and processing of pig raising products; skills of planning and technological process management.

#### PRODUCTION AND PROCESSING OF SHEEP AND GOAT BREEDING PRODUCTS

The program provides knowledge of obtaining products of high pedigree value, technology of production, primary and deep processing of products of sheep and goat breeding.

#### POULTRY FARMING

The program provides students with extended knowledge in biology, embryology and feeding of different kinds of agricultural poultry and practical skills in modern technological process of production and primary processing of food eggs and meat, marketing system in poultry farming.

#### ANIMAL FEEDING

The program provides future technologists-researchers with knowledge, abilities and skills in management of technological process of voluminous forage purveyance, preparation of mixed fodders and forage additives and methods of their effective use in feeding of ruminant and mono gastritis animals.

### Research oriented Master programs

#### ANIMAL BREEDING AND SELECTION

The program provides future technologists and researchers with knowledge of methods of determination of the productivity and animal pedigree value, improvement and population creations, lines and animal breeds, maintenance of gene pool, development of selection perspective programs of herds and skills in animal reproduction and selection.

#### ANIMAL HYGIENE AND VETERINARY SANITATION

The program provides specialists in industry of development, introduction of new systems and methods of animal keeping, control of physical, chemical and biological factors of environment, approbation and sanitary-hygienic estimation of new types of forage, forage additives, technological equipment, facilities for animal keeping and study of their behavior to receive maximal amount of products conditioned by genetic potential.

#### ANIMAL FEEDING AND FORAGE TECHNOLOGY

The program provides future technologists-researchers with innovative knowledge about properties of forage nutrients, its transformation into livestock products in an organism, control of sufficient animal feeding, methods of scientific research into animal feeding.



### Water Bioresources

branch of knowledge

Fishery and Aquaculture

course code

B.09020101

Form of study/training period, years

☒ full time

1,5

☒ part-time

2,0

☐ externship

credits ECTS

90

licensed amount, persons

☒ full time

75

☒ part-time

75

#### ANNOTATION OF PROGRAM

Students obtain deep knowledge about the basics of biology taking in consideration the extension of the species quantity of the objects to be cultivated and wide implementation of valuable high-yielding of fish species, efficiency of pond fishes, mechanism of influence of intensification measures on fish efficiency and fish quality on the cost of fish production.

Master programs focuses on the tendency of intensive development of pond fish farming, training of professionals in sturgeon culture, aqua design, construction and designing of decorative aqua systems, special training of professionals with knowledge of the theory of formation and using bioproductive potential of natural water resources, basics of nature protection law, arrangement of existing and new competitive selective schools of high-yielding essential species and fish breeds, rare and disappearing representatives of water ichthyofauna, the formation and usage of ichthyofauna of fish farming water reservoirs, developing ways of fish raising yielding in continental and world ocean, forecasting the condition of ichthyofauna affected by anthropogenic factors, theoretical substantiation of reproduction and protection of rare and endangered fish species and water resources, evaluation methods of industrial fish stock.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

#### EMPLOYMENT

According to the industry standard of the higher education of Ukraine, graduates obtain the qualification 2213.1 "Aquaculture researcher" and according to the SC 009-96 can be employed in: fishing, fish raising and fish farms; services in fish farming, fishing, sport fishing, hooking of crustaceans, harvesting marine products, fishing services, services in pond examination, storages of water examination services, stimulation of fish raising. Graduates can obtain primary positions of hydro biologist, ichthyologist, fishery officer and inspector of fish protection state agency.



#### Production oriented Master programs

##### POND FISHERY

Training specialists in pond fish culture to work in specialized fish-breeding, ware and full-system fish culture pond type enterprises, in the research institutions that deal with improvements of technology of fish raising in ponds, in the Ministry of agricultural policy and production of Ukraine and State agency of fish farming of Ukraine.

##### STURGEON CULTURE

Training of experts in sturgeon culture to work at sturgeon fish plants, at specialized sturgeon farms, in research institutes dealing with keeping and formation of population in industrial reservoirs of sturgeons, in the natural water storages and development of ware sturgeon culture, in State of fish farming agency.

##### DECORATIVE AQUACULTURE

Training experts in Water bioresources and decorative aquaculture. The aim of master program is to provide knowledge about biology, keeping, reproduction and treatment of decorative fishes; organizing artificial decorative aqua systems; design of aqua systems of closed and opened types; modern technologies in cultivation and selection of the most valuable objects for decorative aqua systems.

##### PROTECTION OF HYDRO BIORESOURCES

Training experts in environment protection to work in the system of Ministry of Ecology and environmental resources of Ukraine or in the system of fish farming State agency, in the regional or district fish protection agencies, in the research institutions, in the state or private enterprises dealing with raising, protection and reproduction of rare and endangered species of fish, increasing productivity of water ecosystems. The programs is based on the scientific approaches to optimize rational use and protection of water resources.

#### Research oriented Master programs

##### SELECTION OF FISHERY OBJECTS

Training specialists in selection and breeding of fish culture to work in the research institutions, Ministry of agricultural policy and production of Ukraine and fish farming state agency that provide general control over selective and breeding facilities of specialized fish breeding enterprises of different forms of ownership.

##### ICHTHYOFAUNA OF COMPLEX USE WATER RESERVOIR

Training specialists in ichthyology to work in the system of fish farming state agencies, its regional structures, research institutions, in other state and private enterprises that deal with fishing and fish raising in the fishing water reservoirs, and in complex use water reservoirs in particular.

##### BIOMONITORING OF FISHERY WATER RESERVOIR

Training specialists in ichthyology to work in the system of fish farming state agencies, its regional structures, research institutions, in other state and private enterprises that deal with water quality control and water ecosystems conditions, complex and fishery use water reservoirs, estimation and forecasting of fish productivity of water reservoirs under natural and anthropogenic factors; development and realization of methods of water quality control and measures directed at increasing bioproductive potential of water reservoirs.

## VETERINARY MEDICINE

branch of knowledge

Veterinary science

course code

B.11010101

Form of study/training period, years

☒ full time ☐ 2, 0 ☒ part-time ☐ 2, 0 ☐ externship

credits ECTS

120

licensed amount, persons

☒ full time ☐ 250 ☒ part-time ☐ 25

### ANNOTATION OF PROGRAM

Specialists in veterinary medicine obtain deep theoretical knowledge and practical skills to work in different areas of veterinary medicine and solve problems of veterinarian provision of cattle breeding, pig breeding, sheep breeding, poultry breeding, treatment of domestic animals, veterinary sanitarian expertise of animal breeding production, veterinary pharmacology, laboratory diagnostics to work in the educational institutions specializing in veterinary science or do a postgraduate course.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

According to the state standard of "Veterinary Medicine" and the state classifier of the professions of Ukraine specialists obtain qualification 2223.1 - veterinary medicine doctor and can be employed in agricultural enterprises, state veterinary medicine service, private veterinary hospitals and can occupy the following positions: veterinary doctor at agricultural farms of cattle, pig, sheep, poultry breeding; veterinary medicine doctor of small animals; doctor of veterinary medicine of agricultural enterprises, doctor of vet medicine of the sanitary and hygiene of the enterprises processing cattle products. Doctor of veterinary medicine (dispenser, chemist-toxicologist, biochemist, microbiologist, radiobiologist, virologist, immunologist, scientific employee).

### Production oriented Master programs

#### VETERINARY PHARMACY

*Studies the drugstores organization and technology of drugs production, pharmacognozy, requirements of the GMP, GDP, GCP systems in pharmacy, production and development of the medicine tools.*

#### VETERINARY PROVISION OF DOGS AND CATS HEALTH

*Studies dietology, dogs and cats reproduction, the most widespread and infectious diseases of dogs and cats, methods of their diagnostics, treatment and prophylaxis; traumatology, deontology, ophthalmology.*

#### VETERINARY PROVISION OF HORSE BREEDING

*Studies modern technologies of breeding and exploitation, specialties of diagnostics, treatment and prophylaxis of non-infectious and infectious horse pathologies.*

#### VETERINARY PROVISION OF POULTRY BREEDING

*Studies modern technological processes of the poultry manufacturing according to the modern sanitary-hygiene requirements, technological drawings of the prophylaxis of the most wide spread non-infectious and infectious diseases of the poultry; modern poultry industry economy.*

#### VETERINARY PROVISION OF HOG PRODUCTION

*Studies modern technologies of hog production; modern methods of pig breeding in the specialized farms; providing of prophylaxis and special epizootic measures.*

#### VETERINARY PROVISION OF CATTLE INDUSTRY

*Studies modern technologies cattle production, sheep breeding and goat breeding; new methods of reproduction, specialties of non-infectious and infectious pathology; methods of prophylaxis of ruminants diseases.*

#### VETERINARY PROVISION OF THE EXOTIC AND WILD ANIMALS HEALTH

*Studies the specialties of the keeping and breeding of exotic and wild animals; methods of diagnostics, treatment and prophylaxis of infectious and noninfectious pathologies in the conditions of zoos and hospitals.*

#### VETERINARY PREVENTATIVE TECHNOLOGIES OF ANIMAL HEALTH PROVISION

*Studies the principles, methods of the general diagnostics, therapy and prophylaxis of the animal diseases using mutual, cell tools and nanotechnologies.*

#### VETERINARY-SANITARIAN EXPERTISE, QUALITY AND SAFETY OF FOOD PRODUCTS AND FODDERS

*Studies state, veterinary-sanitarian expertise of food products under control of the veterinarian service; quality and safety of the cattle production, methods of their determination in Ukraine and in the EU countries; specialties of the technology of production of the cattle industry; analysis of the risks during the production of the food products and nutriment.*

#### ORGANIZATION AND MANAGEMENT OF THE VETERINARY SERVICE

*Studies organizational-legal basis and the management of the veterinary service in enterprises.*

#### JUDICIAL VETERINARIAN MEDICINE

*Studies legal aspects of veterinary medicine doctor activity, judicially-veterinarian expert; methods of judicially-veterinarian autopsy and material selection for the criminal researches.*

### Research oriented Master programs

#### ANALYSIS OF THE RISKS DURING THE PRODUCTION ON THE CATTLE INDUSTRY PRODUCTION CIRCULATION

*Studies specialties of the analysis of the risks in the critical control points during the production and processing of the cattle industry production; possibility of using of the analysis of the risks in the process of production and processing of the cattle industry production as a part of products quality providing guarantee.*

#### BIOMORPHOLOGY AND PLASTINATION OF THE VERTEBRATES

*Studies the composition of animal organisms under comparative aspect of ecological niche; new methods of production and keeping of anatomical germicides.*

#### MOLECULAR MECHANISMS OF THE REGULATION OF THE METABOLIC PROCESSES IN THE ANIMAL ORGANISM

*Studies metabolic processes in the animal organisms and molecular mechanisms of the regulation with the help of modern bio chemical and molecularly-biological methods taking into consideration the specification of solving tasks in vet medicine.*

#### PHYSIOLOGY OF THE ANIMAL HIGHER NERVOUS ACTIVITY

*Studies the processes of the irritation and stemming in the higher divisions of the central nervous system; forecasting of the animals behavior, reactions on the irritants and their connection with productivity.*





## TECHNOLOGIES OF PRESERVATION, CONSERVATION AND PROCESSING OF MEAT

branch of knowledge

Food production and Processing of Agricultural Production

course code

B.05170104

Form of study/training period, years

☒ full time

1, 5

☐ extra-mural☒ externship

credits ECTS

70

licensed amount, persons

☒ full time

30

☐ extra-mural

### ANNOTATION OF PROGRAM

Meat industry and its infrastructure in our country are based on the biochemical approach. In order to install high quality technological processes of preservation, conservation and processing of meat it is necessary to extend the network of highly skilled specialists able to realize important practical tasks in "Technology of preservation, conservation and meat processing".

Master program "Technology of preservation, conservation and processing of meat" uses up-to-date achievements of information technologies and progressive foreign and domestic experience. In the process of studying students obtain deep knowledge about the system and key principles of technological processes in meat production industry and meat products, carry out scientific research, are engaged in educational activity, managerial activity in different lineal and functional departments of the enterprises dealing with organization of industrial processes in the meat industry. The students obtain theoretical and practical skills in improving meat production technologies.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### Production oriented Master programs

#### TECHNOLOGY OF MEAT AND MEAT PRODUCTS

The program includes the complex of disciplines for students to obtain profound system of knowledge and key terms in technological processes of meat production and meat products,

The basic tasks are: to increase production of high quality traditional and new food products, development and introduction of new, intensive technologies. Modern development of domestic and foreign industry is based on biotechnologies with economically closed way of production: the industry of principal processing of raw material into food products with specific apparatus design, systems of control, management and economy. Modern requirements to preservation, conservation and meat processing foresee the use of up-to-date technologies based on deep theoretical knowledge about meat raw materials, extension of technological researches, creating new scientific schools, training specialists for food and meat processing industry.



#### EMPLOYMENT

According to the industry standard of the higher education of Ukraine graduates obtain the qualification of master of meat processing, preservation and conservation. According to the classifier of professions of Ukraine specialists can be employed at the industrial enterprises of meat industry, combined industries, organizations and firms to do organizational, productive, educational, project and research work, to develop new and improve existing technologies of meat production and can occupy the following positions: chief engineer, chief technologist, head of the workshop, laboratory manager etc.



## TECHNOLOGIES OF PRESERVATION AND PROCESSING OF WATER BIORESOURCES

branch of knowledge

Food production and Processing of Agricultural Production

course code

B.05170105

Form of study/training period, years



full time

1,5



part-time



externship

credits ECTS

70

licensed amount, persons



full time

30



part-time

### ANNOTATION OF PROGRAM

In recent years the food industry is focused mainly on processing of fish and marine products. There is also an increase of effectiveness of new technologies in the food industry. In order to succeed in solving important for Ukraine tasks of fish processing enterprises it is necessary to improve master's degree training in "Technology of preservation and processing of water bioresources".

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

According to the standard of higher education of Ukraine graduates obtain the qualification "Master of technology of preservation and processing of water bioresources" and can be employed at the industrial enterprises of fishing industry, organizations and firms to do organizational, managerial, marketing, industrial, educational, research work to develop the new and improve the existing technologies of fish production and fish products, and can occupy the following positions: head of the enterprise, chief technologist, head of the working sector, senior researcher. In the higher and secondary schools a master can occupy the primary position of a teacher, an engineer in the cycle of special disciplines, head of an educational laboratory.

### Production oriented Master programs

#### TECHNOLOGY OF PRESERVATION, CONSERVATION AND PROCESSING OF FISH AND MARINE PRODUCTS

The program aims to train specialists able to work in the fish industry in the field of preservation, conservation and processing of fish resources and marine products and also improve its technological level based on deep theoretical knowledge about fish culture.

The program includes complex of disciplines to provide students with profound knowledge and basic terms related to the technological processes of fish and marine products production. The program covers theoretical material and practical skills related to the analysis of condition and tendencies in the industry, solving the problem of technological character, development and improvement of technologies of fish production and marine products.

The demand for specialists on this training program is explained by the following factors:

- changes in the species composition of raw fish (first the fisheries were extended in the open ocean in the 1970-80s and later reduced in those regions.
- increased catch of fish species, that live near shore, and deficit of qualified staff, able to process fish according to traditional and up-to-date technologies.
- advanced technologies of preservation, conservation and processing of fish, based on deep theoretical knowledge about raw fish, extension of technological fish culture survey, which are provided by organization of specialized technological laboratories, new scientific schools, increased amount of technological information.
- development of fundamental sciences - biology, biochemistry, microbiology, chemistry, physics, and practical mathematics as a basis for providing new technologies into the process of training engineers-technologists.
- insufficient number of specialists studying on the program of preservation and processing slows down the implementation of market relations into fish industry.
- new directions in the development of processing of hydrobionts in fish industry, the use of new technological innovations, effective resource saving technologies.
- development of new fish farms creates the demand for highly qualified specialists, able to realize their professional knowledge not only in the fish farms but in the ministries of water resources and non-fish marine products.
- a great demand for engineers-technologists at the educational institutions of I-IV accreditation level to provide the academic process and scientific activity.



### FORESTRY

branch of knowledge

Agriculture and Forestry

course code

B.09010301

Form of study/training period, years

full time

1,5

part-time

2,0

externship

credits ECTS

70

licensed amount, persons

full time

100

part-time

75

#### ANNOTATION OF PROGRAM

The Master Programs is based on:

- correspondence between present and prospective needs of the forestry industry;
- providing flexible system of training specialists able to adapt to quickly changing demands in the national and international labor market;
- integration into educational, scientific, research and innovation global system of well-known universities;
- correlation between master and bachelor programs.

The content of Master Program is elaborated in accordance with the Ukrainian standards towards educational and professional training.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

#### EMPLOYMENT

Master graduates can occupy the following positions in forest industry: State forestry industry; Forestry and Hunting Industry of State Agency of Forestry Resources in Ukraine (forester, chief forester, engineer in timber logging; forestry engineer; forest plants engineer; forest protection and conservation engineer; manager of forest plantation; agri-forest reclamation engineer); State Forestry Industrial Agency of Ukraine (engineer- appraiser, forest regulator, chief engineer); State Forestry Protection Agency (forest pathology engineer, chief forest pathologist); Ukrainian Scientific and Research Agency of Forestry and agri-forest reclamation named after G.M.Vysotskyi, Ukrainian Center for training and retraining staff in forestry industry; higher educational schools of I-IV level of accreditation, zoological parks, nature and wildlife area agencies; Ukrainian State Forestry Design Institute; Ministry of Ecology and Natural Resources of Ukraine (researcher).



#### Production oriented Master programs

##### FORESTRY SCIENCE AND APPLIED FORESTRY

The program provides training of skilled personnel with profound knowledge in: forest nature, interrelation between forest and environment, forest cultivating and its application.

##### FOREST RECLAMATION

The program provides training of specialists with up-to-date scientific knowledge and practical skills to deal with development of protective afforestation as an important component of zonal soil anti-erosion schemes and a basis of forest landscape architectonics.

##### FOREST PROTECTION

The program provides students with professional theoretical knowledge and practical skills to elaborate bio ecological grounds of forest biogenesis protection and retreatment system; causative agents of plant diseases and the system of preventive measures against these diseases.

##### WILDLIFE SERVICE

The program is aimed at training specialists to deal with management of wild animal population and habitat, as well as their animal protection and rational using of wildlife resources. The program provides knowledge about evaluation and optimization of the quality of hunting forests.

##### REFORESTATION AND AFFORESTATION

The program provides students with up-to-date theoretical knowledge about innovation technologies in: development and exploitation of constant plant seeds storage; forest seed production; micro clone reproduction of tree plants; forest and decorative plants; ecological reforestation; retreatment of soil disbalance caused by technological activity; methods to increase forest productivity.

##### FOREST MANAGEMENT

The program provides students with skills to perform inventory of forest plantations using up-to-date methods, ability to work with the database of 'Forest fund of Ukraine', to apply the appropriate forest economy measures, directed at the rational, sustainable and nonexhaustible forest resources use.

##### FOREST RESOURCE MANAGEMENT AND FOREST INDUSTRY

The program is aimed at providing students with knowledge about economics and management necessary for their future professional activity. The specialists are able to develop and implement strategic measures in the sphere of forest management and other branches of market economy.

#### Research oriented Master programs

##### FOREST FIRE MANAGEMENT

The program provides students with theoretical knowledge and practical skills to elaborate principles of regional and national policy in forest and landscape fire service; to deal with personnel safety, forest protection service and ecological safety in case of fire.

##### SCIENTIFIC GROUNDS OF SUSTAINABLE REFORESTATION

The program focuses on dealing with: reforestation, ecological evaluation of forest reforestation and afforestation, effectiveness of forest plant seeds technological processes; production of forest and decorative plants, natural and artificial reforestation, forest growing and forest recultivation of anthropogenically-disbalanced landscapes.

##### LANDSCAPE SCIENCE AND URBAN FOREST

The program includes the cycle of disciplines dealing with space structures, regulation of protective afforestation; urban landscape phyto-reclamation; forest reclamation of highways; monitoring of forest landscapes and the anthropogenic impact on landscapes.

##### BIOLOGICAL AND ENERGETIC PRODUCTIVITY OF FOREST PHYTOCENOSIS

The program provides students with theoretical knowledge and practical skills to substantiate and develop the system of evaluation and prognosis of dynamics in phytomass components and deposited carbon in the main forest producing variety of trees in Ukraine.



### WOOD PROCESSING TECHNOLOGIES

branch of knowledge		course code	
Processing of Wood		8.05180101	
Form of study/training period, years		credits ECTS	licensed amount, persons
<input checked="" type="checkbox"/> full time	1,5	<input checked="" type="checkbox"/> part-time	2,0
<input type="checkbox"/> externship		90	<input checked="" type="checkbox"/> full time
			50
			<input type="checkbox"/> part-time
			50

#### ANNOTATION OF PROGRAM

The program provides students with theoretical knowledge and practical skills in producing timber materials and goods, evaluating their characteristics and quality; learning up-to-date technological methods and techniques, planning and implementing scientific research to optimize and improve technological processes in timber industry.

A graduate acquires the abilities:

- to analyze the technological processes of production of certain goods and make recommendations for their improvement;
- to analyze timber construction and make recommendations for its improvement;
- to develop technological list of producing timber goods;
- to construct and design certain timber goods;
- to adjust equipment for producing certain timber goods;
- to calculate electrical parameters and aspiration for certain technological process;
- to give scientific substantiation to changes in the design of wood drying equipment.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

#### EMPLOYMENT

Graduates in "Technology of wood processing" can be employed in educational establishment of I-II and III-IV levels of accreditation; state and commercial enterprises, producing and trading building materials, Ukrainian state enterprise "Resurs"; state and commercial enterprises producing timber and furniture and occupy the following positions: engineer-technologist, timber industry expert, specialist, senior specialist, manager, head or manager of an enterprise, or researcher, senior researcher, teacher or trainer, assistant professor in a Scientific and Research Institution or university, or participate in international scientific projects.

#### Production oriented Master programs

##### MODERN TECHNOLOGY OF WOOD PROCESSING

The Program provides knowledge and skills in timber processing and rational use of equipment, timber and energetic resources. The disciplines of the program include theoretical and practical aspects of timber goods technological processes, as well as modern tendencies in timber processing, peculiarities of modern timber industry, modern requirements for production and quality, new production materials, new hardware, methods of calculating models for modern timber goods construction, up-to-date project and modeling technologies, requirements for timber goods production, art design, furniture style, modern tendency in furniture production and marketing.

#### Research oriented Master programs

##### SCIENTIFIC PRINCIPLES OF RESOURCE SAVING TECHNOLOGY OF TIMBER GOODS PRODUCTION

The program is based on a complex approach to learning timber resource saving technology and mastering skills to deal with balanced rational use of timber resources and quality service in timber goods production. The disciplines include theoretical and practical aspects of resource saving technology, tendency in timber production technology, modern requirements for timber goods production, new materials used to produce timber goods, new decoration and hardware, methods of payment for timber goods, project development, requirements for furniture quality, art design construction and modeling, development of new furniture style characteristics, modern tendencies in furniture style and marketing.

##### SCIENTIFIC PRINCIPLES OF RESOURCE SAVING TECHNOLOGY IN TIMBER DRYING PROCESSING

The program focuses on learning resource saving technology in timber drying processing, development of balanced approaches towards management in drying process quality and rational use of energy resources.

The disciplines include theoretical and practical aspects of timber drying processing and maximum nature protection and preservation of drying material, learning of anatomic and physical peculiarities of timber, device construction and modeling for timber drying processing, methods of quality evaluation according to ISO, EN, DCTY, dust drying processing regime, prognosis of dust material drying quality, heat and electricity costs for dust production drying process and mixed timber, drying process costs, possible ways to reduce energy costs.

### WILDLIFE SERVICE

branch of knowledge		course code	
Agriculture and Forestry		8.09010302	
Form of study/training period, years		credits ECTS	licensed amount, persons
<input checked="" type="checkbox"/> full time	1,5	<input checked="" type="checkbox"/> part-time	2,0
<input type="checkbox"/> externship		90	<input checked="" type="checkbox"/> full time
			25
			<input type="checkbox"/> part-time

#### ANNOTATION OF PROGRAM

The sustainable management of different branches of Ukrainian economy dictates the need for integrated approach to rational use, renovation and preservation of natural resources. An integral part of this approach is the game regulation. Wildlife service focuses on organizing, regulating and improving the use of wildlife resources. The adequate infrastructure and qualified human resources will ensure successful development of this sphere.

#### Employment

Graduates can be employed by such companies: State Forestry, Forest Hunting and hunting enterprises of the State Agency of Forest Resources of Ukraine (wildlife expert, chief wildlife expert, head of wildlife station), Ukrainian Centre for training, retraining and staff advanced training of forestry "Ukrtsentrkadrylis", related higher educational institutions of I-IV accreditation levels, zoological parks, institution of the nature reserve fund, Ministry of Ecology and Natural Resources of Ukraine (researcher).

## PARK AND GARDENING MANAGEMENT

branch of knowledge

**Agriculture and Forestry**

course code

**8.09010303**

Form of study/training period, years

☒ full time

1,5

☒ part-time

2,0

☐ externship

credits ECTS

90

licensed amount, persons

☒ full time

75

☒ part-time

75

### ANNOTATION OF PROGRAM

The program provides flexible training for students as well as their adaptation to quickly changing demands of national and international labor market; integration into educational, scientific, research and innovative activities based on the experience of world famous universities and in accordance with Bologna Convention on personnel training; logical correlation between Bachelor and Master Programs.

The program meets the market needs by providing gardening and park industry with skilled personnel in both state and commercial structures.

The program is based on combined cycles of regulatory disciplines and elective subjects chosen by University and students themselves.

An important peculiarity of the program is its practical component. Students master their practical skills at state leading enterprises and well-known firms. The training includes scientific and research activity determined by the departments in charge of graduate training.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

Graduates obtain qualification "Master Degree in park and gardening.

In accordance with professional classifier, graduate can occupy the following positions: junior researcher, engineer of settlements improvement or landscape designer, green house master, nurseryman, master of planning and organization of public green space, gardener.

### Production oriented Master programs

#### LANDSCAPE ARCHITECTURE

The program is focused on training specialists able to analyze, deduce, resolve and implement decisions dealing with exploitation, reconstruction and restoring of parks and gardens in accordance with modern requirements, to make projects and design different landscapes using modern computer technologies.

#### DECORATIVE GARDENING

The program provides theoretical knowledge and practical skills to deal with plant reproduction, as well as technologies of growing garden plants in green houses and decorative seed-plots for designing garden and park objects.

#### SPORT GROUNDS AND GOLF FIELDS

The program provides students with theoretical knowledge and practical skills to develop, maintain and reconstruct sport grounds and golf fields.

#### FLORICULTURE IN OPEN SOIL AND IN HOTHOUSES

The program provides theoretical knowledge and practical skills in flower cultivation, decorative plants variety. The program includes study of flower bed design, climate control regulation, new perspective seeds, innovative technologies in floriculture growing and breeding.

#### INTERIOR PHYTODESIGN

Students obtain knowledge about history of design, variety of styles in floristics, scientific approaches towards phytodesign in hothouses. They also obtain practical skills to deal with different styles of phyto compositions, arrange tropical and subtropical flower collection, analyze the objects of phyto design and make reconstruction projects.

#### NATURE PROTECTION OF PARK ZONES

The program provides theoretical knowledge and practical skills in territorial park reserve organization, forming scientific collection of rare plant diversity. Students learn to determine the values of nature heritage, inspect nature reserve park ecosystem.

#### DECORATIVE NURSERY-GARDENING

The program provides theoretical knowledge and innovative technologies to deal with production of decorative seed-plots, generative, vegetative and micro clone reproduction of plants, trees and bushes, peculiarities of young trees breeding and growing.

### Research oriented Master programs

#### PROTECTION AND USE OF TREE BIODIVERSITY IN DECORATIVE GREEN PLANTATION: SCIENTIFIC PRINCIPLES

The program provides students with theoretical knowledge to deal with green plantation forming and maintaining, their protection in accordance with modern requirements for garden and park management. Students are engaged in applied scientific research in parks and garden plantations; learn methods of investigations, techniques of scientific and cognitive activity.

#### PHYTODESIGN SCIENCE

Students study modern design, elaboration and implementation of different styles and forms and its history. They investigate ethnic roots and influence of national cultures on style formation; determine ways of achieving expressiveness in their projects.



## MACHINERY AND AGRICULTURAL EQUIPMENT

branch of knowledge

Mechanical Engineering Design and Material Processing

course code

8.05050312

Form of study/training period, years

☒ full time ☐ 1,5 ☒ part-time ☐ 2,0 ☐ externship

credits ECTS

70

licensed amount, persons

☒ full time ☐ 50 ☒ part-time ☐ 50

### ANNOTATION OF PROGRAM

The program "Machinery and Equipment of Agricultural Production" provides students with specific skills and knowledge about engineering, design, control testing, certification, operation, maintenance and utilization of agricultural machines and equipment.

### EMPLOYMENT

Graduates can be engaged in business and administrative activity, education and research at laboratories of enterprises; scientific, research and design institutions, and can occupy the following high rank positions:

- head of enterprises; manufacture department manager;
- head of laboratory (education); head of student design laboratories;
- head of research laboratory; design engineer;
- machine engineer
- mechanical engineer;
- research engineer;
- assistant and teacher at educational institutions.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### Production oriented Master programs

#### CONSTRUCTION, DESIGN AND CONTROL TESTING OF AGRICULTURAL MACHINES

The program provides deep knowledge in engineering, design and control testing of agricultural machines manufacturing based on the theory of technical systems; thorough understanding of system assessment steps and methods of agricultural machines control testing in accordance with industry-specific, national and international standards.

Machine engineering involves formation, structuring and solving optimization tasks of agricultural machines analysis and synthesis.

Specialists obtain thorough understanding of agricultural machine engineering as a complex mechanical system, carry out repaired and unrepaired systems quality assessment and ensure their reliability.

### Research oriented Master programs

#### MECHATRONIC SYSTEMS OF AGRICULTURAL MACHINERY PRODUCTION

Specialists obtain deep knowledge about innovative engineering and design of mechatronic systems of agricultural machinery production based on classical and modern conceptions of mechatronics, mechanical motion control of machines with programmed drive component and the theory of digital control. Thorough understanding of hydromechanical and electromechanical mechatronic systems engineering stages is provided. The use of technical aesthetics and industrial design elements for developing up-to-date agricultural machines is ensured. Scientific and innovative developments of dynamic agricultural machines models (machine dynamics with rigid and springy links; machine dynamics with non-linear function of link position; dynamic loads in machines during steady and unsteady mode of motion) are carried out.

## FOREST COMPLEX EQUIPMENT

branch of knowledge

Mechanical Engineering design and material processing

course code

8.05050303

Form of study/training period, years

☒ full time ☐ 1,5 ☒ part-time ☐ 2,0 ☐ externship

credits ECTS

70

licensed amount, persons

☒ full time ☐ 50 ☒ part-time ☐ 50

### ANNOTATION OF PROGRAM

The program provides theoretical knowledge and practical skills in engineering, design, control testing, certification, operation, maintenance and utilization of forest complex equipment.

### EMPLOYMENT

Graduates can be engaged in business and administrative activity, education and research at laboratories of enterprises; scientific, research and design institutions, and can occupy the following high rank positions: head of enterprises; manufacture department manager; head of research laboratory (education); head of student design laboratories; head of research laboratory; design engineer; machine engineer; mechanical engineer; research engineer; assistant and teacher at educational institutions.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### Production oriented Master programs

#### ENGINEERING, DESIGN AND CONTROL TESTING OF FOREST COMPLEX EQUIPMENT

Specialist obtains deep knowledge in engineering, design and control testing of forestry complex equipment based on the theory of technical systems; thorough understanding of system assessment steps and methods of forestry complex equipment control testing in accordance with industry, national and international standards.

Forestry complex equipment engineering involves formation, structuring and solving optimization tasks of forestry complex equipment analysis and synthesis.

Specialists obtain thorough understanding of forestry complex equipment engineering as a complex mechanical system, carry out repaired and unrepaired systems quality assessment and ensure their reliability.

### Research oriented Master programs

#### MECHATRONIC SYSTEMS OF FOREST COMPLEX EQUIPMENT

Specialist obtains deep knowledge about innovative engineering and design of mechatronic systems of forestry complex equipment based on classical and modern conceptions of mechatronics, mechanical motion control of machines with programmed drive component and the theory of digital control. Thorough understanding of hydromechanical and electromechanical mechatronic systems engineering stages is provided. The use of technical aesthetics and industrial design elements for developing modern forestry complex equipment is ensured. Scientific and innovative developments of dynamic forestry complex equipment models (equipment dynamics with rigid and springy links; equipment dynamics with non-linear function of link position; dynamic loads in equipment during steady and unsteady mode of motion) are carried out.



# TECHNICAL EDUCATION AND RESEARCH INSTITUTE FACULTY OF AGROBIOSYSTEM ENGINEERING

## MECHANIZATION OF AGRICULTURE

branch of knowledge

Engineering and Energetics of Agricultural Production

course code

8.10010203

Form of study/training period, years

☒ full time 1,5 ☒ part-time 2,0 ☐ externship

credits ECTS

70

licensed amount, persons

☒ full time 165 ☒ part-time 165

### ANNOTATION OF PROGRAM

The program focuses on innovative technologies and methods in agricultural production, top-priority areas of research in mechanization in accordance with modern requirements. The curricula provide using theoretical material and technical resources to do research at high scientific and technical level. Training is directly carried out at basic research laboratories of the appropriate department.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

Graduates obtain the qualification of research engineer in mechanization of agriculture and can apply for postgraduate degree in order to write and defend PhD thesis. Graduates can be employed at agricultural enterprises of different forms of ownership. According to the classifier of professions SC 003:2010 their professional level meets the requirements of section 4.2 - professionals: 12 - head of enterprises, institutions and companies; 1221 - head of production departments of agriculture, forestry and water management; 1221.1 - chief specialist - head of production departments of agriculture, forestry and water management; 1221.2 - head and foreman of production departments of agriculture, forestry and water management.

### Production oriented Master programs

#### TECHNOLOGIES AND EQUIPMENT IN PLANT-GROWING

Optimization of machine complexes and equipment for modern technologies of growing agricultural crops. Designing and organization of technological processes, research into durability and failure-free operation of machines and equipment.

#### TECHNOLOGIES AND EQUIPMENT IN ANIMAL BREEDING

Optimization of machine complexes and equipment for modern technologies of animal and poultry breeding. Research into durability and failure-free operation of machines and equipment.

#### TECHNOLOGIES AND EQUIPMENT IN PROCESSING PRODUCTION

Optimization of machine complexes and equipment for modern technologies of processing and preservation of agricultural products. Research into durability and failure-free operation of machines and equipment in processing industry.

#### TECHNOLOGIES AND EQUIPMENT OF SERVICE ENTERPRISES

Optimization of machine complexes and equipment for modern technological processes of agricultural equipment, technical maintenance and restoration of parts. Research characteristics and modes of technological equipment, non-standard equipment designing.

#### TECHNOLOGIES AND EQUIPMENT IN BIOSYSTEMS

Designing of technological processes and substantiation of characteristics of technical devices in biotechnical production for complex processing of biomass into biofuel and utilization of AIC wastes. Research into efficiency of using biofuel in modern engines.

#### WORK SAFETY PRINCIPLES OF AGROBIOENGINEERING

Development of work safety management systems of energy and resource efficient and engineering facilities to prevent the negative effect of AIC production processes on the environment, substantiation of safety characteristics of technical devices.

### Research oriented Master programs

#### DESIGNING OF MECHATRONIC SYSTEMS OF AGRICULTURAL COMPLEX EQUIPMENT

Modeling and optimization of AIC equipment motion modes. Designing optimal systems of motion control of AIC equipment on the basis of modern mechatronic systems. Choosing of mechatronic systems structure and configuration depending on the intended purpose of equipment. Development of programs for optimal control of AIC equipment.

#### TECHNICAL SERVICE OF MACHINES AND EQUIPMENT

Optimization of systems and characteristics of technical service of modern equipment. Designing control testing methods and technologies for power-consuming equipment. Organization and technological arrangement of service stations. Research into reasons of failure of AIC equipment under different conditions and in different spheres.

#### OPTIMIZATION OF PROCESSES, CHARACTERISTICS AND OPERATING MODES OF AIC EQUIPMENT

Improving the failure-free level of AIC equipment on the basis of structural analysis of its durability and substantiation of efficient technological processes, characteristics and operating modes. Research and designing of technological and kinematical schemes, aggregates, assembly units, operating elements.

#### OPTIMIZATION OF HANDLING PROCESSES IN AIC

Research and design of efficient lift-and-carry schemes for agricultural production. Substantiation and choosing of appropriate handling equipment and its construction and technological characteristics in the process of agricultural freight transportation. Optimization of motion modes of handling machines operating elements.



## ORGANIZATION OF TRANSPORTATION AND MANAGEMENT IN TRANSPORT

branch of knowledge

Transport and transport infrastructure

course code

8.07010102

Form of study/training period, years

☒ full time 1,5 ☒ part-time 2,0 ☐ externship

credits ECTS

90

licensed amount, persons

☒ full time 15 ☒ part-time 15

### ANNOTATION OF PROGRAM

Graduates obtain the qualification of research engineer in transportation and can apply for postgraduate studies in order to write and defend PhD thesis. The program provides knowledge and skills in theory of freight and passenger transportation, transport logistics, transport and expeditionary activity, types of transport and operation of road junction, international transportation interaction. The program is in demand on the agricultural market today since freights are transported under specific conditions of countryside. The substantiation of requirements for considerable part of agricultural products transportation, optimal transport means fitness, predicting freight streams in harvest time are essential. A great number of master theses are recommended by SEB for practical application in the process of organization of transportation and management in automobile transport for AIC enterprises of different forms of ownership.

### Production oriented Master programs

#### MANAGEMENT OF AGRICULTURAL PRODUCTS FREIGHT TRANSPORTATION UNDER CONDITIONS OF ECOLOGICAL AND ECONOMIC RESTRICTION

Designing freight transportation by motor-and-tractor devices and loading-unloading operations in agricultural production. Objects of research are specificity and diversity of agricultural freights, terms and conditions of transportation, mid- and long-distance freight streams.

#### EMPLOYMENT

According to the classifier of professions CP 003:2010 graduates can be employed as traffic controllers, engineers of traffic service and logistic department managers of transport enterprises; transport department managers for big corporations; transport and infrastructure management specialists; control department engineers of State automobile inspection; research engineers of research and development transport institutes; teachers at automobile schools, vocational schools and higher educational institutions.

## TRAFFIC ORGANIZATION AND CONTROL

branch of knowledge

Transport and Transport Infrastructure

course code

8.07010104

Form of study/training period, years

☒ full time 1,5 ☒ part-time 2,0 ☐ externship

credits ECTS

90

licensed amount, persons

☒ full time 15 ☒ part-time 15

### ANNOTATION OF PROGRAM

Graduates obtain the qualification of research engineer in transport and can apply for postgraduate studies in order to write and defend PhD thesis. The program provides knowledge and skills in theory of transport and pedestrian streams, traffic organization and control and transport streams control methods, improving ways of communication and city, village transport planning, traffic accident inspection, fundamental organization of freight and passenger transportation (e.g. state program: buses for rural schools). Objects of research and study are: the problem of organization of agricultural products transportation during mass harvesting, intersection of rural roads with motor-roads and highways for developing ways of traffic organization and control.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### Production oriented Master programs

#### TECHNOLOGY OF TRAFFIC DESIGN

Development of exploitation improvement methods in existing transport network, traffic safety, efficiency and its impact on environment (in rural conditions). Research into transport streams change during mass harvesting on the critical segments of transport networks.

#### EMPLOYMENT

According to the classifier of professions CP 003:2010 graduates can be employed as: safety traffic organization engineer at transport enterprises; specialist of motor-roads states service, road-maintenance and road exploitation administration; engineer of management department organization and safety traffic of State automobile inspection; expert of insurance companies; research engineer of research-and-development transport institutes; teachers at motor schools, vocational schools and higher educational institutions.

### AUTOMATED CONTROL OF TECHNOLOGICAL PROCESSES

branch of knowledge

Automation and Control

course code

8.05020201

Form of study/training period, years

☒ full time

1,5

☒ part-time

2,0

☐ externship

credits ECTS

70

licensed amount, persons

☒ full time

35

☒ part-time

35

#### ANNOTATION OF PROGRAM

Automation of agrarian sector is an important indicator of scientific and technical progress in agriculture. The need for specialists in automated technological processes in agriculture is caused by introduction of information technologies into all spheres of agricultural production. Automated control systems of technological processes and computer-integrated production are broadly used on modern animal farms, poultry farms, hog farms, hothouses, vegetable depositories, electricity and energy supply objects. In order to solve professional tasks specialists in automated control of technological processes are engaged in all stages of research, design and development and exploitation of computer-integrated systems of technological processes control in AIC; work out all kind of documentations for apparatus and program complex automation and control systems. Graduates can head the departments responsible for researching, designing, assembling, tuning and exploiting and repairing of devices, equipment and automated control systems of technological processes in agriculture are worked out.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

#### EMPLOYMENT

Graduates can be employed in agricultural and energy complexes, at agricultural enterprises of different forms of ownership, research institutions of the NAS of Ukraine and the NAAS of Ukraine. According to the standard classifier of higher education of Ukraine graduates obtain Master degree and qualification in automated control of technological processes. According to the classifier of professions graduates can occupy the following positions: 2131.2 - production control automated systems engineer; 2131.2 - computer systems engineer; 2131.2 - research engineer of computerized systems and automation; 2131.2 - computer systems constructor; 2132.1 - research engineer; 2139.2 - computer engineer; 2131.2 - CCS and A engineer.

#### Production oriented Master programs

##### COMPUTER-INTEGRATED OPERATING SYSTEMS OF TECHNOLOGICAL PROCESSES OF ANIMAL HUSBANDRY PRODUCTION

The program provides students with knowledge about planning, research, organization and introduction of modern computer-integrated operating systems of technological processes of animal husbandry production. Students obtain knowledge and innovative approaches into technology, mathematical modeling of technological processes of animal husbandry production.

##### COMPUTER-INTEGRATED OPERATING SYSTEMS OF TECHNOLOGICAL PROCESSES OF CROP PRODUCTION

The program provides students with knowledge about planning research, organization and introduction of modern computer-integrated operating systems of technological processes of crop production. Students obtain knowledge and innovative approaches into technology, mathematical modeling of technological processes of crop production.

##### COMPUTER-INTEGRATED OPERATING SYSTEMS OF TECHNOLOGICAL PROCESSES OF AGRICULTURAL PRODUCTS PROCESSING AND PRESERVATION

The program provides students with knowledge about planning, research, organization and introduction of modern computer-integrated operating systems of technological processes of agricultural products processing and preservation. Students obtain knowledge and innovative approaches into technology, mathematical modeling of technological processes of agricultural products processing and preservation.



#### Research oriented Master programs

##### ENERGY EFFECTIVE SYSTEMS OF BIOTECHNICAL OBJECTS OPERATING

The program provides students with knowledge about planning, research, organization and introduction of modern energy effective operating systems of biotechnical objects. Students obtain knowledge and innovative approaches into technology, mathematical modeling of technological processes in agricultural complex. Master's program provides methods and principles of developing economic, reliable, effective operating systems of biotechnical objects. Students acquire abilities and skills to solve challenging tasks of increasing efficiency of both active systems and those ones that are being worked out. Great importance is given to developing abilities and skills of systemic research into objects and operating control systems.





## ELECTROTECHNICAL SYSTEMS OF POWER CONSUMPTION

branch of knowledge

Electrical Engineering and Electromechanics

course code

8.05070103

Form of study/training period, years

☒ full time 1,5☒ part-time 2,0☐ externship

credits ECTS

70

licensed amount, persons

☒ full time 20☒ part-time 20

### ANNOTATION OF PROGRAM

Students receive thorough knowledge of power production, distribution and consumption. The program focuses on the use of renewable and alternative energy sources, installing, commissioning and maintenance services of various power equipment: motors, oscillators, packaged transformer substations, overhead and cable transmission lines, lighting equipment etc. Graduates are able to develop and implement new systems of computer-integrated management of power consumption of energy system. Power consumption process provides distribution and consumption of electricity, sets the direction of managing the ways of supply load from direct influence of energy system to economic management based on dynamic prices for electricity. The aim of power consumption management of energy system is to provide mutual economic interests for all participants (all retail marketers) while performing required level of power and electricity balance in the system and compliance with the set of technological constraints. Meanwhile it is necessary to consider two branches of the unified system of management of power system operation: functional (dispatch) and commercial, that may be integrated only on the basis of complex automated monitoring system, preplanning and management of power consumption parameters (qualitative and quantitative). Complexity and impermanence of management tasks require specialists to have deep knowledge about technology of production, transmission, distribution and power consumption, understanding existing problems, ability to set goals and solve problems. Graduates are able to do research into electrical engineering and energetics in order to improve operational reliability of electrical equipment and to use efficient energy resources and materials.

### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### Production oriented Master programs

#### ELECTRICAL NETWORKS AND SYSTEMS

The program provides students with knowledge about planning and organization of research, development and implementation of energy saving technologies, electrical networks and systems. Specialists study electric power plants, mathematical modeling and projecting of power supply systems of AIC, innovative approaches to application of protectors of automatics and tele automatics of power supply systems in AIC.

### Research oriented Master programs

#### ELECTRIC POWER PLANTS, SYSEMS AND NETWORKS

The program provides students with knowledge about planning and organization of research, development and implementation of energy saving technologies, electric power plants and networks and systems. Specialists study generation plants, electric power plants, mathematical modeling and projecting of power-supply systems of AIC, innovative approaches to rational transporting, distribution and usage of energy resources, operation of power-generating equipment. The program provides knowledge of methodological elements of construction economical, reliable and efficient power-supply systems for electrical energy consumers. Students acquire skills and abilities that enable them to solve complex problems of increasing efficiency of current and projected systems. Considerable attention is given to developing skills and abilities for systemic research into objects and systems of power supply.



### EMPLOYMENT

Graduates can be employed in energy sector according to a chosen profession, in agricultural enterprises of different forms of ownership, in scientific and research institutions of the NAS of Ukraine and the NAAS of Ukraine. According to the industry standard of higher education of Ukraine graduates obtain qualification of Master of electrical power systems and can occupy the following positions according to the classifier of professions: 2143.2 - power engineer; 2143.1 - research engineer (electro engineering); 2143.2 - expert in energy management; 2143.2 - operator of interregional dispatching office of power systems management; 2143.2 - substation engineer; 2143.2 - electric utilities engineer; 2143.2 - distribution network engineer; 2149.2 - research engineer (engineering); 2149.2 - engineer of relay protection and electrics; 2149.2 - operation and maintenance engineer; 2147.2 - diagnostic engineer.



## ENERGETICS OF AGRICULTURAL PRODUCTION

branch of knowledge

Engineering and energetics of agricultural production

course code

8.10010101

Form of study/training period, years

☒ full time 1,5 ☒ part-time 2,0 ☐ externship

credits ECTS

70

licensed amount, persons

☒ full time 100 ☒ part-time 100

### ANNOTATION OF PROGRAM

Students receive thorough knowledge about power production, distribution and consumption. The program focuses on the use of renewable and alternative energy sources, installing, commissioning and maintenance service of various power equipment: motors, oscillators, packaged transformer substations, overhead and cable transmission lines, lighting equipment and others. Graduates are able to develop and apply new computer-integrated control systems in technical processes in AIC; to do research into electrical engineering and energetics in order to improve operational reliability of electrical equipment and to use efficient energy resources and materials.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

Graduates can be employed in energy sector according to a chosen profession, in agricultural enterprises of different forms of ownership, in scientific and research institutions of the NAS of Ukraine and the NAAS of Ukraine. According to the industry standard of higher education of Ukraine graduates obtain qualification of Master of electrical power systems and can occupy the following positions according to the classifier of professions: 2143.1 - research engineer (energetics in agriculture); 2143.2 - energy engineer; 2145.2 - heat-extraction engineer in farming industry; 2143.1 - research engineer (electrical engineering); 2149.2 - research engineer (engineering); 2149.2 - service and testing engineer; 2149.2 - operation and maintenance engineer; 2147.2 - ventilation engineer.

### Production oriented Master programs

#### ELECTRICAL NETWORKS AND SYSTEMS

Study, development and implementation of energy saving technologies, electrical networks and systems. Power plants, design and planning of power supply systems of AIC. Design and devices of defence of automation and teleautomatics of power supply systems.

#### COMPUTER-INTEGRATED CONTROL SYSTEMS IN TECHNOLOGICAL PROCESSES IN AIC

The program provides students with knowledge about planning and organization of research, development and implementation of up-to-date computer-integrated control systems in technological processes in AIC. Specialists study technology and mathematical modeling of technological processes in AIC, innovative approaches to introduction of computerized process control systems in AIC.

#### AUTOMATION OF TECHNOLOGICAL PROCESSES AND COMPUTER-INTEGRATED CONTROL SYSTEMS OF INFORMATION AND TECHNOLOGICAL RESOURCES IN AIC

The program provides students with knowledge about planning and organization of research, development and implementation of up-to-date computer-integrated control systems in information and technology resources in AIC. Specialists study technology and mathematical modeling of information and technology resources in AIC, innovative approaches to introduction of computerized process control systems of information and technology resources in AIC.

#### ENERGY ENGINEERING IN AIC

Organization of integrated operation of projecting, installing, adjusting, commissioning and maintenance of power equipment. Reliability of technical systems and quality of energy resources and energy materials. Innovative methods of improving maintainability of electric facilities.

#### POWER SUPPLY IN AIC

Installing and commissioning of electric power plants in agriculture, development and implementation of renewable and alternative energy sources. Heat-power installations and systems, renewable and alternative energy sources in AIC. Energy resources, energy materials and heat-power technologies.

### Research oriented Master programs

#### ENERGY EFFECTIVE SYSTEMS OF OPERATING BIOTECHNICAL OBJECTS

The program provides students with knowledge about planning and organization of research, development and implementation of new energy-efficient control systems of biotechnical installations. Specialists study technology and mathematical modeling of technologic processes in AIC, innovative approaches to introduction of computerized control systems of technological processes in AIC. The program provides methodological elements of constructing economical, reliable and efficient control systems of biotechnical installations. Students acquire skills and abilities that enable them to solve complex problems of efficiency of current and projected systems. Considerable attention is given to developing skills and abilities for systemic study of control objects and systems.

#### SCIENTIFIC AND TECHNICAL PRINCIPLES OF ELECTROMECHANIC ENERGY TRANSFORMATION

Research of methods of electric energy transformation, development of up-to-date electric drivers with improved operating characteristics. Basic principles of research activity and modern theory of electro mechanic transformation of energy. Technologies of research into electromagnetic devices and electro mechanical transformers of energy.

#### ELECTRICAL NETWORKS AND SYSTEMS

Projecting, commissioning, service and exploitation of electricity transmission lines, transformer substations and distributive devices. Recordkeeping and rational use of electric energy. Power plants, design and engineering of power supply systems in AIC. Design and devices to protect automation and telemechanics of power supply systems.

#### POWER SUPPLY IN AIC

Research and development of electric power plants in agriculture. Research, development and implementation of renewable and alternative energy sources in agriculture. Nanotechnologies for augmentation of heat-mass-exchange, heat-power installations and systems, renewable and alternative energy sources in AIC. Energy resources, energy materials and heat-power technologies. Renewable and alternative energy sources in agriculture. Complex integrated power supply systems.





### ELECTRIFICATION AND AUTOMATION OF AGRICULTURE

branch of knowledge

Engineering and energetics of agricultural production

course code

B.10010103

Form of study/training period, years

☒ full time 1,5☒ part-time 2,0☐ externship

credits ECTS

70

licensed amount, persons

☒ full time 50☒ part-time 50

#### ANNOTATION OF PROGRAM

Students obtain profound knowledge about power production, distribution and consumption.

Graduates acquire skills in installing, commissioning and maintenance service of various power equipment: motors, oscillators, packaged transformer substations, overhead and cable transmission lines, lighting equipment etc. They are able to develop and apply new computer-integrated control systems in technical processes in AIC; to do research into electrical engineering and energetics in order to improve operational reliability of electrical equipment and to use efficient energy resources and materials in modern farming industry.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

#### EMPLOYMENT

Graduates can be employed in energy sector according to a chosen profession, in agricultural enterprises of different forms of ownership, in scientific and research institutions of the NAS of Ukraine and the NAAS of Ukraine. According to the industry standard of higher education of Ukraine graduates obtain qualification of Master of electrical power systems and can occupy the following positions according to the classifier of professions: 2143.2 - farming industry electrification engineer; 2145.2 - engineer in mechanization and automation of technical processes; 2149.2 - operations and maintenance engineer; 2143.1 - research engineer (electrical engineering); 2149.2 - research engineer (engineering); 2147.2 - technical diagnostics engineer; 3152 - electric and heat energy control officer.



#### Production oriented Master programs

##### ELECTRIFIED TECHNOLOGIES AND ELECTRICAL EQUIPMENT IN ANIMAL BREEDING

Research, development and implementation of up-to-date electrified technologies in agricultural production and processing. Design of managed electro mechanical and executive mechanisms in stock-raising. Planning of power installations and lighting systems and networks in stock-raising.

##### ELECTRIFIED TECHNOLOGIES AND ELECTRICAL EQUIPMENT IN SEED AND PLANT GROWING

Research, development and implementation of up-to-date electrified technologies in agricultural production and processing. Design of managed electromechanical and executive mechanisms in seed-growing and plant cultivation. Planning of power installations and lighting systems and networks in seed-growing and plant cultivation.

##### ELECTRIFIED TECHNOLOGIES AND ELECTRICAL EQUIPMENT IN FOOD AND PROCESSING INDUSTRIES

Research, development and introduction of up-to-date electrified technologies in food processing industry. Design of managed electro mechanical and executive mechanisms in food processing industry. Planning of power installations and lighting systems and networks in food processing industry.

##### COMPUTER- INTEGRATED CONTROL SYSTEMS OF TECHNICAL PROCESSES IN AIC

The program provides students with knowledge about planning and organization of research, development and implementation of up-to-date computer-integrated control systems in technical processes of AIC. Specialists study technology and mathematical modeling of technical processes of AIC, innovative approaches to introduction of computerized process control systems in AIC.

##### AUTOMATION OF TECHNICAL PROCESSES AND COMPUTER- INTEGRATED CONTROL SYSTEMS OF INFORMATION AND TECHNOLOGY RESOURCES OF AIC

The program provides students with knowledge about planning and organization of research, development and implementation of up-to-date computer-integrated control systems in information and technology resources of AIC. Specialists study technology and mathematical modeling of information and technology resources of AIC, innovative approaches to introduction of computerized process control information systems of information and technology resources of AIC.

#### Research oriented Master programs

##### ENERGY EFFECTIVE SYSTEMS OF BIOTECHNICAL OBJECTS OPERATING

The program provides students with knowledge about planning and organization of research, development and implementation of up-to-date energy-efficient control systems of biotechnical installations. Specialists study technology and mathematical modeling of technologic processes in AIC, innovative approaches to introduction of computerized control systems of technological processes in AIC. The program provides methodological elements of constructing economical, reliable and efficient control systems of biotechnical installations. Students acquire skills and abilities to solve complex problems of increasing efficiency of current and projected systems. Considerable attention is given to developing skills and abilities for systemic research into objects and systems control.

##### ELECTRIFIED TECHNOLOGIES OF ELECTRICAL EQUIPMENT IN AGRICULTURE INDUSTRY

Research into methods of improving farming industry efficiency by using new electrified technologies. Design of managed electro mechanical and executive mechanisms in AIC. Methods of research into product processing quality in AIC.



## INFORMATION MANAGING SYSTEMS AND TECHNOLOGIES

branch of knowledge

Computer Science and Engineering

course code

8.05010101

Form of study/training period, years

☒ full time ☐ 1,5 ☐ part-time ☐ externship

credits ECTS

70

licensed amount, persons

☒ full time ☐ 25 ☐ part-time ☐

### ANNOTATION OF PROGRAM

The aim of the program is to provide students with systemic knowledge and abilities to develop computerized information systems and technologies for various branches of science, industry and business, namely: to conduct systemic analysis of subject areas and their formalization; to create mathematical models of automation objects and processes; to design and develop applied software, data and knowledge bases; to develop artificial intelligence systems.

The students obtain practical skills in developing software products; designing the systems for data processing and management with network solutions use, hardware platforms and software products of the world leading producers; ability to choose programming technologies relevant to the requirements of specific systems, and to develop applied programs in various subject areas; ability to build effective computing algorithms and develop integrated information solutions for enterprises and companies, including the design of computer networks, alternative options of computerized systems with the evaluation of necessary resources for their implementation; knowledge of up-to-date methods of designing programs and software systems, ability to develop optimal solutions for software content, algorithms of procedures and operations.

Graduates can develop and implement information managing systems, software and hardware needed for information systems functioning. Creating a competitive economy of Ukraine is impossible without modern systems of management and computer-based design.

The program focuses on developing and maintaining in future specialists a genuine interest for scientific, research and pedagogical work, readiness to write and defend PhD thesis.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### Production oriented Master programs

#### INFORMATIONAL OPERATING SYSTEMS AND TECHNOLOGIES

The concept and overall goal of this master program is to provide specialists with skills in designing, creating and implementation of information managing systems using modern technologies of collective development, programming, testing, managing information systems protection and exploitation; the use of technologies and methods of systems analysis and decision making while creating large and complex systems; operating the systems of artificial intelligence and software of automated systems and computers.

Graduates obtain an ability to solve problems that refer to management and maintenance of complex information systems, to do the analysis of subject area at the systems level, design data bases, develop applied software for implementing management systems, computing systems, service applications, etc.

#### TELECOMMUNICATION PROVISION OF INFORMATIONAL OPERATING SYSTEMS

The concept and overall goal of this master program is to provide specialists with systemic knowledge of methods, techniques and tools to build modern telecommunication systems and networks - the part of information managing systems of agro industrial and environmental branches of economy. The program includes the following disciplines: "Global information infrastructure", "Telecommunication technologies and networks", "Mobile computer-integrated systems". The knowledge about the development of scenarios, architecture, and models of systemic and scheme-technical designing of telecommunication systems, their technical exploitation and service using computer technologies and software tools, will enable future specialists to properly choose the technologies and technical means to implement the control and management schemes, to organize effective management of technological processes of agro industrial and environmental branches of economy.

### Research oriented Master programs

#### DISTRIBUTED INFORMATIONAL SYSTEM

In recent years the new principles of constructing complex software systems have been actively used in order to support decision-making through the use of mathematical models, processing large data volumes, supporting highly-productive calculations. The concept and overall goal of this master program is to provide specialists with ability to design, create and implement complex information systems using modern technologies of collective development; programming, testing, protection and operating information managing systems; the use of technologies and methods of system analysis and decision-making while creating large and complex systems, operating systems of artificial intelligence and software of automated systems and computers.

#### EMPLOYMENT

Graduates can be employed in the IT industry, developing and supporting software. Master in specialty "Information Managing Systems and Technologies" can occupy the following primary positions (according to the classifier of professions): computer systems analyst, computer systems engineer, computer systems designer, engineer-programmer, programmer (data base), application programmer, programmer-system administrator of data bases, system administrator, researcher (computing systems), researcher (programming), researcher (calculations area), assistant, instructor at higher educational institutions.

Graduates can be involved in developing software, software documentation design; maintenance and projecting data bases; software testing; creating and supporting Internet sites and web-applications; development and administration of Internet and IT projects; the functioning of computers; providing information security of the company. In addition, to graduates can continue their education at post-graduate school in specialties: 05.13.23 - systems and artificial intelligence means; 05.13.05 - computer systems and components; 05.13.06 - information technologies.



## ECONOMIC CYBERNETICS

branch of knowledge

Economics and Entrepreneurship

course code

8.03050201

Form of study/training period, years

☒ full time ☐ 1, 2 ☒ part-time ☐ 1, 5 ☐ externship

credits ECTS

60

licensed amount, persons

☒ full time ☐ 50 ☒ part-time ☐ 50

### ANNOTATION OF PROGRAM

In today's rapidly changing market environment when supply and demand require instant economic restructuring, the need for specialists who can analyze, forecast and make the appropriate management decisions based on the analysis of market dynamics is growing dramatically.

These professionals have profound knowledge of economics, analysis and study of economic systems dynamics, theory and practice of decision-making, modeling of the market development, management, marketing, economic and legal relations, special mathematical disciplines, theoretical and professional knowledge of new information and computer technologies in economy.

The purpose of this concept is to provide specialists with systemic knowledge in methods, techniques and tools for constructing, economic analysis and application of economic and mathematical models in transformational economy environment.

The undoubted advantage of the specialty "economic cybernetics" is its versatility. Cyberneticist is a system analyst who not only helps to find the right solutions when a problem arises, but can also forecast and prevent such situations.

The graduate obtains the knowledge and ability to adapt to the place of future employment and develop model systems for the study of social and economic phenomena for practical and research purposes, create and use static and dynamic expert systems for business processes in agriculture.

Specialty "Economic Cybernetics" is a synthesis of three components: economics, mathematics and computer science. Cyberneticists analyze and forecast the economic processes on the basis of mathematical models implemented through information technologies.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### Production oriented Master programs

#### ECONOMIC AND MATHEMATICAL MODELING

Economic and mathematical modeling is a tool to solve strategic tasks in management.

Modern development and implementation of information systems in agriculture require professionals with analytical and algorithmic thinking, profound knowledge in modern information technologies and telecommunications, means of information collection, storage, processing and transfer, with ability to effectively use global information resources, develop and implement computer information and managing systems at all levels of management in agricultural sector, use modern GIS.

The program provides accumulation of knowledge and skills for mathematical modeling of industrial and management strategies of producer behavior in competitive environment and studying the trends of modeling coordination processes in investment activity of economic systems. The program includes the following disciplines: "System Analysis", "Mathematical Models in Management and Marketing", "Modeling of investment activity".

### Research oriented Master programs

#### CONCEPTUAL FORESIGHT OF SOCIAL AND ECONOMIC PROCESSES

The current state of the economy is characterized by the need to process large arrays of data and obtain useful information from them. Therefore the purpose of the program is to provide specialists with methods of economic substantiation of future actions. The knowledge of principles and methods of forecasting helps an expert to comprehend the nature of ongoing phenomena, coordinate the activities with perspective tasks, make efficient decisions. The program meets the growing demand for professionals with ability to make a prognostic specialized analysis. The curriculum covers a set of methods, means and ways to develop social and economic forecast. The curriculum emphasizes the use of tools for data management and applied statistics and operations investigation, methods of analysis of large real data arrays, increased return on investment, customer loyalty, reduction of fraud and improvement of decision-making process.

#### EMPLOYMENT

Master in economic cybernetics at primary positions carries out heuristic, diagnostic and administrative tasks mainly, makes complicated economic calculations, manages the specialists of lower position level.

Master of Economic Cybernetics is able to perform such professional tasks and occupy primary positions (according to the classifier of professions): economist-statistician, database administrator, data administrator, access administrator, analyst in computer communications, analyst in computer systems, researcher (programming), researcher (economics), consultant on business efficiency, economist, economist of computing (information and computing) center, consultant on economic issues, survey expert on economic issues, economist on financial activity, specialist in business efficiency and expert on computerization.

Graduates will be able to perform the tasks of:

- head of small enterprise;
- economist-mathematician in forecasting, planning and analysis of the enterprise activities of various forms of business ownership;
- consultant (counselor) in development and implementation of economic and mathematical models of specific production systems in agriculture;
- specialist of information and computing centers of social security, insurance, scientific, economic and research institutions.



# LAND MANAGEMENT AND CADASTRE

branch of knowledge

**Geodesy and Land Management**

course code

**8.08010103**

Form of study/training period, years

☒ full time ☐ 1,5 ☒ part-time ☐ 2,0 ☐ externship

credits ECTS

☐ 70

licensed amount, persons

☒ full time ☐ 70 ☒ part-time ☐ 85

### ANNOTATION OF PROGRAM

The program "Land Management and Cadastre" aims to train highly-qualified specialists in land management, land protection, land resources management, geosystemic monitoring of environment and state land cadastre. Training involves development of skills to independently resolve complex tasks of land use, develop projects of land management and design nature-conservation measures, monitoring and state control over efficient use and protection of land using modern information technologies of data processing of land resources and its changes; create geodesic-cartographic base of land management.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

Graduates obtain qualification "Master of Land Management and Land Registry" and can be employed as: chief project engineer in land management company; a leading specialist at research institutes of land management; vice-chief of the district branch for land resources or district affiliate of state land registry center; chief specialist in regional land resources; chief specialist in the central office of Land Agency of Ukraine; inspector in monitoring the land use and protection of State inspection in monitoring land use and protection; expert in property rights, expert in evaluation of land plots.

Graduates can resolve the problems of a typical evaluation of real estate, prognosticate the use of lands in administrative-territorial formations, form restrictions in land use and make their registration. They can resolve the problems on the deployment and filling in modern land cadastral information systems, perform expert evaluation of land plots of all categories, carry out statutory evaluation of lands, perform inspection of land use and protection

### Production oriented Master programs

#### LAND MANAGEMENT AND LAND REGISTRY

The program provides the study and documentation in land management at state and regional levels, programs of land use and protection, land management schemes and feasibility studies of land use and protection of administrative and territorial units, land management projects on establishing and changing the boundaries of administrative territorial entities, organizations and setting boundaries of nature reserves, recreational and historical areas.

#### LAND PROTECTION

The program provides students with knowledge and skills in the sphere of rational land use and protection, restoration of soil fertility, increasing the productivity of forest fund lands, providing careful use of environment, recreational, historical and cultural areas. Special attention is given to the problems of standardization and regulation in the sphere of land protection.

#### GIS in LAND MANAGEMENT

The program provides knowledge in the sphere of modern GIS software and computer-based design, managing automated land cadastre system in the centers of land resources.

#### LAND EVALUATION AND REAL PROPERTY

The program is aimed at developing special skills and knowledge to carry out regulatory and expert evaluation of land plots, determining the market value of real estate, determining economic evaluation of lands and soils, using automation systems for land work evaluation, managing local and regional data banks for market value of land plots and real property, civil and legal operations on alienation of real property.

#### GEODESIC AND CARTOGRAPHIC TECHNOLOGIES OF LAND MANAGEMENT

The program provides training specialists for geodesic-mapping in land management, able to carry out geodetic and cartographic operations, land inventory, accounting and registration of land plots. Considerable attention is given to technologies of creating maps and land use; zoning maps and zoning lands; optimization of land resources use; mapping modeling of land use problems with the help of geoinformation technologies; characteristic features of national infrastructure of geospatial data, etc.

### Research oriented Master programs

#### LAND QUALITY EVALUATION AND FORECAST

The program provides training specialists to carry out scientific work, study and search for ways of solving urgent problems connected with application of modern approaches to evaluation of lands and forecasting their qualitative state.

Students cover methodological framework for measuring the quality of agricultural lands; the impact of degradation on the quality of lands; evaluation and forecasting the quality of meliorated, drained, acidic and saline lands; the order of expert evaluation of lands; the certificate of expert evaluation of land.

#### GIS MONITORING OF LAND RESOURCES

The program provides specialists-researchers with knowledge of methods of modern GIS technologies application, data of distance land sensing necessary while conducting land management operations, in municipal information systems, GIS for land management.

#### CARTOGRAPHIC MODELING OF LAND USE PROBLEMS

The program provides training specialists for research, design and survey work with knowledge of geodesic-cartographic and GIS technologies of land management, methods of AC-modeling of nature use, thematic and atlas mapping of land resources, using the map in solving problems of land evaluation, land registry, environmental management.





### LAW

branch of knowledge

SCIENCE

course code

8.03040101

Form of study/training period, years



full time

1

5



part-time



externship

credits ECTS

70

licensed amount, persons



full time

15



part-time

### ANNOTATION OF PROGRAM

Students acquire special skills and knowledge necessary to fulfill professional tasks: ability to analyze the practical application of legislation of Ukraine, ability to interpret and apply regulations in certain legal cases, to provide explanations and advice on legal issues, resolve disputes, prepare legal documents etc.

Professional competencies include: ability to think quickly and consistently, good memory, ability to communicate clearly and vividly, psychological balance, ability to deal with paperwork.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

According to industry-standard of the higher education in Ukraine and the classifier of professions CP 003:2010 graduates obtain qualification - Master of Law and are able to fulfill the following legal activities: 2421 - professional in the field of Law and Public Prosecutions, 2429 - Legal Counsel, 1231 - General Counsel; 2419.3 - specialist legal adviser; 2310 - lecturer at higher educational institution.

Graduates can be employed as legal advisers in various agricultural enterprises. In the process of professional activity graduates can resolve the issues of legal security of client intentions, protection of their rights and interests against violations by other persons or against any illegal actions by the authorities. A lawyer acts in the interests of a client, but within the law, and warns customers of illegal errors.

### Production oriented Master programs

#### AGRARIAN LAW

Students acquire knowledge of the following subjects:

- o "Current problems of agricultural law" - The problems of legal regulation of land reform and property relations in rural areas, development of agricultural market, including grain and sugar market. The basic directions of state support for agricultural producers, namely the system of preferential tax credit. The development of Agrarian Policy of Ukraine; the system of management and control in agriculture. The legal aspects of formation and development of agricultural cooperation in agrarian reform. Prospects for development of productive, service cooperatives and credit unions.
- o "Current problems of agricultural law of foreign countries" - the theory of agrarian law of foreign countries, interpretation of national and international agricultural legislation on the basis of comparative analysis.
- o "Legal support of quality and safety of agricultural products" - the general regulations on the requirements and standards for agricultural products, peculiarities of manufacturing and marketing certain agricultural products. International experience and scientific achievements in the field of quality management and product safety in agriculture. The system of state and public control of product quality and safety, conception and the process of certification.
- o "The problems of environmental law" - legal regulation of the use and protection of natural resources, environmental safety, improvement of governance in the environmental sector, environmental rights of Ukrainian people, legal liability for environmental violations.
- o "Current developments in land law" - the theory and methods of land law, study of current issues and legislation on land, ability to apply acquired skills in practice, new quality of legal thinking in the sphere of land law of modern Ukraine, objective substantiation of the need for land reform, its objectives, nature and content. The students gain experience of the legal analysis of the agrarian and land reform in foreign countries, consider the main directions of state support for agricultural producers, investment in agricultural countries, the problems of agricultural development concepts, land and environmental policy in Ukraine, forming a system of management and control in agriculture, legal aspects of formation and development of agricultural cooperation in agrarian reform, the problems of legal regulation of the use and protection of natural resources in agriculture, food and environmental safety, etc.

### Research oriented Master programs

#### LEGAL REGULATION OF AGRARIAN RELATIONS

The development of legal education, the introduction of innovative technologies in the process of training increases the need for highly qualified specialists. Especially urgent is the problem for agricultural sector: to promote agrarian law as an independent branch of law science, to provide qualified legal personnel for rural areas.

The program provides knowledge of modern trends in the state policy on agriculture, agricultural sciences and development of agricultural legislation.



## ECONOMICS OF ENTERPRISE

branch of knowledge

Economics and Entrepreneurship

course code

B.03050401

Form of study/training period, years

☒ full time ☐ 1,5 ☒ part-time ☐ 1,5 ☐ externship

credits ECTS

60

licensed amount, persons

☒ full time ☐ 75 ☒ part-time ☐ 75

### ANNOTATION OF PROGRAM

The Faculty of Economics provides training according to the industry standards of higher education in EQL "Master" in the branch of knowledge 0305 "Economy and entrepreneurship", in compliance with the concept of integration of education, production and achievements of domestic and foreign education and science and best practices. The program is aimed at improving the quality of training by:

- developing creative abilities through application of up-to-date teaching facilities, enhancing students' independent work;
- increasing individual training through application of achievements and experience of educational institutions of leading countries;
- introducing active forms of education, business games, tests and up-to-date methods in training process;
- developing educational and industrial practices, business situations that dominate in the market economy.

The program "Economy of Enterprise" focuses on training economists - analysts who know organizational and productive economic activities of agricultural enterprises in various categories and forms of management, master modern information technology and can work as managers of enterprises or its subdivisions.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

According to the industry standards for higher education and the classifier of professions CP 003:2010 the graduates can occupy the following primary positions: director (chief) of an enterprise, manager (economist) of a department, head of planning and economic department, chief specialist of trade, agricultural, commodity and industrial markets, economist, economist in planning, financial economist, head of regional government subdivisions, business consultant, columnist on economic issues.



### Production oriented Master programs

#### BUSINESS PLANNING OF ENTREPRENEURIAL ACTIVITY IN AIC

The program focuses on theoretical aspects of business planning, nature and organization of business planning for agricultural enterprises, the structure and content of business plans, technology development of different types of business plans; presentation and expertise of business plan, computerized business planning.

#### ORGANIZATION OF PRODUCTION SERVICE AT AGRICULTURAL ENTERPRISES

The program provides knowledge of economics and organization of production services and logistics at agricultural enterprises, the scientific principles of organization of agricultural services, economic relationships between production and service areas in agriculture, optimization of operation and strategy of service companies on the basis of up-to-date methods and techniques.

#### SOCIO-ECONOMIC DEVELOPMENT OF RURAL AREAS

The program provides study and research of the rural sector structure, demographic and settlement base, formation of labor potential in rural areas. The program focuses on the following issues: rural living environment, social sphere of the village, needs, income and expenditure of the rural population, development of different forms of farming, farmers and private farms, cooperative groups, credit unions, rural green tourism, etc.

#### ANALYTICAL SUBSTANTIATION OF STRATEGIES FOR BUSINESS ENTITIES

The program provides research into methods of strategic development of entities, the role and significance of analysis and forecast, diagnosis and assessment of trends in the analyzed units, development of methodological approaches and practical guidelines for analytical support for strategic development of agrarian enterprises.

#### ECONOMY OF AGRICULTURAL SECTOR

The program provides knowledge about the system of agricultural production relationships in connection with development of different forms of ownership in rural areas. The students analyze the criteria and indicators of development of agriculture, ways and means of rational use of the accumulated potential. The program focuses on the need to support innovation and investment potential of the agricultural sector of Ukraine.

#### STOCK - EXCHANGE ACTIVITIES IN AGRICULTURAL MARKET

The program provides training of highly skilled new type of professionals able to deeply understand the peculiarities of the market economy, who have special knowledge and skills of organization and functioning of the exchange infrastructure necessary for concluding exchange agreements and working effectively for the development of society.

### Research oriented Master programs

#### PLANNING BUSINESS IN AGRICULTURE

The program focuses on comprehensive optimization of operation of agricultural enterprises in accordance with the requirements of environment and strategic development that promote the principle of improving management efficiency of production based on up-to-date methods and techniques (methods of quality management, reengineering of business processes, information technologies and systems, etc.).

#### IMPROVEMENT OF THE SYSTEM OF SELF MANAGEMENT IN RURAL AREAS

The program focuses on braking degradation and decline of villages (rural areas) which is possible only through a complex of activities, training qualified local government executives being of prime importance. A modern head of a village (town) council should obtain appropriate professional knowledge of industrial and economic problems of rural areas, local government, and social development of rural areas; have the basics of organizational, economic and legal regulations of small forms of rural business, social partnerships and the system of social and labor relations.

#### ECONOMICS OF INNOVATION ACTIVITY

The program focuses on scientific and methodological principles of innovation in agricultural production, conditions and ways of improving organizational and economic mechanism of innovation, areas of innovation development in the agrarian sector of Ukraine, methodological approaches to formation of innovative strategies of agricultural enterprises, mechanism of evaluating the efficiency and risks of innovation projects on the territories of priority development.

# ACCOUNTING AND AUDITING

branch of knowledge

Economics and Entrepreneurship

course code

8.03050901

Form of study/training period, years

☒ full time ☐ 1, 2 ☒ part-time ☐ 1, 5 ☐ externship

credits ECTS

60

licensed amount, persons

☒ full time ☐ 150 ☒ part-time ☐ 150

## ANNOTATION OF PROGRAM

The program "Accounting and Auditing" aims to provide specialists with advanced theoretical knowledge and practical skills in accounting and auditing, management accounting and analysis of farm business entity according to international standards in order to increase the efficiency of management.

The important directions of these programs are focused on students' individual work, development of creative activity in finding effective solutions to the problems studied, ability to work with scientific literature and legislation, ability to critically evaluate the organizational process, control and analysis of specific enterprises, to develop adequate proposals to improve economic accounting activity.

Theoretical knowledge of accounting, control, auditing are approbated directly at specific companies. Master programs provide advanced study of achievements in sciences and of best practices, IT technologies.

On-the-job practice develops professional practical skills in accounting, auditing, analysis.

Implementation of research into practice, creative and critical thinking, ability to analyze the processes of accounting, control and revision is the core of training scientists at NULESU.

Modern economic thinking is aimed at developing initiative, searching ways to improve performance, quality of life under conditions of market economy.

### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

## EMPLOYMENT

According to industry standard of higher education graduates obtain master's degree in "Accounting and auditing" and according to the classifier of professions CP003: 2010 can obtain the following positions: chief accountant, chief cashier, chief inspector, head cashier, head of the accounting department, head of control and revision department, chief of centralized accounting, auditor, accountant, accountant auditor, researcher.

## Production oriented Master programs

### METHOD AND ORGANIZATION OF ACCOUNTING, ANALYSIS AND CONTROL IN THE MANAGEMENT OF BANK ACTIVITY

The program includes the study of the organization and methods of accounting, control and analysis of bank activity: securities transactions, bill transactions, non-cash payments, leasing, interbank payments, income and expenses of the banks, formation and use of back funds banks, deposit banks operation, foreign currency transactions, investment activities of banks, financial analysis of bank bankruptcy, lending in the market conditions.

The program aims to provide students with knowledge about economic content of financial and business transactions; to teach them to use accounting and auditing information to organize the work in accordance with the directions of bank activity; to show that the audit of transactions may prevent financial abuse and quickly identify drawbacks in the management of the bank. Students will gain knowledge of financial accounting, analysis and internal audit as tools of the bank; learn accounting methods and procedures for financial accounting of basic bank transactions, learn user's requirements for financial statements of banks, methods of preparation and interpretation of the basic financial statements.

### METHODS AND ORGANIZATION OF ACCOUNTING, CONTROL AND ANALYSIS IN AGRICULTURAL ENTERPRISES MANAGEMENT

The program includes the study of trends and patterns of accounting registration in Ukraine in the process of its reformation according to the principles of international standards and requirements of the Institute of European integration methods and accounting organization: non-current and current assets, equity capital, long-term and current biological assets, long-term and current liabilities, tax calculations, costs and revenues according to the type of activity, financial reporting, management accounting and cost calculation of production in agriculture, animal husbandry, subsidiary production, computerized control, audit and analysis of objects of assets, liabilities and processes.

### ECONOMIC CONTROL OF ENTITIES IN AGRICULTURAL PRODUCTION

The program includes research into the system of economic control and its reforming directions, organization of economic control with the use of IT technologies, methods of its implementation, organization and methods of control of objects: non-current assets, stocks, funds and accounts, equity long term and current commitments liabilities, costs and revenues; financial, organization methods and methods of internal control and inventory, documenting the results of control, implementation of audit and inspection of materials and procedure for compensating material damage.

### METHODS AND ORGANIZATION OF ACCOUNTING, CONTROL AND ANALYSIS IN BUDGETARY ORGANIZATIONS MANAGEMENT

The program includes research into accounting policy of budgetary organizations, accounting and control of revenues, expenditures and cash, general and special funds of budget organizations, especially the reporting of budgetary organizations, accounting and control of property funds and accounts, the use of IT technologies in accounting and control of budgetary organizations.

## Research oriented Master programs

### ACCOUNTING, CONTROL AND ANALYSIS IN AGRICULTURAL ENTERPRISES MANAGEMENT

The program includes research into methodology of accounting, control and analysis for analytical and information support and management of property costs, revenues, capital, financial and capital investments, biological assets, business processes, human resources and organization and methods of controlling work, audit, internal control, legal and accounting expertise of the farms, adaptation of international standards of accounting and auditing, IT technologies in accounting, auditing and analysis.

The research into the major directions of organizational development and methods of control will significantly increase the quality of training professionals in accounting, analysis and auditing.





## FINANCE AND CREDIT

branch of knowledge

Economics and Entrepreneurship

course code

8.03050801

Form of study/training period, years

☒ full time 1,5 ☒ part-time 1,5 ☐ externship

credits ECTS

60

licensed amount, persons

☒ full time 150 ☒ part-time 150

### ANNOTATION OF PROGRAM

The program "Finance and credit" provides knowledge of banking system, accounting and analysis of the tax system. Students obtain the skills to manage financial flows of enterprises of all forms of ownership and different organizational and economic structures. Graduates can be employed in financial and credit institutions, insurance companies, tax inspections.

The program aims to deepen the knowledge of theory and practice to ensure efficient management of financial firms in the economic sector. An important direction of this program is to focus students on independent work, to develop creative abilities to find effective solutions to the problems studied, to acquire skills in working with scientific literature, legislation and on this basis, to develop an ability to form internal and external financial relationships, effectively apply methods of financial management, take effective decisions regarding financial services to entrepreneurs.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

According to the industry standards of higher education and the classifier of professions CP 003:2010, graduates obtain master's degree in "Finance and Credit" and can occupy the following positions: director (chief or head) of the company, chief of financial department, specialist in keeping registry of holders of securities specialists in corporate management, specialist in securities trading, researcher (financial and economic security of enterprises, institutions and organizations), analyst of financial and economic security, executive officer of a bank (or other financial institutions), investment analyst, analyst of crediting, an economist in taxation, economist in financial sector, economic adviser.

### Production oriented Master programs

#### BANKING SERVICE OF AGRICULTURAL ENTERPRISES

The program provides students with theoretical knowledge and practical skills in peculiarities and organization of banking services at agricultural enterprises.

#### CORPORATIVE FINANCE

The program provides students with theoretical knowledge and practical skills in cash management, analysis of financial statements, corporate forecasting and planning, methods of complex evaluation of financial situation, financial risk management.

#### INSURANCE BUSINESS

The program provides the theoretical knowledge and practical skills in risk management of agricultural enterprises, using insurance for the timely neutralization of its negative impact on business enterprises, determining financial stability and reliability of the insurance carrier; calculation of insurance rates, calculating the amounts of insurance policyholders and insurance indemnity. Graduates can occupy the position of a manager at insurance companies.

#### EXCHANGE STOCK MARKET ACTIVITIES

The program focuses on training professionals in finance for the stock market of Ukraine. Graduates obtain the skills to perform the functions of financiers for exchanges, to conduct stock trading using financial instruments both on the domestic markets and in global trade networks. The program provides commodity exchange and stock market of financial instruments with financial experts.

Students gain competences in the nature of exchange activities, legal framework and regulatory system of exchange trade, the principles of organization of exchanges and mechanism of their functioning, the technology of exchange operations. They study to establish relationships of firms and various financial institutions with exchanges and brokerage offices, to determine the effectiveness of stock transactions and successfully use stock information in their activity.

### Research oriented Master programs

#### SCIENTIFIC AND METHODOLOGICAL FOUNDATIONS OF BANKING SERVICE OF AGRICULTURAL COMPANIES AND AGRICULTURAL MORTGAGE

The program focuses on training specialists of scientific direction, engaged in research of bank activity and service to agricultural enterprises.

#### SCIENTIFIC AND METHODOLOGICAL FOUNDATIONS OF FINANCIAL MANAGEMENT OF AGRICULTURAL COMPANIES

The program focuses on training financial experts for the agricultural sector and scientific institutions of Ukraine, formation of coherent understanding of the process of scientific research in any field of human activity, including financial, economic, and practical skills to apply appropriate methodological approaches to obtain new knowledge.

#### THEORETICAL AND METHODOLOGICAL PRINCIPLES OF INSURANCE COVER OF AGRICULTURAL COMPANIES

Graduates obtain fundamental knowledge about the essence of insurance management, its functions, methods and tools, formation of agricultural insurance mechanisms of state support of insurance at agricultural enterprises, priority of insurance coverage.

Graduates obtain the following practical skills: assessment of insurance risks in agriculture, management of reinsurance transactions, the use of current accounts, market research and insurance market to promote new products.



# TAXATION

branch of knowledge

**Economics and Entrepreneurship**

course code

**8\_03050803**

Form of study/training period, years

☒ full time ☐ 1, 2 ☒ part-time ☐ 1, 5 ☐ externship

credits ECTS

☐ 60

licensed amount, persons

☒ full time ☐ 50 ☒ part-time ☐ 50

## ANNOTATION OF SPECIALITY

To achieve the tasks facing society the state uses a system of economic, legal, organizational and administrative measures. Thus one of the most important financial regulators are taxes. The current tax system of Ukraine is not quite perfect and not fully meets the requirements of time, causing the need to reform. The program provides students with deep theoretical and practical knowledge by summarizing the experience of developed countries in order to develop an action plan to improve the tax system.

The program focuses on training qualified personnel for tax authorities and financiers of corporate organization in agricultural sector to manage tax liabilities.

Students obtain theoretical knowledge about activities of tax authorities, their managerial functions, advanced methods and tools of tax management. In the course of practical training at university and in state tax inspections students acquire practical skills in businesses and individual tax administration, work with professional computer programs and skills in mutually beneficial relations between tax authorities and taxpayers.

### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

## EMPLOYMENT

According to the industry standards of higher education and the classifier of professions SC 003: 2010 graduates obtain master degree in "Taxation" and can occupy primary positions: head of financial or economic subdivision, head of small agricultural enterprises, financial manager, inspector of tax service, inspector of customs, state tax auditor-inspector, consultant on fees and taxes, researcher.



## Production oriented Master programs

### TAXATION OF AGRICULTURAL ENTERPRISES

The program provides students with deep theoretical and practical knowledge by summarizing the experience of developed countries in order to develop an action plan to improve the tax system.

The program focuses on the basic theoretical and practical knowledge of: taxation of business entities, tax planning and forecasting, tax optimization, its methods and techniques in management activities of agricultural businesses, corporate tax management to reduce negative impact of corporate tax on their business activities and financial position, acquisition of professional skills of businesses and individuals tax administration.

A graduate should be able:

- to evaluate the amount of taxes to be paid to the budgets, to fill tax reporting and check its correctness;
- to identify the most efficient tax system for taxpayers;
- to develop and implement tax strategies at the enterprise level;
- to plan tax payments of a company, providing neutralization and reduction of negative impact of taxation on enterprises;
- to analyze the effectiveness of tax policy of a company and develop methods to optimize and minimize tax payments by using legitimate methods;
- to manage the process of taxation and ensure effective enforcement of tax laws.

Graduates have to make effective independent decisions to manage tax payments of businesses.

## Research oriented Master programs

### THEORETICAL AND METHODOLOGICAL BASIS OF TAXATION AND TAX REGULATION

Student obtain theoretical basis of taxation of legal entities and individuals, know the tax system of Ukraine, basic tax policy, structure and function of the tax service of Ukraine, the purpose and content of tax legislation, the mechanism of tax charge, tax purposes and organizing tax work, and are able to develop tax policy of a company, aimed at optimizing legal taxation land, fill tax reporting.

The program focuses on fundamental theoretical knowledge and practical skills to form mechanisms of business entity taxation, tax planning and forecasting, analytical work to identify specific factors affecting the functioning of the tax system, comprehensive assessment of the impact of tax system, identifying reserves of taxation efficiency; quantitative and qualitative characteristics of the processes taking place in the country and specific sectors, tax regulation as a part of the state fiscal management, and practical skills in planning of the state or region budget revenues.

A graduate should be able:

- to evaluate the amount of taxes to be paid to the budgets, to fill tax reporting and check its correctness;
- to analyse taxation in order to find reserves to enhance the functioning of the tax system;
- to evaluate the effectiveness of taxation in the country, and in agricultural sector;
- to research the trends in economic development, to assess the progress and find resources in order to increase the efficiency of the existing fiscal policy;
- to evaluate the socio-economic impact of tax regulations for effective managerial decision making and development of a rational taxation system.

Graduates have to carry out research work in the field of taxation, to make effective decisions in the state fiscal management.

## MANAGEMENT OF FOREIGN ECONOMIC ACTIVITIES

branch of knowledge

Management and Administration

course code

B.03060104

Form of study/training period, years

☒ full time 1,5
 ☒ part-time 2,0
 ☐ externship

credits ECTS

70

licensed amount, persons

☒ full time 150
 ☒ part-time 150

### ANNOTATION OF SPECIALITY

Specialists in "Management of foreign economic activities" can be employed as managers of joint ventures and business units, heads of international economic departments, consultants in the development of international activities and management of international business payments, customs brokers; carry out international market research and provide product promotion on international markets.

Graduates are able to plan and forecast activities of the entity of foreign economic activity (unit); forecast the dynamics of demand for import-export products, to develop and study trends and market expansion of companies, to make effective managerial decisions; to organize foreign economic activities of the entity to achieve its mission, to manage the quality and competitiveness of domestic products on world markets, to organize business in international markets, monetary and financial management of foreign economic activity, advertising; creating company image on the foreign market, to monitor foreign operations, to report on foreign trade.

The program involves lectures, seminars, workshops and self-study, visiting joint ventures and international organizations. The curriculum includes professionally oriented subjects using up-to-date educational technologies, interactive teaching techniques (business games, case-study, etc.).

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

Managers of business activity and management (manager of foreign economic activity), managers in other types of economic activity, experts in marketing, entrepreneurship and efficiency of production (expert in foreign economic affairs, foreign affairs consultant), economists (economist of international trade), technical and commercial representatives (commercial agent, trade representative), customs inspectors and other state inspectors (inspector of exports).

### Production oriented Master programs

#### INTERNATIONAL BUSINESS MANAGEMENT

The program provides students with profound economic and managerial knowledge, applied skills and abilities.

The program includes business disciplines in the global context and international cultural and social awareness. Graduates are trained for manager's work, which covers economic and cultural diversity of the real subjects on the market. Graduates obtain fundamental knowledge in the field of foreign economy and acquire skills in market analysis, decision making, project activity, working in a multinational, multicultural environment.

The curriculum focuses on the ways of entering the foreign market and the factors influencing the choice of contractors in foreign operations. The nature of market relations provides flexibility and quick response to constant changing of external conditions. The program is designed for students who planing to make a career in international business.

#### INTERNATIONAL COMMERCIAL ACTIVITY

The program provides knowledge of the situation on the international market that is constantly changing. Students will skillfully implement the benefits of the global market, organize and carry out foreign trade operations, evaluate the economic efficiency of foreign operations, foreign trade contracts, conduct negotiations with foreign firms, to carry out foreign economic activity, using the basic forms and techniques of foreign trade activities.

The program contains a series of courses that include a variety of organizational and technical aspects of foreign commercial transactions, the problems of increasing efficiency and improving the organizational forms and methods of work. Its main purpose is to train highly qualified specialists in the field of foreign economic activity for enterprises, businesses, organizations, public institutions that have business contacts with foreign partners.

The program offers the most important disciplines for future international economists. The program focuses on current trends in international commercial and regulatory activities. Thus, great significance is given to the problems of Ukraine entering the foreign market.

The program is useful for businessmen and public servants.

### Research oriented Master programs

#### RESEARCH OF WORLD MARKET SITUATION OF AGRICULTURAL MARKETS

The program trains researchers to develop methods for short-term and long-term forecasting performance of foreign trade activities and strategy of the external market, taking into account factors influencing the development of foreign trade; tariff and non-tariff instruments of regulation of export-import operations.

The students continue in-depth study of basic fundamental economic subjects, and focus on a particular field of economic and managerial knowledge.

The program develops analytical thinking and skills in research and teaching activities. In this context, research work of future professionals is an integral component of the research activity of the world agriculture department.





# MANAGEMENT OF ORGANIZATIONS AND ADMINISTRATION

branch of knowledge

Management and Administration

course code

B.03060101

Form of study/training period, years

full time 1,5

part-time 2,0

externship

credits ECTS

70

licensed amount, persons

full time 100

part-time 100

## ANNOTATION OF SPECIALITY

Specialists in "Management and administration" can be employed as managers at all levels of administration, experts in production, logistics, economic, HR and other functional departments.

Masters can conduct systemic analysis of business, plan and forecast activities of organization (unit); plan the needs in resources (material, financial, labor), forecast the dynamics of demand, form the optimal product mix; combine all kinds of resources and organize collective labor to achieve the mission, organize and rationalize jobs, administrative decisions; develop strategic directions of the organization, ensure its competitiveness, develop and implement innovations, organize business contacts with the environment, manage the quality and competitiveness of products, develop effective systems of motivation and remuneration.

The program involves lectures, seminars, workshops and self-study, visiting joint ventures and international organizations. The curriculum includes professionally oriented subjects using up-to-date educational technologies, interactive teaching techniques (business games, case-study, etc.).

### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

## EMPLOYMENT

Managers of production subdivisions in commercial service (chief administrator), senior executives in the central government (head), senior executives in local government (chief specialist, head of department, head of service), heads of other major units in other areas (chief inspector, deputy head), managers of small businesses (deputy chairman), managers of business and management (PR manager, advertising manager, HR manager, manager of administration), managers in other kinds of economic activity, economists (economist in agreements and claims), economist-adviser, consultant in economic issues, a columnist on economic issues, an economist in logistics), assistant managers.

## Production oriented Master programs

### MANAGEMENT OF BUSINESS STRATEGIC DEVELOPMENT

The program provides training specialists for management activities and HR provision in large commercial units and integrated services of organizational and strategic development. Their activities provide a comprehensive diagnosis of organizational systems, implementation of innovative approaches, through proactive crisis management system by creating an effective institutional mechanism to ensure functioning of corporate entities.

### MANAGEMENT ON THE MARKET OF COMMODITIES AND SERVICES

The students master the characteristics of management in relation to the market of commodities and services. The current situation shows the lack of qualified personnel on the market in Ukraine. The program covers the study of the infrastructure components of the commodity market, managing a variety of market structure, market pricing system, security risks in the commodity market, functioning of trade and logistics organizations in the agribusiness, etc.

### QUALITY MANAGEMENT

The program focuses on building the quality management system taking into account goals and policies in the information management quality, methodology and analysis of indicators of quality, improving the processes of functioning quality assurance system. Students acquire complex knowledge of basic principles, categories, methods and tools of quality management in modern companies, advancements in the theory and practice of quality management, organization of management quality system at enterprises that would meet the requirements of international standards.

### MANAGEMENT IN THE SPHERE OF ECONOMIC COMPETITION

The program covers theoretical aspects of management in the field of economic competition. The demand for training specialists in economic competition management is caused by increased competitive pressure on business structure. This situation requires a systemic approach towards formation of comprehensive measures in order to ensure competitiveness of enterprises.

### INFORMATION AND CONSULTING ACTIVITIES IN AIC

The program provides specialists with knowledge about information and advisory activities in order to form advisory associations, organize, develop and evaluate programs and provide advisory services.

### RURAL GREEN TOURISM

The rural green tourism in Ukraine and the world is becoming more and more popular. Anthropogenic pressure on the human body, especially in cities, cause the desire of residents to "escape from cities into nature". This results in the need for specialists in recreation in hospitable houses of the countryside - agro homes. The program focuses on theoretical, methodological and practical issues of green tourism in Ukraine and the world, its regulatory mechanism, economic, environmental and social aspects of activity, and will provide knowledge of management, marketing and organization, definition of quality and certification of agro homes and market tourism in regions and the state.

## Research oriented Master programs

### SCIENTIFIC APPROACH TO PROVIDING MANAGEMENT EFFECT IN THE MARKET OF COMMODITIES AND SERVICES

The program focuses on providing effective activities to respond to consumer needs with innovative management approaches. The concept and overall goal of the program reflects the need for objective scientific processes of finding the ways to improve management functions based on the latest theories of management. Students master the theory and methodology of scientific creative research and solve management issues of business and agricultural organizations in order to achieve significant results of industrial activity and effective functioning.



## MARKETING

branch of knowledge

Economics and Entrepreneurship

course code

8.03050701

Form of study/training period, years

☒ full time

1, 0

☒ part-time

1, 5

☒ externship

credits ECTS

60

licensed amount, persons

☒ full time

60

☒ part-time

60

### ANNOTATION OF SPECIALITY

Specialists in marketing work in the fields of marketing, advertising, logistics, research and forecasting, international marketing and trade, as well as they can work as managers of large and small companies, successfully developing their own businesses. The specialists possess necessary skills to develop market strategies of enterprises, to strengthen their competitiveness, to develop perspective, current and operational plans, to organize transport services for foreign economic activities, organizing such transport systems as "just-in-time", "door-to-door," etc. They are able to organize an operation of companies under a volatile environment, assessing risks in the implementation of marketing activities and their estimation, as well as to manage their insurance company image formation and public opinion in order to increase the effectiveness of marketing, to use different modern information technologies to support marketing activities and so on. The proficiency in the specialty involves using different forms of learning, including lectures, seminars, workshops and self-education, attending marketing departments of various companies and market institutions. Most of the program's content includes studying professionally oriented disciplines on the basis of modern educational technologies with interactive teaching techniques (role-playing, production situation, case-study, etc.).

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

Heads of units of material and technical support, managers of small businesses without the apparatus of a commercial service, pricing economists, economists of international trade, public sector services and specialists in marketing, specialists in public relations and media relations, research officers (marketing), heads of marketing departments, heads of advertising and PR departments, managers of public relations, advertising managers.

### Production oriented Master programs

#### LOGISTICS

Due to the integration and globalization of economic processes and structures, the need for the program is based on the objective requirement of the information society to implement a recognized practice of the developed countries and logistics management, which provides a synergetic effect resulting in the mutually linked stream processes along the entire chain of a commodity circulation.

The program aims to train specialists in the field of marketing logistics who are capable of a competent, professional and reliable carrying out of the basic logistics functions to facilitate an effective promotion of products from a producer to a consumer, introducing new organizational and economic methods and techniques in marketing. The program provides management with training specialists who are highly qualified, capable of creative professional activities and application of innovative methods in the field of logistics.

#### ADVERTISING MANAGEMENT

The need for a detailed study of the features of the advertising business under the modern conditions of reforming the economy of Ukraine is due to an urgent intensification of promotional activities of the domestic enterprises by enhancing competition, first of all, with foreign producers. The program provides training in management promotional projects, organizations and management of advertising the projects and their implementation. Its goal is to familiarize students with different modern communications technologies, methods of advertising projects, standards and technology development and implementation of promotional activities.

#### COMMERCIAL AND INTERMEDIARY ACTIVITIES

The program aims to train specialists in sales and brokerage activities with a high level of professionalism and culture to be able to competently, professionally and responsibly perform the basic functions of business, to promote goods from a producer to a consumer using all existing marketing tools, to introduce new organizational and economic methods and techniques in marketing. The need for improving and adapting methods of marketing management business of an enterprise in sales, development of methodological and practical areas of applications determines the main elements of the content of the master's program. In particular, the concept and tools of marketing, satisfaction of consumer demand of different categories of population, the growth of sales through an effective utilization of the industrial capacity, an optimization of distribution costs by using existing capacity of the enterprise and its reserves, a required value of profits at the expense of more rational business sales are studied.

#### INTERNATIONAL TRADE

Training program aims to study the analysis of foreign markets in a globalizing world economic space, the development and evaluation of economic efficiency of international commercial transactions, the application of marketing principles in international trade program and it aims to train specialists in international trade to be able to perform respective functions of trade in foreign markets, to contribute to the effective promotion of products, introduce new technology and economic organization in international trade.

### Research oriented Master programs

#### SCIENTIFIC AND METHODOLOGICAL FOUNDATION OF MARKETING AND INTERNATIONAL TRADE UNDER MEMBERSHIP IN THE WTO

Based on new methodological approaches to marketing activities, the training program aims to deepen the skills in developing strategic plans and recommendations to create and implement marketing programs, increasing the competitiveness of market actors in strengthening an impact of international competition.



### SOCIAL PEDAGOGY

branch of knowledge

Pedagogical Education

course code

B.01010601

Form of study/training period, years

☒ full time 1,5
 ☒ part-time 2,0
 ☐ externship

credits ECTS

70

licensed amount, persons

☒ full time 50
 ☒ part-time 50

#### ANNOTATION OF SPECIALITY

Specialists of the program "Social Pedagogy" work in social and educational help centers, provide support, protection and rehabilitation for all the categories of children and youth. Professional activities of the specialists concern finding solutions for industrial areas in the study of social and educational problems of socialization of children and young wards, of their public defense or advice on social and educational issues at their leisure time, assistance in the education of those who have this direct ratio.

The training aims are to deepen their knowledge, skills, personal and professional qualities that allow for professional features and perform tasks of the related activities: investigation, analysis and evaluation of social and educational activities in the region; organization of social protection of the individual, providing advice on various matters, methodological assistance organization; providing practical assistance in professional and social self-determination, self-education, and self-development; practical work in training clients through entertainment, assistance in the process of education; implementation of information and education programs, development and implementation of public service announcements; teaching social and educational courses at school; organization of social and educational research.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

#### EMPLOYMENT

After graduating, the graduates receive a state diploma of higher education on obtaining the profession "Social Educator" allowing to occupy the following positions: pension inspectors; researchers (social protection, social sphere), teacher-methodologists, instructors, research assistants (in other fields of study), lecturers, teachers of professional education institutions, methodologists, state Inspectors, heads of centers, associations, clubs, directors of social services and centers of specialized consultant services; researchers, analysts.

#### Production oriented Master programs

##### SOCIAL AND PEDAGOGICAL ACTIVITY IN RURAL AREAS

The need for training social workers in rural areas is due to unacceptably low levels of the social development of rural children. These problems require increased psychological characteristics to influence techniques in social and pedagogical work with rural children and youth, and the introduction of modern scientific research into the existing rural society. These approaches are embodied in the master program "Social and Educational Activities in Rural Areas."

The program includes the study of complex subjects on the organization of professional social and educational work aimed at social and educational assistance, support, protection and rehabilitation of rural children and youth. The qualification provides the graduates with employment in preschool and general education schools, homes and children's centers of education, cultural centers and art schools, social and educational services and clubs, children's and community organizations, services and care for minors, special children's schools closed, public facilities and services of social work, centers of social protection and assistance, employment centers and employment facilities and preventive education systems.

The main forms of social pedagogy are: counseling, training, lectures, seminars, round tables, games and festivals, themed weeks, holidays, contests, shows, exhibitions, tours, interactive theaters, charity events, clubs and fairs.

Theoretical and practical training in "Social Pedagogy" is focused on a harmonious combination of classroom hours and work directly on the bases of practical training which enables the graduates to adapt to the places of future employment studying complex subjects, conducting research on current social and educational issues involved in a variety of general state of social and educational events, activities and projects in accordance with the objectives of master papers.

The content of the program includes humanitarian and social and economic disciplines (philosophy of science and innovation development, legal framework of social and educational activities, young people from rural sociology, social youth policy in Ukraine, business language), professionally oriented disciplines and basic training (organization of social services, methodological principles of social and educational research, topical issues of social pedagogy, social work in Ukraine, social support family), vocational and practical training (psychological, educational therapy, methods of teaching social and educational sciences, demography, social work with children at risk, education and psychology of high school, social and pedagogical management systems, protection of labor in social and educational sphere), the elective disciplines chosen both by the University (information technology in education, methods of social and pedagogical training, culture and broadcasting business communication, organization of various social groups) and the students (advertising and information technology in social, management of social and educational work).

#### Master program of research type

##### SOCIAL AND PEDAGOGICAL MONITORING OF RURAL TERRITORIES AND DIAGNOSTICS OF SOCIAL GROUPS

Peculiarities of the vital functions of the rural community, its dynamism, a certain ambivalence actions and behavior, allow investigating a wide range of issues as "internal", purely secular and psychological, as well as "external" - the social context of existence of different social groups.

The content of the master program includes a research, study, development, implementation and expert evaluation of the relevant instruments of social and pedagogical monitoring of social groups.

Monitoring provides all participants of educational process with quality information necessary to evaluate the performance and to make decisions, adjusting the process under investigation.

A social diagnosis allows determining the level of the social welfare and social health of rural social environment (micro society).

A high-quality support for social groups in rural areas provides permanent and unbiased monitoring, tracking, identifying and finding solutions to their needs and characteristics of operation that is necessary for scientific research process organized.





# ADMINISTRATIVE MANAGEMENT

branch of knowledge

Specific Categories

course code

8.18010018

Form of study/training period, years

☒ full time 1,5 ☒ part-time 2,0 ☐ externship

credits ECTS

70

licensed amount, persons

☒ full time 50 ☒ part-time 50

## ANNOTATION OF SPECIALITY

The training program "Administrative Management" focuses on training professional managers capable of managing agribusiness based on the possession of a profound professional knowledge and skills and modern computer technologies, innovations and foreign languages. The specialists have the right to occupy leading positions at enterprises and organizations of agricultural production, as well as central and local government agencies.

Specialty "Administrative Management" (international version - MBA) is the highest level of business training for managers and the most prestigious education program in the world of business. It provides with training a new generation of higher-level, competitive labor market, capable of creative professional and innovative methods of managing under the global competition, providing the students with an integrated system of knowledge that combines a full fundamental economic education with practical skills in decision making, teamwork, negotiations and presentations for professional work in business management.

The features of the master programs of the specialty are versatility of industries and areas of future work, practical orientation to the real business, leadership and communication, ethical aspects of doing business, the formation of new approaches to governance, compliance with national and international business environment, innovation and focus on developing leadership skills.

### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

## EMPLOYMENT

Managers of production units in commercial service (chief administrators), senior employees of the central government (heads of units), Chiefs of the Staff of local authorities (chief specialists, heads of Departments, Heads of Services), heads of other major units in other areas (main inspectors, deputy directors of counseling, Deputy Heads), managers (managers in agriculture, hunting, forestry and fisheries), managers in other types of economic activity, assistants leaders.



## Production oriented Master programs

### ADMINISTRATIVE MANAGEMENT AND MARKETING IN THE SYSTEM OF AGRICULTURAL BUSINESSES

The training of top managers and system analysts able to make strategic decisions in terms of risk, constant development and improvement of business under a competitive environment.

### ENERGY MANAGEMENT

The program aims to train specialists for energy management service companies in the system, technical diagnostics of power equipment, organization design objects agricultural energy.

### ENGINEERING MANAGEMENT

The program aims to train specialists for system management of mechanization in agriculture, modeling and forecasting workflows in agribusiness, design process of diagnosing and repairing vehicles and equipment.

### TRANSPORT MANAGEMENT

The program aims to train specialists for the management of transport companies in view of current trends in logistics policy, knowledge of modern transport infrastructure, the cost of services and key business processes.

### MANAGEMENT IN PORK PRODUCTION AND PROCESSING

The program aims to train specialists for system management of pork production and processing enterprises on the base of the branch ecologization, problems products quality and safety solution.

### MANAGEMENT OF GARDENING AND VEGETABLE GROWING

### ON FIELDS AND GREENHOUSES PRODUCTS MARKET

The program aims to train specialists for management and marketing in horticulture being able to use current scientifically grounded technologies of high quality planting material, product yield of fruit and vegetable cultures in the open air soils and green houses.

### MANAGEMENT IN BEE- KEEPING PRODUCTION AND PROCESSING

The program aims to train specialists for practical management of bee-keeping production enterprises and management of innovative and ecological processes, forecast of demand and supply on bee-keeping products market.

### MANAGEMENT IN POULTRY INDUSTRY

The program aims to train specialists for management of technological processes in the branch taking into consideration the peculiarities of pedigree work with proper kinds of poultry and use of mathematical models of optimization tasks for enterprises and their solution at poultry farms.

### MANAGEMENT OF COMPANIES (enterprises) OF LANDSCAPE ECONOMY

The program aims to train specialists for management and park facilities, taxonomy and classification of mold diversity of woody plants, Works Operating landscaping objects on the basis of environmental economics.

### MANAGEMENT OF FORESTRY COMPANIES (enterprises)

The program aims to train specialists for management of state forestry enterprises using spatial analysis of forest sites, PS-mapping forest enterprises and long-term monitoring of forest ecosystems.

### MANAGEMENT OF AGRICULTURAL ENTREPRENEURSHIP ENTITIES DEVELOPMENT

### INNOVATIVE MANAGEMENT IN AGROINDUSTRIAL COMPLEX

### ENVIROMENTAL MANAGEMENT IN AGROINDUSTRIAL COMPLEX

### LAND MANAGEMENT

### ORGANIZATION OF MANAGEMENT IN VETERINARY MEDICINE

### MANAGEMENT IN PLANT PROTECTION

### MANAGEMENT IN CROP

### MANAGEMENT IN THE PRODUCTION AND PROCESSING OF PRODUCTS OF SHEEP BREADING

### MANAGEMENT IN DAIRY CATTLE

### MANAGEMENT IN THE PRODUCTION AND PROCESSING OF BEEF

### MANAGEMENT IN PRODUCTION OF AQUACULTURE PRODUCTS (by types)

The programs aim to train specialists for system management of enterprises in production and processing of relevant products based on greening (ecologization) of industry, solving problems of quality and safety of food products

# QUALITY, STANDARDIZATION AND CERTIFICATION

branch of knowledge

**Specific Categories**

course code

**8.18010010**

Form of study/training period, years

☒ full time

1, 5

☒ part-time

2, 0

☐ externship

credits ECTS

70

licensed amount, persons

☒ full time

50

☒ part-time

50

## ANNOTATION OF SPECIALITY

The process of integration of Ukraine into the World Trade Organization requires an appropriate training level due to the latest requirements of World Trade Organization and national legislation regarding the identification, evaluation and control of risks relating to the safety of food raw materials and foodstuffs of plant and animal origin, providing organizations information to eliminate or minimize risks in the chain of production and consumption of food; methodological assistance in the development and application of regulations concerning the production technology to further improve the knowledge, skills, and abilities of graduate.

During their training the students obtain knowledge and skills in the field of standardization, certification and quality management, and resolve problems and issues of harmonious and integrated development of products and services based on modern management and control of enterprises and organizations, information technology, standards, methods total quality management, environment and future innovative technologies. The major issues focus on the development impact of standardization on the acceleration of scientific and technological progress, improving safety and competitive ability of products and services, technological efficiency in production systems, to improve the systems of quality management, developing organizational and methodological principles of standardization, certification and quality management in market conditions.

## EMPLOYMENT

According to the industry standard of higher education in Ukraine, the graduates are qualified as experts in standardization, certification and quality and therefore of professions Ukraine (DK 003:2010) may occupy the following positions: heads of the organization (business unit) standardization, certification and quality management; experts on standardization, certification and quality management as a quality engineers (leading, category I), engineers for standardization (leading, category I).

## Production oriented Master programs

### QUALITY RATING OF PLANT PRODUCTS, WATER, SOILS AND AGROCHEMICALS

The program aims to study the basic principles and mechanisms of environmental management, mastery of research methodology, environmental management and environmental risk management, familiarization with the system of mandatory functional and environmental requirements to technical solutions.

### QUALITY OF PRODUCTS, STANDARDIZATION AND CERTIFICATION AT THE ENTERPRISES OF POULTRY INDUSTRY

The program aims to study the standards and other regulations for quality and safety of poultry products including the development of measures for the manufacture of meat products, as well as drafting regulations. During their training the students obtain knowledge about the legal requirements of international and national documentation of production processes in the enterprise.

### MANAGEMENT OF SAFETY AND QUALITY OF FOOD PRODUCTS

The program aims to study the basic principles of food safety management that allows guaranteeing production of safe products through systematic controls at all stages of production, properly managing all hazardous factors that threaten food safety: to prevent, eliminate or minimize those to ensure what foods are safe at their consumption as food.

### STANDARDIZATION AND CERTIFICATION OF AGRICULTURAL MACHINERY AND EQUIPMENT OF AGRICULTURAL PRODUCTION

The program aims to study the legal and technical documentation and requirements for equipment in the field of livestock and crop production, principles of good agricultural practices, principles of standardization and certification of agricultural equipment. It focuses on quality management of agricultural equipment in crop and livestock.

### QUALITY, STANDARDIZATION AND CERTIFICATION OF AGROCHEMICALS. TECHNOLOGIES OF GROWING CROPS AND PLANT PRODUCTS

The program aims to study the requirements of the applicable standards and other regulations for quality and safety of agrochemicals and crop production as well as theoretical and practical experience of using a system of measures to improve and optimize the major groundwater regime and drafting and technical documentation.

### ECOLOGICAL STANDARDIZATION AND CERTIFICATION

The program aims to study the principles of environmental standards and certification for international and national levels, legal requirements and standards of ecology as a means of environmental management, environmental aspects of the processors.

### STANDARDIZATION, CERTIFICATION AND MANAGEMENT OF QUALITY OF ENERGY SOURCES AND ENERGY CARRIERS

The program aims to study the requirements for electrical equipment, and how to solve effectively the problems of energy conservation in agriculture; learning the principles of standardization and certification of electrical equipment.

### MANAGEMENT OF QUALITY, STANDARDIZATION AND CERTIFICATION AT THE FORESTRY ENTERPRISES AND ORGANIZATIONS

The program aims to train specialists studying organizational issues providing quality raw materials in the forest sector, adapting regulatory requirements to process products with international regulatory and legal documents. This program covers all the issues of standardization and certification in the forestry sector.



**FACULTY OF EDUCATION PEDAGOGY OF HIGHER SCHOOL**

branch of knowledge

**Specific Categories**

course code

8.18010021

Form of study/training period, years

☒ full time ☐ 1,5 ☒ part-time ☐ 2,0 ☐ externship

credits ECTS

licensed amount, persons

☒ full time ☐ 75 ☒ part-time ☐ 75

**ANNOTATION OF SPECIALITY**

On the contemporary stage of the development of education in Ukraine, an important role in forming a thoroughly developed personality of the specialist belongs to the higher educational establishments, where the lecturer occupies a leading place in the organization of the educational process. The formed creative potential of the specialists of a new generation depends on the competence of lecturers, on their ability to see and formulate the educational tasks, to plan the stages of training, to choose a content of education taking into account the perceptual abilities of students in order to involve them into the scientific search by the means of modern methods of education.

The professional activity of the specialist in 'Pedagogy of Higher School' involves resolving production problems in organization of a training process at colleges and technical colleges, organizing methodical and scientific work. The specialists take various actions, execute educational and training activity and promote the social development of the youth studying at higher schools. The main functions of the professional activity are to plan, to organize and to execute. Training of the specialists aims to form profound knowledge, abilities and skills, personal and professional qualities, which allow realizing the professional functions and executing the proper tasks of activity:

- planning and organizing educational activity of students concerning studying disciplines of the professional and practical cycle;
- planning and organizing training of students in class and out of class;
- preparing the methodical supply for the educational and training process, organization of the material base of higher schools;
- planning and organizing scientific and pedagogical researches in the establishment for higher education;
- improving pedagogical skill.

**EMPLOYMENT**

Have graduated the graduates are given diplomas of the state standard on obtaining the qualification of a lecturer of an establishment for higher education that allows occupying the following positions: assistants, lecturers of establishments for higher education of different accreditation standards (colleges, technical colleges, higher schools, institutes, universities, academies).

Annually, nearly 120 establishments for higher education of Ukraine fill up its staff with the graduates of the pedagogical faculty of NULESU of Ukraine.


**Production oriented Master programs**

- Teaching methods in the cycle of disciplines agrochemistry and pedology**
- Methods of teaching for the botany and recycling of plants production disciplines cycle**
- Methods of teaching for the vegetable and fruit growing disciplines cycle**
- Methods of teaching for the ecological disciplines cycle**
- Methods of teaching for the fish culture and aquaculture disciplines cycle**
- Methods of teaching for the technology of production and processing of livestock products disciplines' cycle**
- Methods of teaching for the system of land tenure disciplines cycle**
- Methods of teaching for the forestry disciplines cycle**
- Methods of teaching for the park and gardening disciplines cycle**
- Methods of teaching for the financial disciplines cycle**
- Methods of teaching for the economics of enterprise disciplines cycle**
- Methods of teaching for the accounting disciplines cycle**
- Methods of teaching for the cycle management of organization disciplines**
- Methods of teaching for the cycle of disciplines social and pedagogical**
- Methods of teaching for the cycle of disciplines in machinery constructing the for the AIC**
- Methods of teaching for the cycle of disciplines in mechanization of agriculture**
- Methods of teaching for the cycle of disciplines in electrification and automation of agriculture**
- Methods of teaching for the cycle of disciplines veterinary**
- Methods of teaching for the cycle of disciplines in jurisprudence**
- Methods of teaching for the cycle of disciplines in woodprocessing industry**
- Methods of teaching for cycle of disciplines in transport technologies**
- Methods of teaching for cycle disciplines in plants protection**
- Methods of teaching for the cycle of disciplines in selection and seed growing**
- Methods of teaching for the cycle of disciplines in informational technologies**
- Methods of teaching for the cycle of disciplines in food technologies and engineering**
- Methods of teaching for the cycle of disciplines in biotechnology**
- Methods of teaching for the cycle of disciplines in construction**

The content of the master's training programs was formed on the basis of the findings of researches concerning the necessity for the lecturer of the higher educational establishment to execute the professional functions and tasks of activity, and also of existing teaching practice at higher school. The findings were included into the curriculum of the specialists training with a purposeful emphasizing of the elective disciplines chosen by the students. The program includes the list of studying methods on the direction of basic education. It allows students to choose studying methods they are interested in, the disciplines of which they are to teach in the future. The students choose the methods according to the needs of regional higher schools, where they are going to work. Practically, the needs of regional higher schools in specialists of certain specializations, traditions and achievements of scientific schools of these educational establishments are taken into account. The programs provide mastering of a complex of educational disciplines for the organization of specialists training in the establishments for higher education: studying of historical aspects of developing of theory and studying methods of disciplines cycle of professional and practical training; regularities, principles, forms, methods and means of studying specialised disciplines, its content, system of control and evaluation of studying results; improvement, construction and modeling of content of studying disciplines; theory and methods of practical studying; planning, organizing of educational process of EHE of I-II accreditation levels; theory and practice of training etc. Professional training of the specialist of the course "Pedagogy of Higher School" aims to realize the efforts concerning the organization of an effective perceptual activity of students with the orientation point to the forming of a creative potential of the specialists, developing their intellect, maximum realization of personal capabilities, forming the moral and ethical culture, national consciousness, interests, habits, motives and values, and it provides with:

- direction of the education to the science in its development (students master the scientific knowledge and methods of the very science, its problems and abilities of its resolving);
- direction of educational process to the independent work of students, which in its content is common to a scientific work;
- the unity of scientific and educational content, which provides the role of lecturers as the scientists (the specialists become not only organizers of students' studying, but also active researchers in the field, discipline of which they teach);
- the through-professional direction - all educational disciplines are oriented to the future profession of the lecturer;
- the UNITY and the optimum correlation of theoretical and practical training of the specialists;
- humanistic direction of the educational process, introduction a personal approach as the basic value, which determines the character of the interaction of lecturers and students.



# MANAGEMENT OF EDUCATIONAL INSTITUTION

branch of knowledge

Specific Categories

course code

B.18010020

Form of study/training period, years

☒ full time ☐ 1,5 ☐ part-time ☐ externship

credits ECTS

70

licensed amount, persons

☒ full time ☐ 75 ☐ part-time

## ANNOTATION OF SPECIALITY

The graduates of the program "Management of Educational Institution" work at educational institutions of different types. The training program aims to deepen knowledge, abilities and skills, personal and professional qualities that allow performing professional functions and executing the appropriate tasks of activity:

- finding the directions of development of the educational establishment, projecting and forming of its organizing structure, optimization of the structure of the educational establishment for the ensuring of maximum effectiveness in the management according to the abilities of existent automated informational systems of management and adopting the decisions;
- planning the activities of educational establishment, moving the propositions concerning the strategies of the development of educational establishment, prognostication of crisis phenomena and factors, which cause it in the innovative development of educational establishment, development of preventive and corrective anti crisis acts;
- managing educational and economical activities of the educational establishment, control over the execution of the planned tasks;
- forming the regular policy of educational establishment and contingent of students.

## EMPLOYMENT

After obtaining the qualification of the manager of institution and organization (in the sphere of education and industrial education) that allows occupying the following positions: directors (rectors, superiors) of establishments for higher education; directors (superiors) of professional educational and training establishments; directors of advanced training courses, out-of-school establishments, preschool educational establishments, educational and industrial complexes, educational (educational and training) centers, educational centers (branches), directors of schools (higher sport mastery, specialize children's and youthful, sport and technical etc.), superiors (college, advanced training courses, educational center, school); deans; managers (postgraduate study, candidate of sciences study, intern study, educational and scientific basis, kindergartens, educational cabinets, departments, courses, laboratories (education), out-of-school establishments); superiors of educational centers, supervisors of students' projected and constructed (research) offices; managers of the departments, sections, centers, sectors.

## Production oriented Master programs

### MANAGERIAL ACTIVITY AT EDUCATIONAL INSTITUTION OF GENERAL EDUCATION

The program provides future specialists with mastering complexes of educational disciplines on planning and organization of the activities of establishments of general education, supervision of educational and training activities of establishments of general education, control over the executing of planned tasks, forming of a regular policy of establishments of general education and a contingent of persons that study there.

Training of the specialist aims to organize theoretical and practical education, which aims at a harmonic combination of their work in auditorium and the direct work of students on the bases of practical education that allows adapting the graduating student to the future job placement.

The professional training of a manager of an institution of the general education aims at the realization of efforts concerning the organization of effective and perceptual students' activities to form the creative potential of the specialist, development of their intellect to realize their personal abilities, moral and ethical, culture and national consciousness, interests, habits, motives and values.

### MANAGERIAL ACTIVITY IN THE PROFESSIONAL AND TECHNICAL EDUCATIONAL ESTABLISHMENTS

The program provides future specialists with mastering in the complex of educational disciplines on planning and organization of the activities of professional and technical educational establishments, management of educational, training and economic activities of professional and technical educational establishments, control over the execution of planned tasks, forming a regular policy of professional and technical educational establishments and the contingent of persons that study there.

Training of the specialist aims to organize theoretical and practical education oriented at the harmonic combination of their work in auditorium and the direct work of students on the bases of practical education that allows the graduating students to adapt to the future job placement.

The professional training of the managers of professional and technical establishments aims to realize efforts concerning organization of effective and perceptual students' activities to form the creative potential of the specialist, development of their intellect to realize the personal abilities, form the moral and ethical culture, national consciousness, interests, habititudes, motives and values.

### MANAGERIAL ACTIVITY IN THE ESTABLISHMENTS FOR HIGHER EDUCATION OF I-II ACCREDITATION LEVEL

The master program provides future specialists with mastering the complex of educational disciplines on planning and organization of activities of the establishments for higher education of I-II accreditation levels, management of educational, training and economic activities of the establishments for higher education of I-II accreditation levels, control over the execution of the planned tasks, forming a regular policy of the establishments for higher education of I-II accreditation levels and the contingent of persons that study there.

Training of the specialist aims to organize theoretical and practical education, which aims at a harmonic combination of their work in auditorium and the direct work of students on the bases of practical education that allows adapting the graduating student to the future job placement.

The professional training of a manager of an institution of the general education aims at the realization of efforts concerning the organization of effective and perceptual students' activities to form the creative potential of the specialist, development of their intellect to realize their personal abilities, moral and ethical, culture and national consciousness, interests, habits, motives and values.

### MANAGERIAL ACTIVITY IN THE ESTABLISHMENTS FOR HIGHER EDUCATION OF III-IV ACCREDITATION LEVEL

The master program provides future specialists with mastering the complex of educational disciplines on planning and organization of activities of the establishments for higher education of III-IV accreditation levels management of educational, training and economic activities of the establishments for higher education of III-IV accreditation levels, control over the execution of the planned tasks, forming a regular policy of the establishments for higher education of III-IV accreditation levels and the contingent of persons that study there.

Training of the specialist aims to organize theoretical and practical education, which aims at a harmonic combination of their work in auditorium and the direct work of students on the bases of practical education that allows adapting the graduating student to the future job placement.

The professional training of a manager of an institution of the general education aims at the realization of efforts concerning the organization of effective and perceptual students' activities to form the creative potential of the specialist, development of their intellect to realize their personal abilities, moral and ethical, culture and national consciousness, interests, habits, motives and values.



# EDUCATION AND RESEARCH INSTITUTE OF POSTDIPLOMA EDUCATION FACULTY OF ADVANCED TRAINING OF SPECIALISTS IN AGRICULTURE AND ENVIRONMENT PROTECTION PUBLIC ADMINISTRATION

branch of knowledge

Public Service

course code

8.15010002

Form of study/training period, years

☒ full time ☐ 1, 2 ☒ part-time ☐ 1, 5 ☐ externship

credits ECTS

69

licensed amount, persons

☒ full time ☐ 50 ☒ part-time ☐ 150

## ANNOTATION OF SPECIALITY

Master program 'Public Service' aims to form a new generation of government employees and officials for local governments of Ukraine having an appropriate educational and qualification level.

The program is based on the priorities of professional training of highly qualified responsible staff for the state management of the AIC and local governments, who are competent in developing, analyzing and realizing of state policy, as well as who are able to creatively, effectively and successfully execute the managerial functions, contribute to innovative processes in society to strengthen the social justice and successful development of Ukraine. The program is grounded on the ideology of

introduction of public administration in Ukraine according to the political, economic and social European standards, especially the standards for public services. The program aims to provide extended law, economic, political science, managerial, social and humanitarian, professional training to ensure the normative and law, organizing and regulatory, consultative and deliberative managerial activity in AIC of Ukraine.

## EMPLOYMENT

After graduating the specialists with a Master's degree in 'Public Service' obtain posts at state jurisdictions and local government administrations.

## Production oriented Master programs

### MUNICIPAL SELF-GOVERNMENT

The program allows deepening the knowledge about the problems of establishment and development of the municipal self-government in Ukraine on the basis of studying foreign experience, and comparing an actual state of the existent system with the problems and perspectives of the municipal self-government development. The master's program aims to form a clear understanding of political and legal nature, main tendencies, stages of evolution and perspectives of the establishment and development of municipal government in Ukraine, understanding of the role and place of the municipal local government in the system of the state administration, as well as profound knowledge about the elements, system, forming principles of agencies of the municipal local government, its functions and authorities, guarantees and responsibility, the main normative and legal basis of the activities and the development of the municipal self-government.

### REGIONAL ADMINISTRATION

The program aims to train specialists in the field of regional administration, in global and regional contexts, training of governors of a higher level and system analysts, who are able to make the scientifically based and practically reasonable decisions at the state and municipal levels, at the level of the top management of big companies and enterprises. It is directed to the stable development of particular regions taking into account the global processes.

### PROJECT MANAGEMENT

The program is focused on acquiring necessary skills to be able to use the project management methodology as one of the methods of state administration. The practical relevance of introduction of project management technologies to the system of the state administration of Ukraine is caused by such factors as the growing of demands of the market economy and the civil society, the consequence of which is the need to accelerate the adoption and implementation of managerial decisions. In particular, the result of the global competition is the need to improve the quality and reduce the cost of government programs at the same time. In the master's program, a special attention is paid to the formation of knowledge and skills for forecasting and planning of project activities, work organization, coordination and regulation of development and implementation of projects in public administration.

### LEGISLATION

The program aims to train highly qualified specialists in the field of political and state administration, parliamentary system and parliamentary activity, who able to analyze, formulate and implement public policy, make political and legal regulation of parliamentary activity, regulation procedures, to take qualified part in providing of the legislative and regulatory processes in the government and local authorities, in the staff of Verkhovna Rada of Ukraine and local councils.

### STATE MANAGEMENT OF ECOLOGICAL SAFETY AND BALANCED DEVELOPMENT OF RURAL AREAS

The program provides forming competency concerning the state management in the sector of ecological safety of agro sphere - human and natural guard from extreme dangerous in the AIC, ensuring the health and quality of life, a stable social and economic ecologically balanced development of agricultural using of nature, guaranties of preconception, prevention of catastrophes and accidents.

### STATE REGULATION OF QUALITY, SAFETY AND STANDARDIZATION OF AGRICULTURAL AND FOOD PRODUCTS

The program aims to obtain special abilities and knowledge of an innovative character on state management of the sector, which supplies the demands of the society concerning the production, recycling and marketing of high quality, environmentally friendly production for the domestic market and export, what provide the use of the most professional modern technologies.

### STATE MANAGEMENT IN THE SECTOR OF VETERINARY MEDICINE

The program gives the knowledge about the specialties of state management in the sector, legislation, psychological basis of managerial activity, ability at the different stages of state regulation to control human, financial, material, technological, informational resources, organize the realization of medical and prophylactic measures in the veterinary medicine, influence on the production of veterinary products, and realize the other organizing and law activity in conditions of the international integration.

### STATE MANAGEMENT OF THE INNOVATIVE ACTIVITY IN AIC

The special mean gains the system of management and regulation of innovative development as at the state, as at the industrial, regional levels, and also directly at the level of enterprises and organizations, by a consistent level of training of the specialists with the higher education in that or another sector.

### STATE CONTROL OF THE AIC

The program is based on the priorities of professional grounding of highly qualified responsible staff for the state management of the AIC and local governments, who are competent in developing, analyzing and realizing of state policy, they can creatively, effectively and successfully execute the managerial functions, contribute to innovative processes in society with the aim to strengthen the social justice and successful development of Ukraine.

### STATE MANAGEMENT IN USE AND PROTECTION OF SOILS

The program is directed to training specialists of state management on soil resources, system of land tenure, soil protection and control after its use, who can competently execute the leading official functions of officers, while introducing into the life the state policy in the sphere of soil relations.

### SOCIAL AND ECONOMIC DEVELOPMENT OF RURAL AREAS AND TERRITORIAL GOVERNMENT

The program is directed to the chair of rural council appropriate professional grounding on industrial and economic base of rural areas, organization of the system of local government, development of social sphere of rural areas, mastering of the basis of organizing and economic and law bases of functioning of small forms of economy in rural area, formation of social partnership and system of social and labor relations, forming of contemporary living environment of rural community.

### ORGANIZATIONAL AND LAW SUPPORT OF STATE MANAGEMENT IN AIC

The program is aimed to obtain special knowledge, abilities and skills concerning the organization and management of activity of legal service in the AIC, law and regular supply of state management in the sector, the main basis of work with staff of the central bodies of executive authority and local state administrations, local government administrations.

### MANAGEMENT OF FORESTRY ECONOMY

The program is directed to the acquaintance with the modern methods of state management, effective normative and information ensuring of stable development of the sector, international principles, criteria and standards of forest economy keeping.

### MANAGEMENT OF PARK AND GARDEN IN

The program is directed to the acquaintance with the modern methods of state management, effective normative and information ensuring of stable development of the sector, international principles, criteria and standards of park's economy keeping.

### STATE MANAGEMENT OF ENGINEERING AND TECHNICAL SUPPORT OF AIC

The target of the master degrees program is to train specialists of state management of the AIC, which are competent to participate in forming and maintenance of function of system of engineering and technical supply for the growth of agricultural production, reduction of material and energy intensity of technological processes, increasing of labor productivity.

# INTERNATIONAL PROGRAMS

## Master programs at NULES of Ukraine in cooperation with its foreign partner universities



### Wageningen University, Wageningen city (Netherlands)

**Specialty:** Ecology and environmental protection

**Master's program:** Studying about environment

System approach in ecology, structure, connections in the ecological systems, key natural qualities of ecosystems (water, land), finding the pollution at systems, arrival at decision concerning selection of ecologically balanced acts, directed to the improvement of ecological situation.

**Specialty:** Economy of enterprise

**Master's program:** Management, economy and consumer sciences

Informational and consultative supply of demands of agricultural producers and population herewith introduction of modern systems of management of social and economic development, forming the state policy in the agro-industrial and environmental protection sectors.



### University of applied sciences of Weinstephan, Triesdorf (Germany)

**Specialty:** Administrative management

**Master's program:** Administrative management in agriculture

Control over the processes of effective production at agrarian subjects of business by means of introduction of intensive technologies, lowering of costs and increasing of economic effectiveness of production. Forming of the effective system of management and enterprising activity and also resolving the industrial and scientific tasks concerning the effective development of agrarian enterprises and innovative activity.



### Humboldt University, Berlin (Germany)

**Specialty:** Quality, standardization, certificating

**Master program:** Management of processes and quality

Provision safety, climate changes, stable agriculture and ecological using of natural resources. Determination of the quality, safety, standardization, certification of agro-industrial provision and natural bio resources of agro industrial and nature protection complexes.



### University of applied sciences Anhalt, Bernburg (Germany)

**Specialty:** Agronomy, economy of enterprise

**Master's program:** Provisions and agribusiness

Modern technologies of production of quality food production. System of quality and standards of ecological, food and bio technological production. Marketing in food technologies. Consultation in realization and selection of production in the agribusiness sector.



### Swedish university of agricultural sciences, Alnarp (Sweden)

**Specialty:** Forestry

**Master program:** Euro forestry

Control over forest resources on the basis of stable development and ecologically oriented forestry. Developing and introducing of socially optimal strategies of management of forests and forest using at the international levels.



### Tokyo agrarian university, Tokyo (Japan)

**Specialties:** Economics of enterprise, Agronomy, Forestry, Administrative management

**Master program:** International bio business, specialization – 'Surrounding environment'

System approach to the resolving of problems of environmentally friendly production, recycling, preservation and realization of industrial raw materials, lowering of costs, increasing of economic effectiveness of production. Global provision systems.



### Czech university of life sciences, Prague (Czech Republic)

**Specialty:** Economics of enterprise

**Master program:** Organization of international relations

Forming of strategies for developing the subjects of economy, analysis, forecasting and diagnostics of the state and estimation of analyzed objects. Complex estimation of financial state of the enterprises, control of the financial risks. Control and analysis of property management, costs incomes, fund and financial investment, biological investments, industrial processes at the international, national and regional levels.



# INTERNATIONAL PROGRAMS



## Master programs at NULES of Ukraine in cooperation with foreign partner universities

### University of sciences and technologies of Iowa State, Aims (USA)

**Specialty:** Automotive operation of technological processes

**Master program:** Intellectual systems of operation by bio technical objects

Intellectual systems of operation of technological process with biological objects - technical or programmed systems for resolving problems, those traditionally consider to be creative and belong to the sphere of operating of growing, cultivating and maintaining of the vital activity of biological objects.

**Specialty:** Ecology and environment protection

**Master program:** Radiation ecology

Action of sources of ionizing radiation, regularity of migration of radioactive matters to the environment, biological action of ionizing radiation incorporated radioactive matters and ways of its taking to the human organism, theoretical basis of conducting of separate fields of economy at the polluted with radionuclides territories, ways of protection from the damage with ionizing radiation.

**Specialty:** Agrochemistry and soil science

**Master program:** Soil science, monitoring of quality of soils and its protection

Measures for improvement and optimization of the main soil's regimes - elements of nutrition, water and air, heat, oxidizing and restorative, toxic, estimation of soils, its global, ecological and social and economical functions, soils regimes as the functional part of model of effective productivity and biosphere and ecological stability of soil.

**Specialty:** Information operation systems and technologies

**Master program:** Distributed informational systems of making decisions

Projecting, creating and realization of difficult informational systems with using of modern technologies of collective developing; programming, testing, protection and exploitation of operating informational systems; using of technologies and methods of system analysis and making decisions when creating the large and difficult systems, exploitation of systems of artificial intellect and program supply of automate systems and computers.

**Specialty:** Technologies of preservation, canning and processing of meat s

**Master program:** Resources saving technologies of meat products

Developing and practical introduction of rational resources saving technologies of production of safe and of high quality meat products of new generation

**Specialty:** Quality, standardization and certification

**Master program:** Quality and safe of agricultural food production and environment

Analytical and practical using of modern methods of analysis of soil, environment, and also the provision raw materials for the producing of quality and safe food production.

**Specialty:** System of land tenure and cadastre

**Master program:** Geo information monitoring of soil resources

Developing of structure of geo informational monitoring of soil resources of different levels, based on geo space data, developing of scientific and methodical principles of using the data of distant probing of the Earth and digital processing of aerospace data as the important component of geo space data in the structure of geo informational monitoring of soil resources.

**Specialty:** Social pedagogy

**Master program:** Social and pedagogic work with people with special needs

Social and pedagogic work with people with special needs, in particular: law basis of social and pedagogic work with invalids, content of activity of state bodies of government and public organizations of invalids, professional basis of social and pedagogic work with people with special needs.

**Specialty:** Technology of fats and their surrogates

**Master program:** Technology of esters and oil production

Technology and equipment for the processing of esters and fat, projecting and organization of works of processing enterprises of different form of property, its improvement, developing of measures for betterment of quality of esters and fat raw materials, spreading of assortment of esters and oils production and raising of its competitiveness.



### Warsaw's university of life sciences, Warsaw (Poland)

**Specialty:** Electrification and automation of agriculture

**Master program:** Energetics and automatics in the bio systems

Planning and organization of realization of researches that develop and introduce the modern energetic and effective, computer and integrated systems of management of bio technical objects.



### Wroclaw's university of life sciences, Wroclaw, (Poland)

**Specialty:** Park and Gardening

**Master's program:** Landscape architecture

Analysis, argumentation, adoption and realization of decisions on exploitation, reconstruction and restoration of garden and park objects, projecting by the modern computer technologies of landscape objects of different purpose oriented appointment, according to the modern demands of garden and park economy holding.

## MASTER PROGRAMS IN APPLIED BIOLOGY, SPECIALIZATION "LABORATORY ACTIVITY" IN EXPERT AND CONTROL SPHERE OF EMPLOYMENT (EXPERTS-ANALYSTS)

Master programs aim to train professionals in applied biology, the course "Laboratory Business" of expert and control field of job placement on the basis of the educational and scientific laboratories of educational and scientific institutions (ESI) and Ukrainian laboratories of quality and safety of production of the AIC (ULQSP AIC), that ensure the mastering of modern methods of chemical, physical and chemical, biological, ecological examination and estimating of quality and safety of appropriate objects according to the international standards, developing of methods on finding the quality and safety of provision raw material and food products, its identification for the needs of appropriate sectors of the economy of Ukraine (State Veterinary and Phyto Sanitary Service of Ukraine, Central State Inspection of Plants Protection "Golovderzhyst", State Scientific and Technological Center of Safety of Fertility of Soils "Centrderjrodyuchist", Ministry of Ecology and Natural Resources of Ukraine, State Scientific and Technological Center of Environmental Protection, State Ecological Inspection etc.)

### MESC of biology of plants and laboratory diagnostics of quality and safety of plant products and environment

#### Master program:

#### Methods of microbiological and virology control of objects of plants and environment

**Specialties:** Agronomy, Fruits and Vegetable and Viniculture, Agrochemistry and Pedology, Plant Protection, Ecology and Environment Protection, Ecological Biotechnology and Bioenergy, Forestry, Park and Gardenny.

The program aims to train professional bacteriologists to work at diagnostic laboratories of plant production.

The program is directed to the mastering of methods of microbiologic and biologic researches while examination of biopreparation, microorganisms cultures, and also executing the works, connected with measuring technics, microscopy and other diagnostic and analytic equipment, carrying the microbiologic monitoring of soils and plants with the aim to grow of productive forest plantations, forest vegetation and diagnostic of changes in in population of hunting animals.

#### Master program:

#### Methods of entomological control in plant science and environment management

**Specialties:** Agronomy, Fruits and Vegetable and Viniculture, Agrochemistry and Pedology, Plant Protection, Ecology and Environment Protection, Ecological Biotechnology and Bioenergy, Forestry, Park and Gardenny

The program aims to train professional entomologists to work at diagnostic laboratories of state phyto and sanitarian service.

The program provides studying of normative documents in the sector of activity, state and modern entomological methods of researches that are based on the modern principles of diagnostic and identification of zoological objects, ways of work with laboratory equipment, laboratory patterns.

#### Master program:

#### Methods of genetic control in the plants science and environment management

**Specialties:** Agronomy, Fruits and Vegetable and Viniculture, Agrochemistry and Pedology, Plant Protection, Ecology and Environment Protection, Ecological Biotechnology and Bioenergy, Forestry, Park and Gardenny

The program aims to study schemes of varietal certifying of seeds, assigned for the international trade according to the seeds' schemes OCCD, that are integrating in Ukraine and modern national and international legislative and normative and law basis of production of seeds in the world and Ukraine, contemporary state, tendencies and directs of its development, peculiarities of national and foreign price formation for seeds of agricultural cultures. The special part of the program gives an opportunity to master the main methods in the work with genetic material, and practical part gives the opportunity to master the main rules of work in molecular and biologic laboratory, the main methods of practical diagnostic and identification of components of analyzed objects according to the put task by means of modern biotechnological molecular and genetic methods.

#### Master program:

#### Methods of ecologic control of environmental objects

**Specialties:** Ecology and Environment Protection, Agrochemistry and Pedology, Forestry

Students are trained as ecotoxicologists that are able to work in control and toxicologic laboratories of State veterinary and phyto sanitarian service, services of nature protection ecologic control, protection of soils' fertility, control after the turnover of pesticides and agro chemicals.

The program provides with a theoretical and practical studying of modern methods of ecotoxic dynamic, ecotoxic kinetic and ecotoxic metric of harmful matters; estimating of its dangerous level; control in the objects of environment; estimating of ecological risks of using the modern pesticides and agrochemicals; control of the quality and safety of agricultural production; principles of laboratory equipment; organization of work in laboratories, main concepts in the metrology sector, standardization, certification and inspection.

A special part of the program gives an opportunity to master the applied aspects of ecotoxicology, main methods of researches of toxic influence of pesticides and agro chemicals, gain the knowledge on ecotoxicological estimation of technologies of agricultural cultures growing, and the practical part gives the opportunity to master the main rules of work in ecotoxicological laboratory, main methods of practical diagnostic and identification of analyzed components in researched objects by the means of modern analytical methods.

#### Master program:

#### Methods of technological ecological and radiation safety of plants

**Specialty:** Ecology and Environment Protection

This program is for ecologists able to work at the laboratories of radiological monitoring of the State agency of Ukraine on the management of contaminated zone, State veterinary and phyto sanitarian service, services of nature protection ecological control, services of soil fertility protection etc.

The program provides with the theoretical and practical studying of modern radiology's, radioecology's, radiobiology's and radioactive matters methods; estimating of the level of its danger; control in the environmental objects; control of quality and safety of agricultural production; principles of laboratories' equipment, organization of laboratory work, main concepts in the sector of metrology, standardization, certification and inspection

A special part of the program gives an opportunity to master the applied aspects of radiology, main methods of radionuclide's contents researches, appropriate knowledge concerning the sources of ionizing radiation, regular migration of radioactive matters in the environment and ways of its takings to the human organism, theoretical basis of carrying the separate sectors of economy at the polluted with radionuclide territories, protection ways from the damage of ionizing radiation, which are need for the training of highly qualified specialists- eco radiologists of branch subdivisions. A practical part of the program gives an opportunity for students to master the basic rules of work in radiological laboratory, main methods of practical diagnostic and identification of analyzed components in the researched objects by the means of modern laboratory methods, gain the necessary skills for the ecological estimation of radioactive state under the certain conditions, realizing of the radiometric of contaminated with radionuclide objects of environment, forecasting the possible radionuclide contamination of different environmental objects under the certain conditions, using of isotopes in scientific researches.

#### Master program:

#### Reserving business and nature protection control methods

**Specialty:** Ecology and Environment Protection

The program aims to train specialists in reproduction and protection of natural ecosystems to work at specialized laboratories of State veterinary and phyto sanitarian service, services of natural and protected fund, nature protective ecological control, services of soil's fertility protection etc.

The program provides with the theoretical and practical studying of modern methods of monitoring of indices of biological diversity, forest's state, state of soils, geological environment and physical factors of influence on the territories and objects of natural and protected fund, principles of laboratory equipment, organization of laboratory work, main concepts in the sphere of metrology, standardization, certification and inspection.

A special part of program gives an opportunity to master the applied aspects of saving and reproduction of natural landscape and biological biodiversity, appropriate knowledge concerning the forming and functioning of preserves, territories and aquatories, which are liable to the special protection, which is necessary for the training of highly qualified specialists on reproduction and protection of natural ecosystems of departmental subdivisions. A practical part of the program gives an opportunity for students to master the rules of work in laboratories of ecological control of state of the environment, main methods of practical diagnostic and identification of analyzed components of the researched objects by the means of modern laboratory methods, gain the necessary skills for the ecological estimation.

## MASTER PROGRAMS IN APPLIED BIOLOGY SPECIALIZATION "LABORATORY ACTIVITY" IN EXPERT AND CONTROL SPHERE OF EMPLOYMENT (EXPERTS-ANALYSTS)

### MESC of biology of animal and laboratory diagnostic of animal health and quality and safety of livestock products

The role of Ukraine in provision supply in the world community is becoming more and more powerful, while the problem of examination of quality and safety indices of agriculture raw materials and ready production is becoming extremely actual. The corresponding state services (Ministry of Agrarian Policy and Provisions, National Committee of Veterinary and Phyto-sanitarian service, Ministry of Health, Ministry of Ecology etc.) nowadays implement the system of the national control and inspection over quality and safety of agricultural and food production. These products seriously need not only modern equipment, but firstly, the professionally trained specialists, who can work and operate with these modern and valuable devices.

Actually the new, and for the present time the only in Ukraine, program of master's degree training on applied biology, the specialization 'Laboratory Business' will allow, on the base of modern laboratories, mastering the methods of physical and chemical, spectral, molecular, microbiological and other researches of agricultural raw material and ready production through the system 'from the field to the table', diagnostic of animals' health and ecological examination of environmental objects.

#### Master program:

#### Microbiological methods of diagnostic in livestock raising

**Specialities :** Veterinary medicine, Production and Proussing Technologies of Livestock Raising Products, Water Bioresources, Technologies of preservation, canning and recycling of meat, Technologies of preservation and proussing of water bioresources

The program aims to train specialists to work at specialized diagnostic laboratories. The students master the modern methods of laboratory diagnostics in microbiology.

#### Master program:

#### Immunological researche methods

**Specialities :** Veterinary Medicine, Production and Proussing Technologies of Livestock Products, Water Bioresources

The program aims to train specialists to work at specialized diagnostic laboratories. The students master the modern immunological methods of diagnostics of animals' infectious diseases, finding the immunity tension, acquainting with the principles of monitoring researches of animals' infectious diseases.

#### Master program:

#### Chemical and toxicological analysis methods

**Specialities :** Veterinary medicine, Production and Recycling Technologies of Livestock Products, Technologies of Preservation, Canning and Recycling of Meat, Technologies of Preservation and Recycling of Water Bioresources, Water Bioresources

The program aims to master methods of chemical and toxicological analysis, studying of biomaterial and fodder for the content of organic and inorganic toxic compounds. Organization of toxicological and chemical and analytic laboratories. The accurate selection of research samples. Extraction of toxic substances from the biological material and fodders. Extract's refinement and preparing of the samples for the identification of toxic substances. Carrying out of the forensic-chemical examination.

#### Master program:

#### Biochemical researche methods

**Specialities :** Veterinary medicine, Production and Proussing Technologies of Livestock Raising Products, Technologies of Preservation, Canning and proussing of Meat, Technologies of Preservation and Proussing of Water Bioresources, Water Bioresources

The program aims to train specialists to work at specialized diagnostic laboratories, with the aim to hold the biochemical analysis of environmental objects and microsystems, analytical, biochemical, physical and chemical analysis in the industrial laboratories of different appointment. On the basis of the gained knowledge the specialists can work at the laboratories of veterinary medicine, diagnostic centers, analytical laboratories of enterprises, which work at production, proussing, preservation and realization of agricultural products.

#### Master program:

#### Physical methods of diagnostics and treatment

**Specialities :** Ecology and Environment Protection, Veterinary Medicine

The program provides with the training of specialists to work at specialized diagnostic laboratories. The students master the normative and law and methodical materials in the branch of activity, system of ecological standards and norms, methodology of field and laboratory researches, ways of work with laboratory equipment, laboratory samples, technological processes and regimes of agriculture products production, order, methods and means of radiation control and radiation safety of environmental objects, regularity of migration of radioactive matters in the environment and ways of its taking to the human's and animals' organism, theoretical basis of holding of separate branches of economy at the contaminated with radionuclide territories, ways of protection from the damage of ionizing radiation.

#### Master program:

#### Veterinary and sanitary examination of agricultural and food production

**Speciality:** Veterinary Medicine

The program provides with the preparation of specialists to work at laboratories of veterinary and sanitary examination. The students master the methodology and modern methods of laboratory diagnostics on the veterinary and sanitary examination of food raw material.

#### Master program:

#### Virology methods in veterinary medicine

**Speciality:** Veterinary Medicine

The program aims to train specialists - doctors of veterinary medicine - virologists to work at diagnostic laboratories of veterinary medicine. The students master the modern methods of laboratory diagnostics of animals' virus infections.

#### Master program:

#### Immune and biotechnological researche methods

**Speciality:** Veterinary Medicine

The program aims to train specialists- doctors of veterinary medicine- immune and biotechnologists to work at the enterprises on production of immunological preparation. The students study the organization of immunological preparation production, principles of constructing, production and control of vaccines, serums, probiotics, immunoglobulins. Interferons, master modern methods of getting and cultivating of producers of immunotrop products.



## AGRONOMY

branch of knowledge		course code	
Agriculture and Forestry		B.09010101	
Form of study/training period, years		credits ECTS	licensed amount, persons
<input checked="" type="checkbox"/> full time	<input type="checkbox"/> 1,5	<input checked="" type="checkbox"/> 90	<input checked="" type="checkbox"/> full time
<input type="checkbox"/> part-time	<input type="checkbox"/> 1,5	<input type="checkbox"/> 90	<input type="checkbox"/> part-time
<input type="checkbox"/> externship	<input type="checkbox"/> 90	<input type="checkbox"/> 90	<input type="checkbox"/> 50

## ANNOTATION OF SPECIALITY

The graduates of the program "Agronomy" are able to work in farm production, using methods and measures for high and stable crop production friendly to the environment, storage and primary processing, soil climatic conditions growing area, and the existing material and technical capabilities of agro industrial and economic redevelopment of the enterprise.

The master's programs in "Agronomy" provides with the studying of modern ecological systems of crop varietal resources major crops and their seed characteristics, standards in crop, scientific aspects in agriculture, energy efficient technology used in agriculture and crop production, efficient productivity of field crops, and scientific issues of local management of agro bio-resources in crop and agrobiological principles of productivity of field of plant communities (phytocoenoses).

### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

## EMPLOYMENT

The graduates of the master's program in "Agronomy" get the qualification 2213.1 "Agronomist - analyst" according to the industry standard of higher education of Ukraine and they are qualified to work in (according to the DC 003-2010): plant economy, grain crops growing, fodder and technical cultures growing, seed growing, concession of relief services in plant economy, farmer's consulting on questions at the agriculture sector

An agronomist-analyst is competent to occupy the posts of senior agronomists, chiefs of brigade, directors of farmer's economy, directors of small agricultural enterprises, agronomist-analysts, junior scientific assistants, scientific assistants, scientific assistant-consultants, agronomists, agronomists in seed growing, agronomists in plant protection, agronomist examiners, agricultural consultants or experts.

### Production oriented Master programs

## SUBSTANTIATION AND DEVELOPMENT OF SYSTEM OF ECOLOGICAL AND ADAPTIVE FARMING

The master program aims to train specialists in ecological adaptive farming and provide with mastering of scientific methods and ways of agro-ecological analysis and optimization of links of adaptive systems of farming in agro-formations of different forms of property, directions of its development on the base of ecologization of plant economy, resolving the problem of environment, producing the clean plant production. Agronomist-analysts, according to this program, have to analyze the market of competitiveness of cultures, projecting the structure of areas under grain and crop rotations, which conform to ecological, landscape, soil and climate and market conditions of a specific agro-formation for the production of the planned volume and quality of plant products, develop the optimal variants of soil-protective and resources-saving system of soil cultivation on the base of using of modern agricultural technics ,develop the adaptive agro-economical proved system of farming and technologies of cultivating of basic agricultural cultures taking into account its biological peculiarities for the economies of different forms of property and soil and climate conditions of separate Ukrainian zones.

## MANAGEMENT OF PRODUCTIVITY OF FIELD CROPS

The master program aims to train specialists, competent to work as main and leading specialists mainly at large agricultural agro-formations, regional departments of agro-policy and provision, in the system of consultative and informational services, which engaged in introduction and scientific accompaniment of perspective scientific, adaptive technologies of field cultures growing, resolving of problems of supplying the country's population with food products of high quality, raw material for the recycling industry, supply livestock raising with fodders; in scientific and research establishments, that work in the plant sector improvement and developing of systems for agriculture cultures growing, to lecture at agrarian educational establishments of II-III accreditation level.

## QUALITY OF PLANTS PRODUCTS DEPENDING ON GROWING CONDITIONS, AFTER PROCESSING, SAVING AND RECYCLING

The master program aims to train specialists able to work at agricultural enterprises of different form of property, which possess the modern and perspective adaptive technologies of growing, and also the primary recycling of crops and producing of food products (grains, bakery and macaroni goods, food fats, vegetable and fruit and berry's, canned food), medical, essential oil's and other technical cultures, the raw material for which is the products of plants' economy. The students are qualified to work in scientific and researching establishments, that work with issues of improvement of growing technologies and agricultural production's recycling technologies, in the regional centers of standardization and control quality of production; for becoming a lecturer in agrarian educational establishments of II-III accreditation level.

## Research oriented Master program

## SCIENTIFIC BASES OF MANAGEMENT OF BIOPRODUCTIVITY FORMATION OF AGRO-CENOSIS OF FIELD CULTURES

The master program aims to train specialists able to work in scientific and research establishments, that work at: improvement and development of perspective scientific adaptive technologies of field cultures growing; resolving the problems of forming the agro-phyto-cenosis of high productivity of field cultures; scientific argumentation of adaptive ways of crops' rising and quality of agricultural production; studying the scientific and practical bases of informational supply of scientific researches in plants' economy

The graduates' knowledge and practical experience can be used in organizations and establishments of the Ministry of Agrarian Policy and Provision of Ukraine that work with the issues concerning the improvement of agricultural cultures' growing technologies and also they can work as lecturers of agrarian educational establishments of II-III accreditation levels.



## FRUIT AND VEGETABLE SCIENCE AND VITICULTURE

branch of knowledge

**Agriculture and Forestry**

course code

**8.07010104**

Form of study/training period, years

☒ full time ☐ 1,5 ☒ part-time ☐ 1,5 ☐ externship

credits ECTS

**70**

licensed amount, persons

☒ full time ☐ 50 ☒ part-time ☐ 30

### ANNOTATION OF SPECIALITY

The graduates obtain knowledge about current technologies of production, storage and primary processing products of vine, fruit, berries, and grapes growing with energy and ecology efficient systems of protection products and agrochemical of modern technological processes in fruit-growing, vegetable-growing and viniculture. It allows the graduates to have a sufficient theoretical and practical training to work at agricultural enterprises which specialize in manufacturing, storage and processing of fruit vine and vegetable growing or research institutions.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

According to the industry standards for higher education of Ukraine, the graduates of the program get the qualification 2213.1 "Researcher of the vine, fruit and vegetable growing" to be allowed to carry the following economic activities (according to DC 003-2010): growing of vegetables, melons, vegetable seedlings, and seed production; growing of fruit, berries, planting material; in viniculture: the growing of sustainable harvest of grapes and planting material; providing support services for fruit growing, vegetable growing and viniculture, farmers consultation in management (agronomy) issues in agriculture.

The graduates are able to do specified professional work in accordance with the classification of professions. They can hold the following positions: office chief agronomists, farm managers, directors (heads) of small farms, agronomists, researchers, agronomist-researchers in vine, fruit and vegetable growing, young researchers, scientists, researcher consultants, agronomists, agriculturists of seed growing, agronomists in plant protection specialized in solving scientific problems for agronomy, agro information technologies and systems of fruit, vegetable and vine growing, selection and genetics of crop, plant protection, or continue his education in graduate school, agronomist inspector, agricultural expert counselors.



### Production oriented Master programs

#### GRADE TECHNOLOGIES IN VITICULTURE

The master program aims to train professionals at enterprises and institutions concerned with improving the technology of growing grapes in different natural wine regions of the Crimea as well as in the farms of different ownership forms, definition of perspectives for growing grapes in the vineyard risky areas of central and northern regions of Ukraine, the study biological basis of various alternative technologies of growing root-down and graft propagating material of grapes, and innovative growing technology, its reproduction, where they profoundly study ampelographic features and technological characteristics of the grapes for the production of various types and vine sorts. The specialist may work in production in the agricultural enterprises of different ownership forms, research institutions of the National Academy of Sciences of Ukraine, advanced agricultural economies, and at universities that deal with viticulture.

#### UP-TO DUTE TECHNOLOGY OF PRODUCTION OF FRUITS AND BERRIES IN THE SOUTH OF UKRAINE

The master program aims to improve the advanced technologies for fruits and berries in-depth study of photosynthetic systems garden programming and forecasting yields, features rock-grade and zonal agricultural practices and modern technologies of planting material by future professionals.

The specialists are trained to work in the fields of fruit-growing, nursery fruit and berries as the leading agronomists district and regional offices for entrance to postgraduate study at universities and research institutes with a focus on specialty fruit growing and nursery.

#### UP-TO DUTE TECHNOLOGY IN VEGETABLE GROWING OF OPEN GROUND

The master program aims to prepare professional agriculturists, gardeners various ranks and private entrepreneurs.

The students obtain knowledge in the technologies of heat-loving vegetables and potatoes, to work in specialized vegetable enterprises of different ownership forms in the southern Ukraine, the Ministry of Agricultural Policy and Provision of Ukraine and other regions with similar climatic conditions.

### Research oriented Master program

#### RESEARCH AND INNOVATIVE WORK IN VITICULTURE

The program aims to train professionals to work at research institutions that study: the problems of affinity and adaptation of variety-wilding combinations of grapes; conditions for obtaining high-quality propagating materials, grafted varieties of traditional technical direction, improve and develop methods for selection of rootstocks for valuable technical grape varieties, to competitive production of wine, improve energy and resource saving technologies in grape nursery, modern technologies of repair and reconstruction of vineyards, the development of modern technologies of growing new grape varieties including different weather conditions.

The specialists may work in manufacturing, in the agricultural enterprises of different ownership forms, research institutions, the National Academy of Sciences of Ukraine, in leading agro industrial farms, and in universities.

#### RESEARCH AND INNOVATIVE WORK IN GARDENING

The master program aims to deepen the knowledge about the peculiarities of specific planning and bookmark experiments of records and observations in fruit-growing, to be capable to work in research institutions, engaged in finding new ways to solve problems of increasing yields and harvest quality of fruit and berry crops with their biological characteristics, and soil cultivation as well as climatic conditions.

The master's program is for future researches and pedagogy staff of research institutes, experimental stations and research universities and teachers of disciplines related to fruit and berry crops.

#### RESEARCH AND INNOVATIVE WORK IN VEGETABLE GROWING OF OPEN GROUND

The master program aims to deepen the knowledge about research of improving the technology of growing vegetables and potatoes in the open ground. The scientific institutions of the National Academy of Agrarian Sciences of Ukraine, organizations are involved in approbation of introduction of varieties and hybrids of vegetable crops and potatoes and in introduction into production innovative technologies of vegetable.



## VETERINARY MEDICINE

branch of knowledge

Veterinary science

course code

8.11010101

Form of study/training period, years



full time



2



part-time



externship



120

credits ECTS



full time

70



part-time



0

licensed amount, persons



full time

70



part-time



0

## ANNOTATION OF SPECIALITY

The master degree program aims to deepen knowledge and sharpen special skills to execute tasks and duties of professional activities provided for primary positions.

The training program allows predicting and conducting preventive maintenance and distribution of non-communicable, infectious and invasive diseases in the future professional activity. The students obtain the skills of veterinary management accounting, reporting and record keeping, implementation of industrial and financial activities, marketing and management in veterinary medicine, modern methods of livestock veterinary services, successfully to treat animals suffering from non-communicable infectious and parasitic diseases using modern scientific, technical and innovative achievements of world civilization. The students qualified as masters of research type have necessary theoretical and practical skills in clinical and laboratory research of animals and sample materials for diagnosis of animal diseases, as well as their interpretation, including advanced science and practice.

## Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

## EMPLOYMENT

According to the State classifier of professions of Ukraine the course graduates can get a position in area of "Veterinary medicine" having a qualification "Master of Veterinary Medicine." According to their qualification they may occupy the following positions: doctors of veterinary medicine at agricultural entities in cattle breeding, pig breeding, poultry raising; doctors of veterinary medicine of small animal; doctors of veterinary medicine of agricultural enterprise and institutions of veterinary medicine; doctors of veterinary medicine of meat processing of enterprise; veterinary medical experts; doctors of veterinary medicine in sanitary hygiene of enterprise from remaking livestock production; microbiologists, virologists, immunologists, parasitologists, pathologists; doctors of veterinary medicine at biotech companies; doctors or chief doctors of veterinary medicine, researchers; heads of laboratories of veterinary medicine or departments, of district, or in regional and Republic administrations; heads of departments and so on. The graduates work at agricultural enterprises of different ownership, in the state veterinary medicine, in private clinics, in veterinary medicine and so on.



## Production oriented Master programs

## DIAGNOSIS, TREATMENT AND PREVENTION OF BIRD DISEASE

The master program aims to study poultry farms under modern sanitary requirements, technological schemes which prevent the most common non-communicable and communicable diseases of poultry.

## DIAGNOSIS, TREATMENT AND PREVENTION OF INTERNAL DISEASES

The master program aims to study modern principles of general prevention of disease in animals, methods of laboratory diagnoses and treatment of most common animal diseases and preventive measures for diseases of different organs and systems of their body.

## TREATMENT AND PREVENTION OF SURGICAL DISEASES

The master program aims to study treatment and prevention of the most common surgical diseases of farm animals, small animals (dogs and cats). Herewith the problems of traumatology, orthopedics, and dentistry and ophthalmology animals are considered.

## CLINICAL PHYSIOPATHIONAL OF ANIMALS

The master program aims to study and analyze the nature of disorder functions of vital organs of animals at every stage of the disease and identify the relation of pathogenesis of the disease and its clinical implications. They study etiology and pathogenesis violation of immunological reaction in animals, the major metabolic disorders in cattle and justification of pathogenetic therapy.

## PREVENTION AND REHABILITATION OF DISADVANTAGED FARMS BY CONTAGIOUS OF ANIMAL DISEASES

The students learn the principles, methods and tools for diagnosis of infectious and parasitic diseases, planning and organizing events for the prevention and rehabilitation of disadvantaged farms by contagious diseases.

## THE VETERINARY EXAMINATION OF ANIMAL PRODUCTS

The main goal of the course is to form skills in realization of hygiene research and definition of a veterinary welfare of food and technical raw materials of animal origin. Veterinary and sanitary examination covers such main sections as meat (its morphological and chemical combination, veterinary and sanitary evaluation of food slaughter in the case of invasive disease), fish and food processing, bacteriological examination of meat and meat food.

## OBSTETRICS, GYNECOLOGY AND REPRODUCTIVE BIOTECHNOLOGY OF FARM ANIMALS

The master program aims to study the peculiarity of treatment and prevention of the most common obstetric and gynecological disease of agricultural and small animals. A considerable attention is paid to obstetric and gynecological clinical examination.

## PATHOLOGICAL ANATOMY, AUTOPSY SECTION AND JUDICIAL VETERINARY

The course involves studying morphological changes of different pathology and sanogenesis and thanatogenesis. The graduates study different aspects of the activities of a veterinary medicine doctor, a forensic veterinary expert, forensic methods of a veterinary autopsy of animals and selection of materials for the criminological research laboratory.

## Research oriented Master programs

## MODERN METHODS OF DIAGNOSIS, TREATMENT AND PREVENTION OF ANIMAL DISEASES

This course provides scientific basis of the principles, means and methods of general diagnosis, therapeutics and prevention of diseases using remote sensing and digital devices and nanotechnologies.

## MODERN LABORATORY METHODS FOR EVALUATING THE IMMUNE STATUS OF FARM ANIMALS

The students study classical and novel immunological methods, means and methods of indication of immune cells and antibodies induced by them, the scientific assessment of immune deficient state farm animals body and the ways of reasoning their correction.

## ECOLOGICAL MORPHOLOGY

The master program aims to examine general biological patterns of animal body structure that is the base in preparing a specialist with a master's degree in veterinary medicine. Learning the ecological morphology lays foundations of research methodology apparatus and systems, and structure of animals including species, breed and age aspects under the influence of environmental factors.



## TECHNOLOGIES OF PRODUCTS OF FERMENTATION AND VITICULTURE

branch of knowledge

Food Production and Processing of Agricultural Products

course code

8.05170106

Form of study/training period, years

☒ full time ☐ 1,5 ☒ part-time ☐ 1,5 ☐ externship

credits ECTS

70

licensed amount, persons

☒ full time ☐ 15 ☒ part-time ☐ 10

### ANNOTATION OF SPECIALITY

The graduates of the program apply their knowledge of technology viticulture, beer and soft drinks, alcohol production technology at enterprises and in the process of research knowing the methods and measures to obtain the final products with a minimal impact on the ecology and economic feasibility and being able to choose an appropriate technology in accordance with logistical capabilities of particular food businesses.

The master program aims to deepen knowledge about modern systems of environmental security, economic development of companies, new developments in developed countries in the world.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

A graduate of the program 8.05170106 "Technology of Products of Fermentation and Viniculture" is qualified as "Master of the Technology of Products of Fermentation and Viniculture". The graduates can occupy the following positions: an engineer-technologist, an engineer, an engineer-technician, an agricultural expert advisor, a head of a department (research, project), a head of a department (bureau) of registration of project materials, a head of a laboratory (research, preparation of production), a head of a research department, a chief engineer of a project, a teacher at professional and higher educational institutions and so on.

### Production oriented Master programs

#### TECHNOLOGY OF PRODUCTS OF FERMENTATION AND VINEMAKING

The master program aims to train specialists for the production of wine products, malt, beer, soft drinks and alcohol production to be able to solve simple and complex scientific technological and engineering issues, focusing on the problems of improving product quality, combating fraud, regulating the range of the produced wines, developing low-waste and energy efficiency technologies, utilizing waste production, improving the ecological environment, being able to use computers.

The master program consists of the following sections:

-improving the quality of table wines by optimizing process, parameters technology process, cooking wine materials. This section of the program aims to train professionals to work on establishing the impact regimes and process parameters on the performance of table wine and quality wines, which requires knowledge of the range of wine products, performance and quality, to conduct chemical analysis and organoleptic evaluation.

- the influence of enzyme preparations and dry yeast for quality table wines. This section of the program aims to train professionals to work on problems of the stability and quality of wines from using enzymatic catalysis using a new generation of drugs that enhance the release mash-drift, go into the mash phenolic compounds and aromatic grapes. Herewith energy savings and raw materials is achieved. A part of the program aims to train scientists engaged in improving the quality of wine using dry yeast.

- improving the technology of fortified wines that are produced with the use of grape alcohol. The section of the program aims to train wineries, possession methods and ways of obtaining high-quality grape alcohol, used in the production of fortified wines.

A final master paper shows a degree of knowledge of the graduates about all disciplines in the curriculum of the program: the ability to set and solve scientific and technical tasks in technology of wines, to perform methodical, technical, economic and graphic design; to use the latest achievements of science, best practices of leading companies and to use modern methods of research.



## TECHNOLOGIES OF FATS AND FAT SUBSTITUTES

branch of knowledge

Food Production and Processing of Agricultural Production

course code

B.05170102

Form of study/training period, years

☒ full time

1, 5

☐ part-time☐ externship

credits ECTS

70

licensed amount, persons

☒ full time

10

☐ part-time

### ANNOTATION OF SPECIALITY

The graduates obtain knowledge and skills in the production of fatty food products and essential oils. Training includes studying trends in oil and fat production in Ukraine and abroad; natural sources of fat products, the markets of raw fat products, the development of basic processes and equipment to prepare materials for extraction of vegetable oils, the development of technical bases storing oilseeds, the study of flow diagrams and production equipment fat products (vegetable oils and animal fats). The students study the technical support of production and purification of vegetable oils, animal fats, margarine and mayonnaise production, the production and technological bases of technical fats, surfactants, fatty acids, higher fatty alcohols.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

The classification of the graduates' job placement under the state classification of occupations of Ukraine is "Master of Technology of Fats and Substitutes". According to the obtained qualification, the graduates are allowed to occupy the following positions: chief specialists, heads of research units (on production and design: soap-making, microbiological control, fat production, analytical and chemical research); head (chief) of research units and departments of scientific and technical preparation of production (the departments: research, design, automation of production processes, environmental protection, standardization, technical, technological, central plant laboratories, pilot production and others); chief engineers of the project, chief chemists, heads of department (research, project), heads of department (bureau) of design project materials, heads of laboratories (teaching and research, production), heads of central laboratories, heads of research department of production, a chemist-analyst, engineers, chemists, technicians, engineers for the design of the mechanized development, engineers of the implementation of new equipment and technology, research engineers, teachers at institutions, technology researchers for the production and processing of animal products, etc.

### Production oriented Master programs

#### VOLATILE PRODUCTION TECHNOLOGY

The master program aims to deepen knowledge and skills in solving production problems with the production of essential oils. The graduates are trained for productive activities in the following areas: using of technologies and equipment for processing of aromatic raw materials, design and organization of work processing essential oil of various types of ownership, improving the technology essential oil production, development of technical and technological measures energy-saving and waste recycling technologies aromatic raw material, development of measures to improve the quality of aromatic raw materials to expand the range of volatile oil production and increase its competitiveness, organization and implementation of measures, to reduce the cost of essential oil production, technology development and solutions of various aromatic products, improving the processing technology of various kinds of aromatic raw materials, the development of complex, waste technologies for volatile oil production from the expansion of the range, design of aromatic raw materials for processing.



#### TECHNOLOGY OF FATS AND FAT SUBSTITUTES

The master program aims to deepen knowledge about productive activities in the areas of planning processes and design of production lines for the production of fats, fat substitutes and essential oils, making and implementing proposals for optimization processes industry, the introduction of energy saving technologies, development of measures for quality control and product safety, implementation of technology aromatic complex processing of raw materials, planning of ecological safety of production, development of information technology in management of production.





## MECHANIZATION OF AGRICULTURE

branch of knowledge

Engineering and Energetics of Agricultural Production

course code

8.10010203

Form of study/training period, years

☒ full time

☐ 1,5

☒ part-time

☐ 1,5

☐ externship

credits ECTS

☐ 70

licensed amount, persons

☒ full time

☐ 65

☒ part-time

☐ 65

### ANNOTATION OF SPECIALITY

While training, the students get deep knowledge, ability and skills to solve the problems of comprehensive mechanization of agriculture, efficient use of resources and management of production processes; experience in designing operational and technological requirements subject to the conditions of different organizational forms. The main goal is to provide undergraduates with theoretical knowledge and practical skills needed to create advanced machines and equipment for agriculture, to develop of concepts of efficiency agriculture technology, introduction and implementation of plans for introduction of energy-saving technologies, development of information technology of technical services in agriculture. Graduate of this specialty has deep knowledge of contemporary issues in agro-engineering and vibrant use of modern advances in agricultural engineering, information technology on farms.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

### EMPLOYMENT

The qualification of the graduates according to the state classification of occupations in Ukraine in "Agricultural Engineering" is an engineer-researcher of agricultural production. According to the obtained qualification the graduates are able to occupy the following positions: research engineers with the mechanization of agriculture, researchers and consultants, engineering-designers of machinery and equipment and social and labor agricultural production engineers, chief engineers, heads (chiefs) of production lab, heads of mechanization and automation of production processes, an engineer with the electrification of agricultural enterprises, teachers at professional educational institutions and so on. The graduates work in agriculture, forestry and transport enterprises of different forms of ownership, government departments, research institutions and the NAAS, the National Academy of Sciences of Ukraine, state reserve, reservation, regional and district agriculture department or research institutions that specialize in solving scientific issues in the field of "Technology and Energy of agriculture."

### Production oriented Master programs

#### MECHANIZATION OF AGRICULTURE

Up-to date technology and various agricultural machinery of domestic and foreign production require managers and chief specialists of farms who able to conduct a reasonable and effective choice of new technologies and agricultural technology in modern economies. Program completely meets the current trends in the development of agriculture.

#### MECHANIZATION OF ANIMAL BREEDING

Efficiency of livestock production in the contemporary economy consists in using promising technology and facilities to serve the livestock farms, using a large variety of specialized machines in production and harvesting of food, service animals, cleaning, and final production of livestock products. Using high-quality and modern technology requires highly skilled professionals. The graduates can work as the main specialists on farms and complexes in growing cattle, pigs, poultry, and in business of storing and processing of livestock products.

#### MECHANIZATION OF PROCESSING AND STORAGE OF AGRICULTURAL PRODUCTS

The program allows prospective specialists to solve the urgent problems of the quality of processing and storage of agricultural products at agricultural enterprises using energy efficient, environmentally friendly technologies continues at the mind, the specific crops in Southern Ukraine and effective use of renewable energy.

#### TECHNICAL SERVICE

The program aims to give knowledge about the principles of organization of technical services, the features of its implementation on tractors, combines and agricultural machinery. A particular attention is given to advanced methods and technologies for improve machine reliability in their maintenance with the latest scientific achievements in the fields of bionics and nanomaterials. The graduates may work as leading experts and heads of structural divisions of tractor and agricultural machinery.

#### STATE TECHNICAL SUPERVISION

The program aims to give knowledge about the principles of organization of the State Technical Supervision in Ukraine, the legal enforcement of technical standards and regulations, the compliance with the state during production, maintenance, repair and maintenance service of tractors, combines, agricultural machinery and hardware. A particular attention is paid to the rules and methods of the drafting job descriptions employees serving machines and mechanisms; documents are issued by departments of the State Technical Supervision of Ukraine. The graduates of the program can work as inspectors and experts of the State Technical Supervision Service of Ukraine.

### Research oriented Master programs

#### RESEARCH PROCESS OF MECHANIZATION OF WORK IN PERENNIAL PLANTS

The program is created to train professionals who works on the development of scientific technology of machines in perennial plants. In addition, the students gain required knowledge and skills in using scientific research methods, methodology for scientific experiments and laboratory studies, acquire knowledge and practical experience that can be used in groups of master planning or to be employ in research institutions Ministry of Agriculture and Food of Ukraine.

#### INVESTIGATION OF WORK MECHANIZATION OF TILLAGE

The aim of the master programs is to develop creative thinking of future graduates, to develop theoretical conditions, training methods of finding new technical solutions based on biologically inspired comparisons, constructing mathematical models of biological systems, prototypes, features of systematic approach in the creation of working groups of agricultural machines. During the learning process, a scientific basis for energy conservation tillage, application of environmentally safe against erosion and economically viable technologies, development and improvement of designs of energy-saving work of agricultural machines and tools are studied. The graduates of the program can work as teachers in institutions of II and III levels of accreditation, research assistants in research institutions and the National Academy of Sciences of Ukraine, research departments of universities, or they may enter a post-graduate school.





## ECONOMICS OF ENTERPRISE

branch of knowledge

Economics and Entrepreneurship

course code

0 . 03050401

Form of study/training period, years



full time



1 . 0



part-time



1 . 0



externship

credits ECTS



60

licensed amount, persons



full time



30



part-time



30

## ANNOTATION OF SPECIALITY

The main task of the course "Economics of enterprise" is to give knowledge and skills to identify patterns of functioning and development trends of modern business in a market economy for increasing social and economic efficiency of enterprises.

An economist is an expert engaged in planning and production, audit and advice on economic issues, financial and economic security and enterprise management projects and programs in production. Economists collect the necessary statistical data; reduce it to the tables, groups, study, plans. According to the plan and in case of unforeseen variations, economists analyze it and give necessary recommendations to the leadership.

## Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

## EMPLOYMENT

The graduates can choose such position as: economists, economists with contractual claims and work in management, economist advisers, advisers on economic issues, columnists on economic issues, instructors, teachers in professional academic institution, an expert on foreign affairs, directors of production, directors of enterprise, professional intellectual property, economists on accounting and analysis, economists of the international trade, economists of taxes and fees; members of the executive board, members of the audit department, a member of the supervisory board, directors of economy, heads of planning and economic section, heads of the organization of labor and wages, directors of small firms, industrial specialization.

## Production oriented Master programs

## ECONOMY AND ECONOMIC ANALYSIS OF AGRICULTURAL ENTERPRISES

The master program aims to deepen knowledge of systems analysis of agricultural enterprises, of the detection of internal reserves management of material, labor and financial resources to prepare chief managers of economy, economists-analysts, experts-consultants of the organization of economic work in the agriculture. The graduates of the master's programs are able to develop prospective and current plans of enterprises, target complex programs of development of trade in agricultural market, to perform economic analysis of statistical data on the activities of agricultural enterprises and tax payments to the budgets of all levels, related to the company, to provide forecasting and monitoring economic and financial situation in agricultural sector, they have skills in preparing proposals for the participation of agricultural enterprises in trade fairs held in AR of the Crimea and other regions of Ukraine.

## ECONOMICS AND ORGANIZATION OF ENTERPRISES OF GRAPE AND WINE-MAKING SUBCOMPLEX

The master program aims to deepen knowledge of wine production, wine subcomplex. A special attention is given to the study evaluating the effectiveness of agricultural production and the creation of grapes and wine. The graduates can identify and summarize the theoretical foundations of the formation and functioning of enterprises wine, wine subcomplex; evaluation of economic efficiency and development of wine subcomplex considering its features; research and analysis of areas of organization, economic regulation mechanism subcomplex and market of its products, analysis of major trends and economic functioning of enterprises wine subcomplex; study the basic directions of improving the allocation and specialization of wine as the basis of the complex, the definition of reserves, ways of balancing capacity and proportional development of the most important parts of expanded reproduction in wine business, wine subcomplex, business planning, forecasting and planning of effective development of viniculture, wineries.

## ECONOMICS OF AGRICULTURAL PRODUCTION AND RURAL TERRITORIES

The master program aims to deepen knowledge of the characteristics of social and economic development of village and business of the countryside. A special attention is given to studying the creation and functioning of effective forms of farming, understanding of the functioning of agricultural markets and the pricing mechanism for agricultural products to prepare managers and entrepreneurs in the agribusiness and rural services. The knowledge and skills gained by the graduates are to improve the quality of social and economic conditions of the rural development in general on the basis of organizational and technological characteristics of agricultural production, where the main meaning is land, and the subjects of labor are serving set of crops and types of farm animals. It creates a specific lifestyle of the rural population, which is based on the organization of agriculture as the sector of the national economic complex.

## Research oriented Master programs

## METHODOLOGY AND ORGANIZATION OF ECONOMIC ACTIVITY IN ECONOMIC ENTITIES

The master program is for the students who plan to be engaged in research and teaching activities. It provides with learning the theoretical foundations of innovation entities and practical skills of its organization in market conditions. The graduates have an opportunity to participate in the scientific substantiation of the individual performance of the farm as a whole and its individual units of production processes. The students get skills in scientific analysis and economic evaluation of the company under certain conditions laid down by management in connection with the peculiarities of the manufacturing process the company, its specialization, features to meet the needs of current and short- long-term planning of individual units and enterprise as a whole. The program includes the study of scientific principles of organizational engineering of agricultural enterprises, planning innovative development patterns and factors in assessing efficiency innovation in all areas of business.



## ACCOUNTING AND AUDITING

branch of knowledge

Economics and Entrepreneurship

course code

0.03050901

Form of study/training period, years

☒ full time

1, 0

☒ part-time

1, 0

☐ externship

credits ECTS

60

licensed amount, persons

☒ full time

10

☒ part-time

10

## ANNOTATION OF SPECIALITY

The main task of the course "Accounting and Auditing" is to give knowledge and form accounting skills necessary to work effectively at enterprises of different ownership, in a market economy according to the national standards of accounting, the ability to make optimal decisions concerning the organizational form improvement and methods of accounting. An accountant is a professional who is competent to design information systems, to interpret and analyze data about enterprises and financial reports, to make recommendations for management decisions, to audit, to work with taxes. Despite all the difficulties and the high demands of the profession of accountancy, this profession is very prestigious and popular. It helps to demonstrate not only the special knowledge and skills, and show the personal qualities such as honesty and integrity in working with large financial transactions.

## Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

## EMPLOYMENT

The graduates can choose such position as: economists, economists of accounting and business analysis, economists in relations and pretentious works, methodologists for Economic Education, directors of production, consultants on fees and taxes, teachers at higher vocational institutions, economic advisors, columnists for economic issues, members of audit committee, members of the supervisory board, the chief auditors, chief accountants, chief economists, directors of economics, heads of department and so on.

## Production oriented Master programs

## THE ACCOUNTING IN THE SYSTEM OF FOREIGN ECONOMIC ACTIVITY

The master program aims to deepen knowledge about accounting, auditing and analysis of foreign economic activity in agriculture. The students obtain deep knowledge in accounting, organization of the peculiarities of international standards, of tax accounting of foreign economic transactions and order of payment of VAT on export-import operations. Graduates have practical skills in the formation of accounting policy on the basis of practical experience in domestic and foreign agricultural enterprises, development of evaluation procedures of cash in foreign currency in accordance with the requirements of National Bank of Ukraine, organization of documentation of export-import transactions, foreign exchange operations, operations with foreign currency and others.

## ACCOUNTING SYSTEMS AND MANAGEMENT OF ENTERPRISE

The master program aims to deepen knowledge of management accounting. It is intended to prepare heads in accounting, accountants, analysts, experts and consultants for the organization of management accounting. Special attention is given to the study of management accounting tools, including budgeting in agricultural enterprises. An accountant analyst is an employee of accounting that collects information for management decisions, and helps managers in carrying out the functions of planning, control, organization and motivation. In the process of planning accountant analyst participates in the development of long-term plans by providing information, is responsible for the formation of data on the results of the last period, coordinates development of short-term plans for all departments of the enterprise and confirms that these plans are closely linked. Accountant Analyst in the process of control and regulation informs the manager of the cases the deviations of individual results from the production targets, helps to process monitoring and control through operational analysis of manufacturing results and identification of weaknesses of agricultural products.

## ORGANIZATION OF ACCOUNTING AND AUDITING OF LAND RELATIONS

The master program aims to deepen knowledge and skills in land relations, conducting environmental audits. It is an essential thorough study of the characteristics of the assessment of land: compulsory, expert, legal. The students study the legal framework and established workflow in detail, taking into account the land relations at rural farms. During the study of special subjects, the students get skills of independent development of methods of accounting for state and movement of land and other operations associated with land. The graduates have a sufficient theoretical and practical basis for the development of the methodology for the assessment of land and capital costs for its improvement for agricultural enterprises.

## Research oriented Master programs

## METHODOLOGY AND ORGANIZATION OF ACCOUNTING ACTIVITY OF ECONOMIC ENTITIES

The master program aims at the students who plan to continue being engaged in research and teaching. It is recommended for the students who show a capability of scientific work and educational activities. The program includes the study of scientific research methods in accounting. The master's degree program aims to study the information base for management of the development, implementation and realization of innovations at agricultural enterprises, to implement the directions creation and sales innovation, motivation which includes: scientific evaluation of innovation, providing operational information for the management of the development, implementation and realization of innovations, maintaining registers of analytical and synthetic accounting to reflect the processes of innovation, providing management, accounting and statistical reports to monitor the process of creation and implementation of product innovation. The graduates obtain the ability to do research in the field of accounting and may continue to study.



## MANAGEMENT OF ORGANIZATIONS AND ADMINISTRATION

branch of knowledge

Management and Administration

course code

B.03060101

Form of study/training period, years

☒ full time

1,5

☒ part-time

1,5

☐ externship

credits ECTS

70

licensed amount, persons

☒ full time

15

☒ part-time

10

## ANNOTATION OF SPECIALITY

While studying "Management and Administration", the students acquire knowledge and skills of analysis, planning, management and control of all the areas of business, to be able to form an effective financial policy, corporate structure, develop effective schemes of functioning processes within its competence, organization and control departments. A well-educated manager provides professional management with functioning in a market system of relations, understanding the nature of administrative processes, being able to allocate responsibility for the levels of management, knowing economics and marketing, information technology, being able to plan and predict. The graduates are trained to make scientific analysis, to advice and guide on the principles of consistency, creativity and innovation.

## Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"

## EMPLOYMENT

The graduates are qualified to occupy the following positions: managers of management organizations, manager sand economists, directors of marketing, heads of sales, heads of commercial department, directors (heads) of small agricultural enterprises, managers of regional development, managers of communication technology, marketing managers, managers, administration managers, logistics managers, supply managers, managers of public relations, managers of the foreign economic activity, advertising managers, HR managers, managers of consulting services, managers of quality systems, including public administration, environmental systems managers, systems managers of information security, managers of corporate social responsibility, an analyst of the financial and economic security, researchers and consultants, consultants of business performance, marketing, rationalization of production and foreign trade issues.

## Production oriented Master programs

## AGRIBUSINESS MANAGEMENT

The master program aims to explore the components of management of agricultural enterprises in more detail. It is for middle and senior management of administration of enterprises to generate knowledge and skills in strategic management and evaluation of management. Taking the practice at business organizations, the students explore technological, managerial and marketing innovations, content and motives of their acquisition, finance sources, they assess the strategic approach to organization development, process management and innovation of its components, skillful management of agricultural enterprises. The students also learn the determination of influence of internal and external factors on the management process, evaluate the extent and effectiveness of innovation in agribusiness. The graduates of the master's program can analyze and evaluate economic and social processes of the agricultural sector, make economically and socially reasonable steps to solve problems and apply the principles of consultation methods to implement innovative projects agribusiness, analyze and predict changes in the agricultural market, apply the principles and methods of quality agricultural products, develop and implement marketing strategies and models of agricultural enterprises.

## MANAGEMENT OF LOGYSTICS SYSTEMS

The master program aims to deepen knowledge and skills in doing research and solving logistical problems of the agricultural market. It provides with a thorough study of methods of cost optimization and rationalization of production, distribution and related services as within a single agricultural enterprise and group companies program provides training in management of material and information and financial flows at the enterprise level, industry, National and World Agricultural Economics. The master's degree program aims to create knowledge and skills to solve logic problems, and systemic thinking and ability to analyze economic processes in agriculture. The students learn to model and optimize the material and information flows in the logistics system design and implement modern logistics, business processes and technology. In addition, training program covers the study of modern methods of accounting, analysis and reduction of logistics costs, the costs of organizing and maintaining inventory, which reduces the costs of the firm as a whole.

## Research oriented Master programs

## THEORETICAL AND PRACTICAL MANAGEMENT OF AGRICULTURAL ENTERPRISES

The master program aims at students who plan to continue being engaged in research and teaching. The program includes the study of scientific methods of management decisions and elements of successful career management. The graduates learn theoretical and practical principles of comprehensive management of agricultural enterprises in detail. By combining a grand methodological framework of agricultural management based on practical experience, the graduates are able to clearly define the strategy of the company, be flexible and react to signals external economic environment, determine disposition on the markets of agricultural products, services, activities and resources efficiently and promptly, receive current management decision to form multi-effective management based on various aspects of its operations and the factors that do the greatest impact on the character of (economic, political, social, technological, environmental factors, etc.). In addition, the graduates, enrolled in this specialization, have the knowledge of the formation of individual managers at any level of management as competitive units with their own appropriate axiological world view. All these scientific tasks they can perform through the learning management as a science, practice and art.





## LAND MANAGEMENT AND CADASTRE

branch of knowledge

**Geodesy and land management**

course code

**8.08010103**

Form of study/training period, years



full time

1,5



part-time



externship

credits ECTS

70

licensed amount, persons



full time

20



part-time

### ANNOTATION OF SPECIALITY

Professionals completed their training in Specialty "Land Management and Cadastre" have acquired knowledge and skills to perform tasks in their professional work, using modern technologies of geodesy, land management and cadastre.

The educational process of the master's course is based on the existence of industrial specialization and research specialty. It allows the graduates to be ready for the practice in land surveying, at research institutions that specialize in resolving scientific issues of geographic information technologies and systems, land surveying, or continue their education at graduate school, as well as teaching in schools.

The places for practical training of students of Master's Course "Land Management and Cadastre" is the National Committee for Land Resources of the Crimea, State Enterprise "Crimean Research and Design Institute of Land", Crimean Branch of the State Enterprise "Centre of State Land Cadastre", industrial and scientific enterprises of different ownership forms in the Crimea.

### EMPLOYMENT

The qualification of the graduates of the master's course in "Land Management and Cadastre" is high enough to occupy the following positions: an engineer surveyor, a specialist in regional and municipal departments of land resources, district and city departments (centers) of land cadastre, land management project institute, project sector research institutes in the service of the Department of Geodesy and cartography, regional and municipal bureau of technical inventory, private enterprises related to topographic and geodetic and land surveying work, engineers in land inventory, land evaluation experts, an expert in evaluating real estate, an agent for sale of land and real estate experts in land relations, the registrar of land and real estate engineers of urban cadaster, land registry engineers, engineers of forest resources, engineers of water resources.

### Production oriented Master programs

#### LAND MANAGEMENT, GEODESY SUPPORT LAND OPERATIONS, LAND AND ROOMY CADASTRE

The master aims to train specialists in the area of the Effective Use of lands and Land Management. The graduates obtain knowledge and skills to deal with the survey and the use of land, using modern technology to implement the scientific background and perspective of high technologies in the development of land on the basis of ecological industry, land and urban cadastre.

#### LAND ADMINISTRATION, LAND MARKETS, ECONOMY of LAND USE

The master's program aims to train experts in land management, efficient use of land in all categories and types of ownership, problem solving land protection, environmental and economic evaluation of land management, legal and expert valuation of land and real estate.



### Research oriented Master programs

#### SCIENTIFIC BASIS OF LAND MANAGEMENT

The master aims to train specialists to work in research institutions, capable to prove the state (quality) of land scientifically and to find the trends of improving the land management, to forecast changes in the quality of the soil on the base of analysis of dynamics of its degradation and scientific development of effective measures of its conservation, scientific foundation of the ecologically stable agricultural landscapes at the local and regional level.

#### Academic rights of applicants for a master program

Except the specialty mentioned above, applicants have a right to study in the specialties of branch of knowledge "Specific categories" in such spheres of employment as:

- Expert Controlling - "Quality, Standardization and Certification"
- Teacher - "Pedagogy of Higher School"
- Management - "Administrative management"
- Management - "Management of Educational Institution"



# ADMISSION TO MASTER PROGRAMS AT NULES OF UKRAINE

There are two types of funding of Master Programs of NULES of Ukraine: state order (funding) and tuition fees according to the contracts with individuals or organizations. To be enrolled in a master program, applicants are required to have a diploma on their basic or higher education in a chosen specialty ("Specialist" degree or "Master" degree) in accordance with the approved rules of NULESU.

Master programs for the applicants who have Specialist degree are paid by physical (legal) entities (except Master program "Public Service" of NULES of Ukraine). The applicants who have Junior Specialist degree in 5.11010101 "Veterinary Medicine" may also be enrolled in Master program 8.11010101 "Veterinary medicine (by types)".

According to the rules approved by the Cabinet of Ministers of Ukraine on 29.07.2009, № 789 "About the Admission to Master Programs in Specialty "Public Service", Field of Knowledge "Public Administration", and Employment of the Graduates" the basic institution NULES of Ukraine has the right to admit to the course in "Public Service". The applicants should have higher education diplomas, work in government agencies or local governments, have experience of state service or service in local governments (one year is the minimum), and be under 45 years old by the moment of being enrolled. The applicants should submit the following documents to the selection committee:

- a request addressed to the Rector;
- a diploma and Its Appendix (an original or a certified copy of it);
- 5 color photos sized 3x4 cm;
- a referral, a letter of reference (to be enrolled in research specialization);
- a copy of the certificate of identification number;
- a copy of the passport (1, 2 pages and a page with the registration stamp);
- an application from companies, organizations, institutions and other places of future employment; (for the applicants entering a full-time studying by the state order);
- an extract from the work records (for incoming correspondence and studying by the state order).

Passports and other documents confirming the right to apply must be filed in person.

A competitive grade of the applicants is calculated as the total grade of the results of entrance examinations and the average grade of the Diploma Appendix, which are rated on a scale from 100 to 200 points. The entrance examinations for master programs courses are held in the form of tests in basic and professionally-oriented courses and a foreign language programs having been completed during bachelor courses.

For the applicants entering:

- "Pedagogy of Higher School" and "Management of Educational institution" - tests in humanities and foreign languages;
- "Quality, Standardization and Certification" - tests in quality, standardization, certification and foreign language;
- "Administrative Management" - tests in the fundamentals of Economics and foreign languages;
- "Public Service" - tests in the principles of State and Law, fundamentals of Economics and an interview on Public Administration.



Master Degree Programs  
National University of Life and Environmental Sciences of Ukraine

Edited by  
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## **MASTER DEGREE PROGRAMS** **National University of Life** **and Environmental Sciences of Ukraine**

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