

**MASTER'S DEGREE PROGRAMS**

**2012-2013**



**LEADING RESEARCH  
UNIVERSITY IN FACTS:**

**YEARS OF SUCCESSFUL  
WORK**

**114**

**NUMBER  
OF STUDENTS**

**40 000**

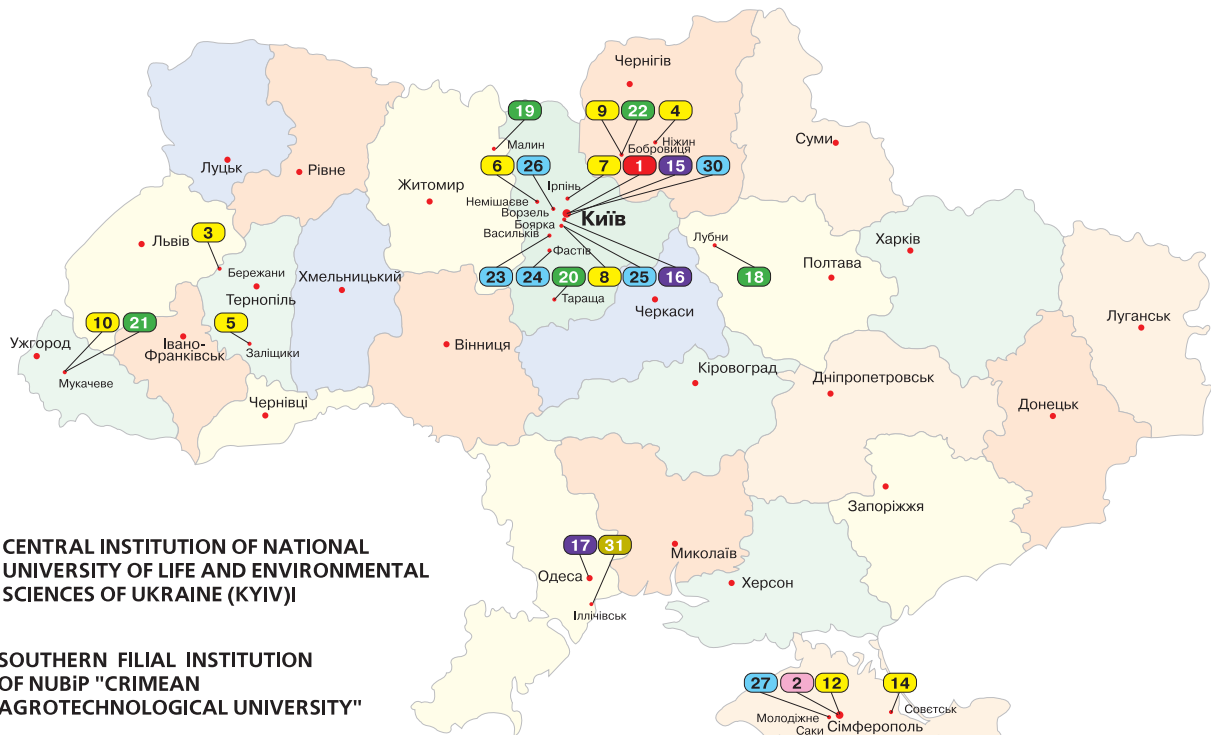
**NUMBER OF MASTER  
DEGREE STUDENTS**

**5 000**

**NUMBER  
OF COURSES**

**43**

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



**1** CENTRAL INSTITUTION OF NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF UKRAINE (KYIV)

**2** SOUTHERN FILIAL INSTITUTION OF NUBIP "CRIMEAN AGROTECHNOLOGICAL UNIVERSITY"

## REGIONAL DIVISIONS

- 3** Berezhany Agrotechnical institute
- 4** Nizhyn Agrotechnical institute
- 5** Zalischyky College of Agriculture after. E.Khrapliviy
- 6** Nemishaevo Agrotechnical College
- 7** Irpin' college of economics
- 8** Boyarka College of ecology and natural resources
- 9** Bobrovitsa college of economics and management after O. Mainova
- 10** Mukachiv College of Agriculture
- 11** Priberezhne College of Agriculture
- 12** Crimean Agroindustrial College
- 13** Bakhchisaray College of constructing, architecture and design
- 14** Crimean technical college of reclamation and mechanization of agriculture

## SCIENTIFIC AND RESEARCH DIVISIONS 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 divisions of NUBIP of Ukraine "TRAINING-INFORMATION-CONSULTING CENTRES"

- 18** SD of NUBIP of Ukraine "Lubny TICC"
- 19** SD of NUBIP of Ukraine "Malin TICC"
- 20** SD of NUBIP of Ukraine "Tarashcha TICC"
- 21** SD of NUBIP of Ukraine "Mukachiv TICC"
- 22** SD of NUBIP of Ukraine "Bobrovitsa TICC"

## Separated divisions of NUBIP of Ukraine RESEARCH STATIONS AND EDUCATIONAL AND RESEARCH FARMSTEAD

- 23** SD of NUBIP of Ukraine "Agronomy Research Station"
- 24** SD of NUBIP of Ukraine "Velika Snitinka Training and Research Farmstead after O.V. Muzichenko"
- 25** SD of NUBIP of Ukraine "Boyarka Forest Research Station"
- 26** SD of NUBIP of Ukraine "Training and Research farmstead "Vorzel"
- 27** "Training and Research farmstead "Komunar" (in the structure of Southern filial institution of NUBIP of Ukraine "Crimean agro technological university")
- 28** State enterprise "Training and Research Breeder Plant" named after Frunze NAU
- 29** "Training and Research Centre of Biology and Ecology of subtropical plants and Landscape"
- 30** "BOTANICAL GARDEN" (in the structure of ERI of Forestry and Landscape Architecture)

## SPORT AND RECOVERY BASES

- 31** Sport and recovery camp "ACADEMICHNIY"
- 32** Recovery base "VOLNA" ERF "Education and Research Breeder Plant named after Frunze"
- 33** Recovery base of Priberezhne College of Agriculture
- 34** Sport and recovery base "Foros" SF of NUBIP of Ukraine "Crimean agro technological University"
- 35** Recovery base in village Noviy Svit

# Dear students!



This short edition is dedicated to the demonstration of opportunities of National University of Life and Environmental Sciences of Ukraine for master training of new generation, who have to provide significant growth of biological resources, to solve the issues of improving the quality and safety of food in our country, material wealth and intelligence and democratization of our society.

Having substantial experience in communication with colleagues from many leading universities of the world, I would like to identify that master courses are one of the determinant factors of the University's authority. That is why studying at master courses at many leading world universities costs thousands of US dollars per year.

On my opinion, such university's educational degree plus PhD department is the crucial factor for the level of scientific-technical progress in a country and favors development of high spirituality, increase of intellect and prosperity in society. All mentioned is achieved by the philosophy of Master studies: unification of knowledge, skills and continuous readiness to the immediate reaction on fast going today and future challenges of life, including emergency. All these things cause the need in high flexibility of the Master Programs, their ability to help people to recognize in any fact its macro-and micro consequences and to develop highly effective business schemes, to foresee global changes in nature and society, to educate political and state leaders. That is why, while fulfilling Master Programs by the responding content, we have to remember that they form ability of the future experts for the global view of place and role of profession obtained in the society, provide opportunity for comparative analysis of achievements reached in Ukraine with those in the world and be successful in searching means for their bringing to the international level. At the same time it is important to enrich the content of education by issues related with nature protection, economics and law components, understand deeply international standards and technologies, raw materials, and final products, etc.

For skeptics, who are afraid of Americanization or Europeanization of the Ukrainian higher school, I would like to say, that the issue is about its first formed ukrainization. Our ancestors trained Bachelors and Masters in the times of the Kyiv-Mohyla Academy (XVII century). Such training was conducted in the following years on the territory of Ukraine and Russia up to 20s of the past century. So, as it appears, we are coming back to our sources.

All the mentioned requires not only substantial professional training from us, but also knowledge of foreign languages and Mastering modern information and telecommunication components (computer and geoinformation technologies), that creates a background for entering into the world information network and gives opportunity for everybody to use world information resources, including those, who are occupied directly in the production sphere and do not have higher education. Under such conditions only reformation of higher education system will bring success.

Nowadays National University of Life and Environmental Sciences of Ukraine is world known self-governed educational establishment with high level of research activity (it has more than 40,000 students in 29 directions and 43 specialties, and more than 600 postgraduate students, doctorate students). It has 14 functioning Scientific-Research Institutes and Stations, a range of scientific-innovative departments, etc. According to this our University has an opportunity to become recognized by the international academic community of agroindustrial, natural, biotechnological and nature protection domain as such, that meets the international requirements, concerning quality of education, research and innovation systems.

Everything we managed to achieve during the last 20 years indicates the well selected way of reforms. Now we are looking into the future with confidence, and that is why we are inviting dear university entrants, colleagues and friends to our prominent University to study, improve qualification, for joint projects and just to have a pleasant visit.

Respectfully Yours,

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

A large, stylized handwritten signature in black ink, written over a white background.

Dmytro O. Melnychuk

# CONTENT

**National University of Life and Environmental sciences of Ukraine**  
**Scheme of central institution of NUBIP of Ukraine**  
**International cooperation**  
**Students' life**  
**Strategy of Master training in NUBIP of Ukraine**  
**Providing of educational process**

## The list of Master courses of NUBIP of Ukraine

8.09010101	Agronomy
8.09010105	Selection and Genetics of Agricultural Crops
8.09010102	Agrochemistry and Soil Science
8.09010104	Fruit and Vegetable Growing and Viniculture
8.09010501	Plant Protection
8.04010601	Ecology and Environmental 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	Technology of Keeping, Conserving and Processing of the Meat
8.05170105	Technology of Keeping and Processing of Water Bioresources
8.09010301	Forestry
8.05180101	Technology of Woodworking
8.09010303	Park-Gardening
8.05050312	Agricultural Machinery and Equipment Production
8.05050303	Forestry 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	Electrical Systems of Power Consumption
8.10010101	Energetics of Agriculture Industry
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	Economy of Enterprise
8.03050901	Accounting and Auditing
8.03050801	Finance and Credit
8.03050803	Taxation
8.03060104	International Economic Activity Management
8.03060101	Management of Organizations and Administration
8.03050701	Marketing
8.01010601	Social Pedagogy

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

8.18010018	Administrative Management
8.18010010	Quality, Standardization and Certification
8.18010021	Pedagogics of Higher School
8.18010020	Management of the Educational Establishment

## The list of Master courses ("State administration")

8.15010005	Government Service
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## International programs

Master programs, realized in NUBIP of Ukraine in cooperation with foreign partner universities  
Master programs, prepared to be realized in NUBIP of Ukraine in cooperation with foreign partner universities

## Master programs of specialists' training in applied biology by the specialization "Laboratory business" of expert and control sphere of placement (experts-analysts)

MESC of biology of plants and laboratory diagnostics of quality and safety of production of plants and environment  
MESC animals' biology and laboratory diagnostic of their health and quality and safety of livestock raising's production

## The list of Master courses at "KATU"( NUBIP of Ukraine)

8.09010101	Agronomy
8.09010104	Fruit and Vegetable Growing 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	Economy of Enterprise
8.03050901	Accounting and Audit
8.03060101	Management of Organizations and Administration
8.08010103	Land Management and Cadastre

## Admission to Master courses of NUBIP of Ukraine

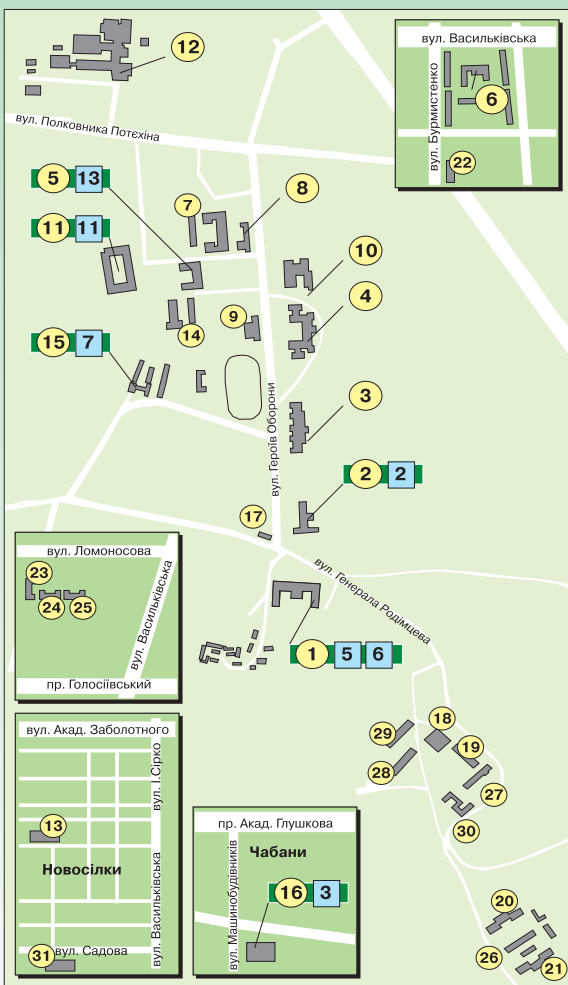
# NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF UKRAINE



National University of Life and environmental sciences of Ukraine is founded in 1898. It is one of the leading educational, scientific and cultural establishments of Ukraine nowadays. Over 40 thousand undergraduate students and over 600 postgraduate students, doctors and applicants study at central institution of University (Kyiv), in the South filial institution of NUBIP of Ukraine the "Crimean Agrotechnological University" and in 12 regional higher educational establishments of I-III levels of accreditation.

An educational process and scientific researches in university are provided by over 3000 employees (scientists and pedagogies), including 1446 persons in central institution (350 – Dr. and professors, 1300 – PhD and associated professors).

## SCHEME OF CENTRAL INSTITUTION OF NUBIP OF UKRAINE



### Educational building and other objects of central institution of NUBIP of Ukraine and their address:

- |    |                             |  |
|----|-----------------------------|--|
| 1  | 1th educational building    | 03041, Kyiv, General Rodymtsevstreet, 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, Vasykivs'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, General Potekhin str., 16   |
| 13 | 14th educational building   | 03027, Kyiv region, Kievo -Sviatoshynskiy distr., Novosilky, Yermolenko street , 5     |
| 14 | 15th educational building   | 03041, Kyiv, Heroiiv Oborony str. 18-a   |
| 15 | 17th educational building   | 03041 Kyiv, Agricultural alley , 4   |
| 16 | 16th educational building   | 08162, Kyiv region, Kievo-Sviatoshynskiy distr., Shabany vil. Mashynobudivnykiv str, 7 |
| 17 | Botanical garden            | 03041, Kyiv, General Rodymtseva str., 2  |
| 18 | Dining-room                 | 03041, Kyiv, General Rodymtsev str., 7   |
| 19 | Hostel № 1                  | 03041, Kyiv, General Rodymtsev str., 3   |
| 20 | Hostel №2                   | 03041, Kyiv, Blakytynogo street, 10  |
| 21 | Hostel №3                   | 03041, Kyiv, street Blakytynogo, 4   |
| 22 | Hostel №4                   | 03041, Kyiv, Burmistenko street, 4   |
| 23 | Hostel №5                   | 03022, Kyiv, Lomonosov Street, 63  |
| 24 | Hostel №6                   | 03022, Kyiv, Lomonosov Street, 65  |
| 25 | Hostel №7                   | 03022, Kyiv, Lomonosov street, 67  |
| 26 | Hostel № 8                  | 03041, Kyiv, Blakytynogo Street, 8   |
| 27 | Hostel №9                   | 03041, Kyiv, General Rodymtsev str., 1   |
| 28 | Hostel №10                  | 03041, Kyiv, General Rodymtsev str., 7-A   |
| 29 | Hostel №11                  | 03041, Kyiv, street of General Rodymtsev str., 7-B                                     |
| 30 | Hostel №12, Hotel           | 03041, Kyiv, General Rodymtsev str., 1-B   |
| 31 | Hostel №13, 13-A            | Kyiv region, Kievo-Svyatoshynskiy distr., Novosilky, Sadova str., 21                   |

# NUBIP OF UKRAINE IS GRATEFUL TO PROMINENT UKRAINIAN AND FOREIGN SCIENTISTS AND STATESMEN FOR THE SUPPORT



# INTERNATIONAL COOPERATION



The thorough study and analysis of training systems for Masters in universities of developed countries in Europe, America and Asia have become the basis for determination of Masters training strategy which is worked out at the National University of Life and Environmental Sciences of Ukraine (NUBIP of Ukraine) initiated by Rector Academician D.O. Melnychuk.

Masters programmes in NUBIP of Ukraine have successfully been developed due to an active cooperation of our University with Iowa State University of Science and Technology (Martin Zhyshe, 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), Vagheningan (Tsee M. Karsen, M.J.Kropff, Eric Frederics), Wynshtephan University of Applied Sciences (Yoseph Herts, Herbert Shtriobel), Humboldt University (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 Horska), 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) and several others.

V. Kalenskyi, M. Melnychuk, N. Ridei, A. Kravchenko, S. Melnychuk, M. Zakharenko, M. Tsvilikhovskyi, P. Lakyda, V. Halushko, A. Kovtun and others have taken an active part in creation of training systems for Masters from the side of Ukraine.



# NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF UKRAINE



Curricula and programs of masters training meet the demands of the Law of Ukraine "About higher education". They were examined for adaptation and conformity to the requirements of U.S. and European systems of higher agricultural education. It is demonstrated by memoranda of mutual recognition with such universities: USA - Iowa (Ames, May 1996, June 1998, Oct. 2011); Louisiana (Baton Rouge City, August 1998, April 2009); De Paul (Chicago, September 2005); Belgium - Ghent (Ghent, September 2002); Germany - Humboldt (Berlin, September 2002); Wunshtephan (Trisdorf, April 2005); Anhalt (Bernburg, Oct. 2006); Netherlands - Vaheninhen (Vaheninhen, Oct. 2006).

NUBiP Ukraine was awarded by a gold medal in the nomination "For the development and implementation of modern masters programs" for his significant contribution to the Master training programs for the agricultural sector of Ukraine on the XXIII International Agricultural Exhibition AGRO-2011.

March 3, 2010 NUBiP of Ukraine start to implement the Quality Management System according to the requirements of international standard ISO 9001:2008 "Systems of Quality Management".

In March 2012 NUBiP of Ukraine passed a certificate audit on Quality Management System, which was conducted by auditors of one of the leading companies providing independent technical services, which is represented at the markets all over the world - TUV Rheinland InterCert (a part of TUV Rheinland).

The organization is responsible for the technical supervision, certificate of products, management systems and staff in accordance with international standards. The Company was founded in 1872 in Germany and now it has about 500 offices in 60 countries.

According to the audit in Brussels (Belgium) in April 27, 2012 our University received the conformity certificate of Quality management system in NUBiP of Ukraine to the requirements of international standard ISO 9001:2008 "Quality Management System" in the scope "Education and Research".



# STUDENTS' LIFE

## Implementation of leadership skills of the students of NUBiP of Ukraine



A number of public youth organizations actively operate in the university, including the primary trade union organization of students, Ukrainian Youth Public Organization "Association of young farmers of Ukraine", Student Organization,

### **Primary Trade Union Organization of Students of NUBiP of Ukraine**

**is a** public organization of the students and postgraduates of the university, its aim is the presentation, implementation 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 primary trade union organization of the students of the university carries out its work in the following areas:

- social and legal protection of students;
- organizational and mass work;
- recreation and leisure of students;
- housing and household work;
- cultural and sports activities;
- international cooperation and common questions.

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

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

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

Since 2000 AFYU organized and conducted with the support of state authorities and international partners over 100 nationwide and global events. AFYU serves as a consolidating core, organizing and bringing together young farmers and scientists of Ukraine in the implementation of tasks in achieving organizational goals.

**Students' organization** is the organ of students' government, providing student participation in the development, adoption and implementation of management of decisions towards the functioning of the university and its regional divisions, facilitates the integration of youth in various kinds of social and meaningful activities.

In the structure of Students' organization operate:

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

# STUDENTS' LIFE

## Realization of leadership skills in students of NUBiP of Ukraine.



Every year in Ukraine National University of Life and Environmental Sciences of Ukraine are held more than 70 different cultural events. Such as the Day of Knowledge, International festival of amateur "Holosiivska Spring", competition "Beauty of National University of Life and Environmental Sciences of Ukraine", International Students' Day, New Year's Day, Day of Agriculture, International Women's Day, Shevchenko's days, Mother's Day, Victory Day, applied art exhibition "Hospodarochka", theatre performances, sports glory party. Days of releases of young professionals are held with the active participation of students in National University of Life and Environmental Sciences of Ukraine and its 13 separated regional divisions.

Leisure of university's students is organized by the department of Culture, department of education and student affairs, student and labor union organizations, scientific and educational specialists, mentors of academic groups under the leadership of the rector.

Students can develop and implement their creative skills in the following groups:

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

Students can develop and implement their athletic skills in the following sections and groups:

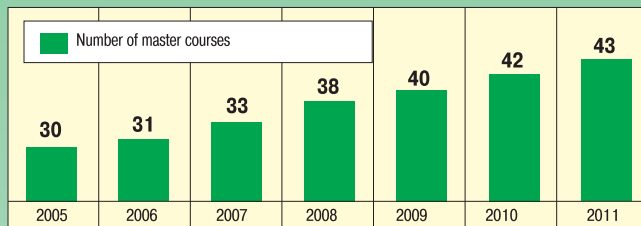
- football;
- basketball;
- athletics;
- athletic exercises;
- touristic club "Burs";
- Kyokushinkai karate;
- sambo;
- aikido;
- weightlifting;
- ski race;
- callanetics;
- volleyball;
- sport orienteering;
- fighting sports;
- dance aerobics;
- table tennis;
- hand-to-hand fighting;
- judo;
- powerlifting;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

Such trainers are working with students in 30 academic departments of sports, recreational groups: 1 Honored Worker of Physical Culture and Sports of Ukraine, 1 Honored coach of Ukraine, 3 masters of sports of Ukraine of international level, 11 Masters of sports, Honorary master of sports.

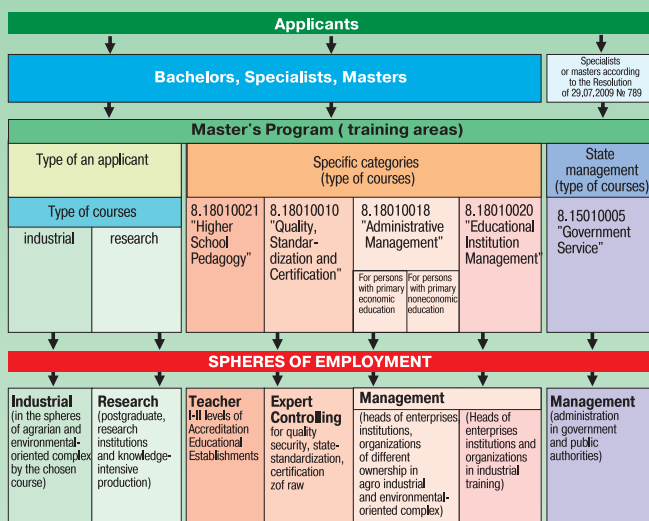
Students and university staff are involved in local, regional, national and international competitions. Combined teams of the University regularly participate in nationwide sports games for students of agricultural universities of High Educational establishment in Ukraine of III-IV levels of accreditation.

# STRATEGY OF MASTERS TRAINING AT NUBIP OF UKRAINE

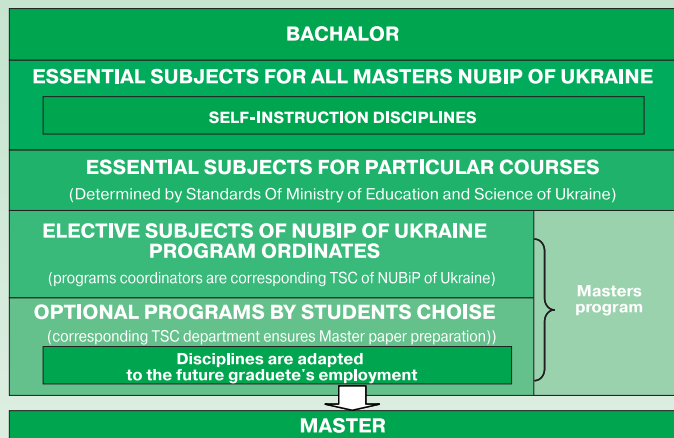
Number of master courses



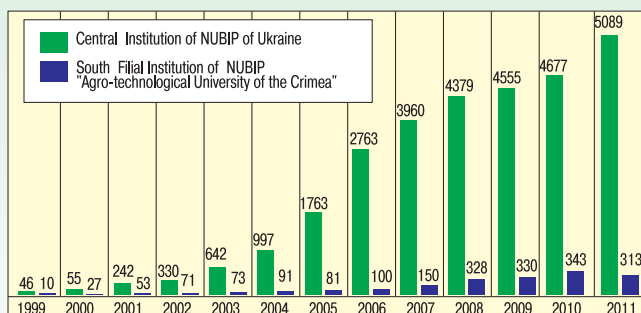
Spheres of job employment of masters



THE CONTENT STRUCTURE OF MASTERS PROGRAMS OF NUBIP OF UKRAINE



UNDERGRADUATES CONTINGENT GROWTH (QUANTITY OF PERSONS / YEAR)



NUBIP has 43 masters courses, each of it provide different types of Masters programs, in total more than 100.

The peculiar property of Master's Degree Courses at NUBIP is proximity of curricula to:

- spheres of job employment of graduates of these programs (production, research, teaching, expert controlling and management);
- specific content in the activity in each of these areas.

Basic principles of the program content are:

- accordance with existing and future needs of agriculture, biotechnology, environmental and scientific research facilities and other sectors of the economy of Ukraine;
- adaptability to the system of training accepted in the world (Bologna process);
- flexibility in the system of training for adaptation of graduates to rapidly changing requirements of national and international labor markets;
- innovative masters programs and job training plans for masters;
- integration of education, research and innovation in master's programs on the base of the model of the world leading research universities;
- logical relationship between masters and bachelors programs (formation of characteristics of the future master's degree program in undergraduate programs)

Content of the master's program is determined in each case by agreement of the parties' NUBIP of Ukraine - employer - master student.

In NUBIP of Ukraine master training is provided at:

- type of courses (production and research);
- area of knowledge "Specific Categories", courses "High School Pedagogy", "Quality, standards and certification", "Administrative Management", "Academic Management";
- area of knowledge "State Management" course "Government Service".

# EDUCATIONAL PROVISION



## PROVIDING OF EDUCATIONAL PROCESS

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

- 3 research stations - "Agronomic Research Station" NUBIP Separate Subdivision, "Boyarka Forestry Research Station" NUBIP Separate Subdivision (Kiev region), the Mountain Forestry and Horticulture Research Station "Foros" (Crimea);
- 6 educational and research farms (ERF) - Velykasnitynka ERF n. a. O.V. Muzychenko, NUBIP Separate Subdivision; Vorzel ERF, NUBIP Separate Subdivision; and Nemishaev Agricultural College ERF, NUBIP Separate Subdivision (Kyiv region), Training and Research Breeder Plant named after Frunze, ERF NUBIP Separate Subdivision; Zalischytsky Agricultural College n. a. E. Hraplyviy, NUBIP), Separate Subdivision; Nijin Agricultural Institute, ERF NUBIP Separate Subdivision (Chernihivskiy region);
- practical training specific bases of regional universities NUBIP of Ukraine, I-II levels of accreditation;
- training and research center of subtropical plants biology and ecology and Landscape science, NUBIP of Ukraine (Yalta, Crimea);
- Botanical Garden, NUBIP of Ukraine.

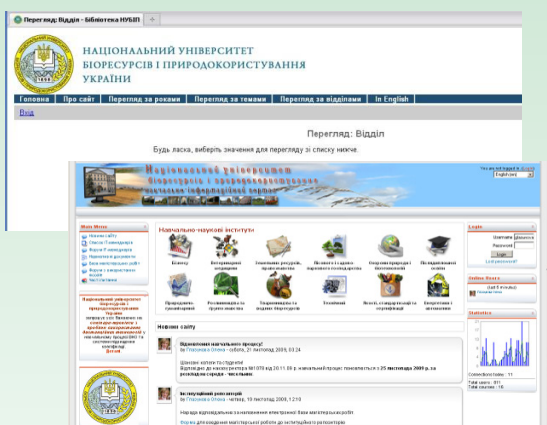
The University practical training bases peculiarity is the appropriate departments, branches and more than 50 training and research production laboratories, where laboratory students took their practical training, work experience or placement, etc.

## INFORMATIONAL AND TELECOMMUNICATION SUPPORT

Computer networks of Central institution NUBIP of Ukraine and its regional units are united into a single corporate network, that include over 2500 computers, dozens of servers, 14 sites of certain university structural subdivisions.

The students (participants) are provided with PC-based library, that has 6 filials at training and research institutes united to a single university network and also connected to Internet. Modern software allows the library readers to access 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.

There is the University education data portal powered by e-learning platform Moodle (original Cyrillic version) that hosts all prerequisite subjects for master's degree e-learning courses, that suggests students (participants) to use distance learning technology.



# FACULTY OF AGROBIOLOGY

branch of knowledge

**Agriculture and Forestry**

course code

**Б.09010101**

Form of study/training period, years

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

credits ECTS

90

licensed amount, persons

full time  100  part-time  100

## ANNOTATION OF COURSE

The basis of the master's training content is adapted for current and long-term requirements for crop farming and growing, system specialist training flexibility provision in the system of training for their adapting to national and international rapidly changing labor market, educational, scientific and research and innovation activity on the model of the world leading research universities .

Masters training aimed at effective master personal training, able to use crop growing adaptive technologies, to provide its economic, energy, environmental ecological efficiency. Undergraduates are able to develop and implement efficiency enhancement varieties biological potential measures, productivity and yield class training in terms of soil and climatic parameters and crop cultivation technology, production and scientific problem solving, post harvest handling and crop storage.

## EMPLOYMENT

According to industry specific higher education standards undergraduates obtain qualification 2213.1 - research agronomist and is ready for economist job за SC (State Classifier) 003:2010: agriculture and forestry, crop growing, corn growing, industrial crops, etc., horticulture, landscape gardening and plant nursery growing, cultivation of fruit, berry, nut, beverage and spice crops, crop growing combined with animal breeding, horticulture service rendering.

Specialist is competent in accordance with Occupational Classification of Ukraine SC 003:2010 and can hold entry level positions: research agronomist, agronomist, airfield agronomist, hydraulic agronomist engineer, agronomy supervisor, research officer (agronomy), seed agronomist.

## Master's programs of productive type

### ORGANIC FARMING

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

### APPLIED HERBOLOGY

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

Method mastering and skills development of seedling probable emergence, field agrophytocenosis optimal weed control system.

### GRAIN PRODUCTS MARKETING AND PRODUCTION

Grain production, which involves studying the biological characteristics of crops, expanding the range of grain species 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, economics, marketing and branch management.

### DRUG PLANTS MARKETING AND PRODUCTION

Drug plants production, which involves the study of their biological properties released, wild species introduction and other geographical zones species; drug plants 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 feed.

### SEED FARMING AND CONTROL

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

### PLANT PRODUCTION TRANSPORTATION, PRESERVATION AND PROCESSING.

The program allows to master after harvesting work (sorting, calibration, peeling, drying, aeration, etc.), grain, fruit and vegetable production, industrial raw material storage and processing.

## Master's programs of research type

### RESEARCH TYPE OF MASTER'S PROGRAM.

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

Research agronomist program for scientific work on studying and looking for ways to decide crop infestation contemporary issues program under different farming systems.

#### ENERGY SAVING ECOLOGICAL FARMING DEVELOPMENT SYSTEM IN UKRAINE THEORETICAL SUBSTANTIATION

Energy saving ecological farming in the context of combination with natural earth potential and agro-technical measures for their enhanced fertility renewing, getting environmentally safe agricultural products.

#### FODDER PRODUCTION ENERGY SAVING TECHNOLOGIES

Energy and resource saving technologies of fodder plants growing and fodder production in the meadows and pastures grounding and development.

#### CROP PRODUCTIVITY DEPARTMENT

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

#### CROP PRODUCTION QUALITY IN RELATION TO AFTER HARVESTING WORK, PROCESSING AND PRESERVATION FACTORS

Future research agronomists learn the growing, after harvesting work, preservation methods and modes of production, different purpose grain processing, potato, vegetable and fruit products, technical raw material factors impact on storage, technical and seed properties.

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

Putting into practice resistant to abiotic and biotic environmental factors varieties is the most effective method of increasing varieties productivity. One way to achieve an understanding of the mechanisms of plant resistance is the accumulation of fundamental knowledge about the defense mechanisms of plants. 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

**8.09010105**

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 COURSE

Masters' training is aimed at forming of students' knowledge, practical skills of scientific basics of crops selection and genetics, organization of state scientific and technical expertise of sorts and hybrids in Ukraine, theoretical grounds and organization of seed production, development of recourse saving technologies of agricultural seeds growing under farm and state control of sort and sowing seeds quality for further growth and stabilization of crop production volumes in Ukraine

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

### EMPLOYMENT

According to branch standard of higher education in Ukraine after graduating from the university graduates receive the qualification 2213.1 - "Researcher of breeding and crops genetics" and are ready to work in sphere of economics on DK 003:2010: agriculture and forestry, crop production, grain, technical and other crops growing, vegetable growing, ornamental plants growing, fruits, berries, nuts, plants for production of beverages and spices, growing of crops in combination with animal production, crop production services. A specialist is able to perform the professional work, functions of which are given according to profession classifier DK 003:2010 and can occupy such initial positions: researcher in selection and genetics of agricultural crops, specialist in genetics and selection of agricultural crops, scientific worker of department or laboratory (expert in qualification evaluation of plants sorts 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.

### Master's programs of productive type

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

Formation of national sort recourses provides provision safety of the country. The main tasks of state qualification expertise of sorts and hybrids of agricultural crops in Ukraine (WOW-test and expertise on suitability for spreading in Ukraine), the main stages of the methods and studying techniques. Registration of varieties and hybrids after registration study. Legal protection of species and hybrids, inspectional supervision during their civil use.



### Master's programs of research type

#### USE OF BIOLOGICAL DIVERSITY, AS SOURCES OF ECONOMIC VALUABLE FEATURES AND CREATION OF NEW DONORS FOR CREATION OF MODERN SORTS AND HYBRIDS

Genetic-selecting aspects of modern competitive sorts and hybrids of agricultural crops are adapted to bio and abiotic factors of environment. Developing and evaluation methods of new source material, technology of selecting process. Peculiarities of modern seed work under conditions of agroindustrial complex reforming



## 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

90

licensed amount, persons

full time 50
  part-time 50

### ANNOTATION OF COURSE

Masters' program is focused on the study of soil as a natural body, development of measures on its conservation, rational use and management, monitoring and agrochemical soil certification on positions of soil scientist, agrochemist, head of soil department in organizations of agrochemical service in agriculture. Received speciality will help the future specialist to be engaged in the following activities: conducting soil, geobotanical, agrochemical soil investigations, preparation of 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 at advanced level of agrotechnology in plant growing.

### EMPLOYMENT

In the list of professions of Ukraine DK 003:2010 established position for graduates' of EQL "Master" is Investigator of Agricultural Chemistry and Soil Science (code KP 2213.1). These programs provide employment of specialists in the system of design and exploration centers "Oblderzhrodyuchist", system of land management organizations, at any agricultural enterprise at position of an agronomist, agronomist-agrochemist, at private and state enterprises, that produce and sell chemical fertilizers (fertilizers for protection of plants) on positions of managers; at environmental inspections, in the sphere of criminalistics, system 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, that are connected with soil quality assessment and ecological conditions of environment.

### Master's programs of productive type

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

Program provides training of specialists with knowledge of methodological and agrotechnical aspects of agrochemical service 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. Training of specialists is made for production sphere of agroindustrial complex plant growing field, 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, the ability to develop measures for their rational use, protection and restoration of fertility; defining the ecological and genetic status and potential productivity of soils; defining the character and degree of development 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 "Oblderzhrodyuchist", system of land management organizations, financial enterprises for expert soil assessment and at any agricultural enterprise.



### Master's programs of research type

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

The program provides the 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. Training of specialists is done for educational, scientific, scientific-research institutions, dealing with plant nutrition, quality of plant products, soil fertility for public 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 maintenance enough 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; preparation of 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 "Oblderzhrodyuchist".



## FRUIT AND VEGETABLE GROWING 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

90

licensed amount, persons

full time 50  part-time 50

### ANNOTATION OF COURSE

Training of master's degree students in specialty is oriented at modern and perspective directions of development in fruit and vegetable growing and viticulture. Training master degree students on specialty foresees the deep specialized training in the sphere of horticulture, vegetable-growing of the opened and protected soil. Such specialists, after acquiring special abilities and knowledge of innovative character in this sphere are able to satisfy modern requirements of the society in assortment and production of necessary amount of high-quality fruit and vegetable products for internal consumption and to the export, capable to organize and to ensure use of the most progressive modern technologies, both in scientific researches and production.

### EMPLOYMENT

In accordance with the state standard of higher education of Ukraine after graduation students receive qualification "Researcher in fruit and vegetable growing and viticulture" (code 2213.1) and are prepared to work in the sphere of economy (DK003:2010): plant growing, vegetable growing, ornamental horticulture and growing production of seed-plots, growing fruit, berries nuts, crops for making drinks and spices, growing crops in connection with cattle-breeding, rendering services in plant growing. Specialist is able to do professional work listed in accordance with professions Classifier DK003:2010 and 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).

### Master's programs of productive type

#### GARDENING

Master's degree students study modern technologies in gardening (use of spore sorts, methods of regulation of fruit loading on undersized plants, use of bioactive matters for increase of productivity and to not favorable factors of external environment) the ability to program and forecast the yield of fruit planting with high exactness must become a result of it.

#### VEGETABLE-GROWING

Students study modern experience of growing vegetable crops in the opened soil complex technologies of growing modern heterosis hybrids tiny irrigation system and fertigation, methods of creation of sorts and hybrids with beforehand programed signs.

#### PROTECTED SOIL

Technologies of growing agricultural crops are studied in different types of growing buildings, features 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.



### Master's programs of research type

#### THE ADVANCED AND INNOVATIVE STUDY IN GARDENING

Students study modern experience of leading scientific establishments of Ukraine and abroad in creation of 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 for creation hybrids of vegetables and water-melons, melons and gourds for different soil and climatic zones. Normatively legal documents which regulate procedure of vegetable approbation are studied.

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

Master's degree students study the modern methods of processing products of fruit and vegetable growing and viticulture. The factors of plant growing, that influence on vegetables and fruit storage, are investigated. The new modes and methods of storage of fruit and vegetable products are developed.





## PLANT PROTECT

branch of knowledge

**Agriculture and Forestry**

course code

**B.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 COURSE

In the process of studies students become proficient in knowledge in such directions as: entomology, plant pathology, herbology and quarantine of plants. Specialists on plant protection must have perfect knowledge of biology, ecology, distribution and peculiarities of development, character of damage of plants; reproduction of harmful organisms etc.; ensure phytosanitary control of seed and planting material, plants, soil, air; conduct scientifically grounded accompaniment in relation to integrated protection of agricultural crops from harmful organisms; a consultative help to specialists of economies, farmers and private owners, in realization of measures for protection of agricultural crops from harmful organisms and observation of their control.

### EMPLOYMENT

In accordance with the state standard of education graduating students receive qualification - a Researcher in plant protection (code KP 2213.1) and in obedience to the state classifier of professions of Ukraine (Dk003:2010) may be employed in State regional and district inspections of protection and quarantine of plants, 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 consultant, entomologist, entomological phytopathologist; in the economies of different patterns of ownership on positions of agronomist in plant protection and others like that.

Specialists in plant protection (since 2007) and quarantine of plants (since 2005) are given the status of the Civil servant.

### Master's programs of productive type

#### PHYTOMEDICINE

It foresees preparation of specialist in plant pathology with knowledge of: pathogenic and saprotroph microflora of grain of agricultural crops, control of its harmfulness; infection of sorts of agricultural crops by the agents of diseases; study of efficiency of plant protection measures against diseases.

Graduating students are able to work in the strong points of prognosis and appearance of harmful organisms, economies of different patterns of ownership, companies, associations, societies of agricultural direction; on production positions in research institutions on plant protection; in district and regional inspections on plant protection and contiguous directions of labor activity (agronomical and agro-chemical services).

#### PHYTOSANITARY MONITORING AND PROGNOSIS

It is directed at study the monitoring and prognosis of population of harmful phytophagan state in agrocenosis with the purpose of short- and long-term prognostication of their quantity for choice of the optimum systems of agricultural crop protection. Students study theoretical bases of prognostication of quantity of insects-phytophagan; master the modern technologies of monitoring and prognosis of remote sensing of earth and GPS.

The program provides preparation of specialists for work in State regional and district services of signaling and prognosis of harmful and useful biovariety of phytocenosis; inspections of plant protection and quarantine; services of phytosanitary control; scientific research institutions; control-toxicological laboratories and laboratories of biological plant protection; in economies of different patterns of ownership.

#### QUARANTINE OF PLANTS

The program foresees training 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 the limits of Ukraine; potentially ecological and economic consequences and measures on their localization and liquidation.

Graduating students are able to work 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 researcher, laboratory assistants in scientific-research institutions of Ukraine.

### Master's programs of research type

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

The program foresees acquirement of multilateral 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 development of skills of practical application of got knowledge.

Graduating students can work on positions: researcher in scientific-research institutions of Ukraine; managers of laboratories, laboratory assistants, leading specialists, in services on probation of plant sorts on firmness against harmful organisms, seminal inspections and others like that.

#### CONTROL OF INSECTS QUANTITY IN AGROCENOSIS OF AGRICULTURAL CROPS

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

Graduating students can be employed on position of entomologist and entophytopathologist in scientific-research institutions of Ukraine, Institutes of plant protection, phytophysiology, agriculture, sugar beets, potatoes growing and others.



## ECOLOGY AND ENVIRONMENTAL PROTECTION

branch of knowledge

Natural Sciences

course code

E.04010601

Form of study/training period, years

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

credits ECTS

90

licensed amount, persons

full time 50  part-time 50

### ANNOTATION OF COURSE

Stage training of ecologists 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.

### 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 AGROSPHERE 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 AGROSPHERE: 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 of 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

B.05140105

Form of study/training period, years

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

credits ECTS

90

licensed amount, persons

full time 30  part-time 30

### ANNOTATION OF COURSE

The purpose of training is mastering of the theoretical bases and formation of appropriate practical skills at research of biological objects including 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 the students to master the use of modern biotechnology based on the use of wildlife laws, to create and implement new systems for agricultural complex, energetics; light, chemical industry, mining, oil-processing complex, quality control of Bt products, the legal regulation management and marketing, issues of biosafety and bioethics.

### EMPLOYMENT

Qualifications of Masters graduates at employment according to the profession classifier of Ukraine: biotechnologist, researcher (biology, agronomy, forestry, naturally-protected business), engineer of the regeneration of natural ecosystems, biologist, biologist-researcher, researcher and consultant (biology), engineer-researcher.

Graduates work at the enterprises of food, chemical and biotechnological industry (OAC "Slavutychr", OAS "Obolon", OAS "Styrolbiotech", OAS "Kievmedpreparat" etc.), engineering design and the design organizations, enterprises of energy obtaining (biogas, biodiesel) and solid and liquid waste facilities, at establishments of environmental and health surveillance, at production control and control-analytical laboratories, centers of certification, commercial firms, research and design institutes and establishments of MES of Youth and Sports, National Academy of Sciences of Ukraine, specialized agencies government, universities and secondary schools, having the post of chief specialist, microbiologist, engineer, head of laboratory, senior laboratory assistant, teacher, engineer-researcher, scientist, bacteriologist, virologist, mycologist etc.

### Master's programs of productive type

#### ENVIRONMENTAL BIOTECHNOLOGIES

The program is oriented to mastering of environmental biotechnological problems from industrial, agricultural and domestic waste, industrial waste, using of industrial waste-free processes of gaining of food and drugs, forage, mineral raw material, energy, production of environmentally friendly alternative products for industry and agriculture and health safety, overcoming ecological crisis of Earth's biosphere, global environmental pollution prevention, rational environmental management and providing of environmental safety, improving of level of ecological culture of humanity.

#### 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, biotechnology base of its production, safe use to regulate the number of pests in order to obtain high-quality environmentally safe crop production and plant protection from damage - the creation and application of bio-pesticides and bio-fertilizers, restore soil fertility.

### Master's programs of research type

#### ALTERNATIVE ENERGY

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 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; considers the change possibility of mineral fuels on alternative energy sources; examines qualitative indexes of biofuels (biodiesel, biogas, granular biofuels, etc.), parameters and modes of equipment operations of its production.

#### DNA PASSPORTIZATION AND GENOME MAPPING

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

#### BIO SAFETY AND BIOETHICS

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



PRODUCTION TECHNOLOGIES AND PROCESSING OF STOCK-RAISING PRODUCTS

Agriculture and Forestry

Agriculture and Forestry

course code

8.09010201

Form of study/training period, years

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

credits ECTS

90

licensed amount, persons

full time 125 part-time 125

### ANNOTATION OF COURSE

The program of training of masters in course "Production technology and processing of stock-raising products" envisages the advance study of biological and economic descriptions, conformities to law of realization of the inherited making of the productivity, recreation and ontogenesis of agricultural animals of different kinds, systems of their maintenance, features of feeding, technological equipment of enterprises, intensive technologies of the sapling growing, principles of management and marketing in stock-raising industry.

Conception of masters training consists of combination of theoretical studies, practical preparation and realization of scientific researches with forming of professional skills in relation to modern energy saving technologies of production of high-quality stock-raising goods.

Curricula of training got recognition of leading educational establishments of the United States of America and Europe. Combination of high level of teaching of theoretical part and receipt of practical skills on the leading enterprises of stock-raising industry, with the high level of productive indexes, gives an opportunity in full to prepare a student, giving to him the sufficient level of knowledge and abilities for implementation of the put tasks on a production.

### EMPLOYMENT

According to branch standard of higher education in Ukraine (according to professions classifier DK003: 2010) graduates get qualification 2213.2 - a technologist-researcher of the production and processing of stock-raising 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 stock-raising products, work in research institutions, specializing in animal breeding and genetics of livestock, training in postgraduate study.

### Master's programs of productive type

#### GENETIC RESOURCES OF STOCK-RAISING

The program provides knowledge of genetic bases of selection of the future specialists of cattle breeding business, practical skills of the use of theoretical bases of genetics - mathematical analysis in the plant-breeding programs of kinds and breeds of agricultural animals.

#### HORSE BREEDING

The program aims at providing future specialists with necessary scientific, practical and organizational skills for work in the state and private subjects of cattle breeding business, zonal research institutes and stations, hippodromes, horse-racing and medical centers, tourist bases.

#### DAIRY CATTLE BREEDING

Mastering of the program provides the students with forming modern thorough knowledge in dairy cattle breeding at the market conditions of industry function.

#### MEAT CATTLE BREEDING

The program aim is providing future professionals of thorough knowledge of the biology, feeding, housing, features of environmentally friendly production of beef and meat productivity management of meat breed cattle.

#### BEEKEEPING

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

#### PRODUCTION AND PROCESSING OF PIG RAISING PRODUCTS

The program aim is providing future professionals with current knowledge of new produce technologies and processing of pig raising products and skills of planning and management of technological process.

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

The program provides knowledge in questions of the receipt of products of high pedigree value, technology of production, primary and deep processing of commodity products of the sheep breeding and goat breeding.

#### POULTRY FARMING

The program gives possibility to the students to get extended knowledge in biology, embryology and feeding of different kinds of agricultural poultry and get practical skills to conduct of modern technological process of production and primary processing of food eggs and meat, marketing system in the poultry farming.

#### FEEDING OF ANIMALS

The program is oriented to gaining to the future technologists-researchers of modern knowledge, abilities and skills of technological process control of voluminous forage purveyance, preparation of mixed fodders and forage additions and methods of their effective use in feeding of ruminant and mono gastritis animals.

### Master's programs of research type

#### 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 programs of herds on a prospect and skills in animal recreation and selection.

#### ANIMAL HYGIENE AND VETERINARY SANITATION

The program envisages training of specialists in industry of development, introduction in production the new systems and methods of animal maintenance, control of physical, chemical and biological factors of environment, approbation and sanitary-hygienic estimation of new types of forage, forage additions, technological equipment, facilities of animal maintenance and study of their behavior with the aim of receipt from them maximal amount of products conditioned by genetic potential.

#### ANIMAL FEEDING AND FORAGE TECHNOLOGY

The program provides future technologists-researchers with knowledge of innovative character about properties of forage nutrients, its transformation, transformation in stock-raising products in an organism, control of full value of animal feeding, realization method of scientific researches of 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 COURSE

In the process of studying students receive deep knowledge in 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 quality of grown fish according to the cost price of the fish production.

During the formation of master programs the tendency of intensive development of pond fish farming, the training of the professionals in sturgeon culture, aqua design, construction and designing of decorative aqua systems, special training of professionals who will have great knowledge in the theory of formation and using bioproductive potential of natural water resources, basics of nature protection law, adjustment of existing and creating of competitive selective schools of high-yielding essential species and breeds of fish, rare and disappearing representatives of water ichthyofauna, the formation and usage of ichthyofauna of fish farming storages of water, developing of ways of rising of fish yielding in continental storages of water and world ocean, forecasting of the condition of ichthyofauna under the influence of human factors, the theoretical objectivation of reproduction and protection of rare and disappearing fish species and also water resources, methods of summing of industrial fish stock was taken into consideration.

### EMPLOYMENT

According to the branch standard of the high education of Ukraine after the graduation from the faculty, graduates of EQL "Master" get the qualification 2213.1 "The Aquaculture researcher" and are qualified for such kinds of economic activity according to the DK 009-96: fishing, fish raising and fish farms; attendances connected with fish farming, fishing, sport fishing, hooking of crustaceans, harvesting of marine products, service connected with fishing, services connected with pond examination, storages of water examination services connected with stimulation of fish raising. Graduate is able to accomplish given work according to the classification of the professions and may obtain primary posts of hydro biologist, ichthyologist, fisheries officer and inspector of state fish protection.



### Master's programs of productive type

#### POND FISHERY

Preparing of the pond fish culture specialists for working in specialized fish-breeding, ware and full-system fish culture pond type enterprises, in the research institutions that take care of improvement of the technology of fish raising in the ponds, in the divisions of Ministry of agricultural policy and production of Ukraine and State agency of fish farming of Ukraine that are responsible for development of the pond fishing in the country.

#### STURGEON CULTURE

The preparation of experts in sturgeon culture for working in sturgeon fish plants, in specialized sturgeon farms of the different types, in the research institutes that take care of keeping and formation of population in industrial reservoirs of sturgeons, in the natural water storages and development of ware sturgeon culture, in the organs of State agency of fish farming of Ukraine that take care of reproduction and controlling of natural resources and providing of the development of ware aquaculture of sturgeons.

#### DECORATIVE AQUACULTURE

Preparation of the experts of course "Water biosearches" that is related to the decorative aquaculture. The aim of master program is to study knowledge about biology, keeping, reproduction and treatment of decorative fishes; creating of the non-natural decorative aqua systems; design of and aqua design of aqua systems of closed and opened types; cultivation and selection of the most essential objects during implementation of modern technologies for decorative aqua systems.

#### HYDRO BIORESOURCES PROTECTION

Preparation of the experts in the branch of nature protection activity, which are able to work in the system of ministry of Ecology and nature resources of Ukraine or in the system of State agency of fish farming of Ukraine, in the regional or district administrations of fish protection in the research institutions, in the state or private enterprises that take care of raising and protection and reproduction of rare species of fish, in the way of settling them in the water storages in order to renew biological variety, increasing of productivity of water ecosystems. Realization of these programs is based on the scientific ground of the key approaches to optimize rational usage of water resources and on the development of programs directed on the protection of water variety, its summing and its rational usage.

### Master's programs of research type

#### THE SELECTION OF FISHERY OBJECTS

The preparation of the specialists in selection and breeding in the fish culture for working in the research institutions that take care of selection of the aquaculture objects in the organs of Ministry of agricultural policy and production of Ukraine and state agency of fish farm of Ukraine that accomplish general control at the conducting of selective and tribal areas of ware fish enterprises of different kinds of property.

#### ICHTHYOFAUNA OF THE COMPLEX ALLOCATION WATER PRESERVATION

The preparation of the specialists of the ichthyology that are able to work in the system of state agency of fish farming of Ukraine, and its regional structures, research institutions, in other state and private enterprises that take care of fishing and fish raising in the fishing water storages, especially in the complex allocation water storages.

#### BIOMONITORING OF THE WATER PRESERVATION FOR FISHERY

The preparation of the specialists in hydroecology who are able to work in the system of Ministry of Ecology and nature resources of Ukraine, state agency of fish farming of Ukraine system of the State committee of Ukraine in hydrometeorology, in research institutions in state and private fish culture farms and other enterprises that take care of controlling of the water quality and condition of water ecosystems, complex allocation water storages, with estimation and forecasting of fish productivity of water storages under nature and anthropogenic conditions; development and realization of methods of controlling the quality of water and measures directed on the increasing bioproductive potential of the water storages.

## VETERINARY MEDICINE

branch of knowledge

Veterinary science

course code

8.11010101

Form of study/training period, years

full time 1,0  part-time 1,5  externship

credits ECTS

60

licensed amount, persons

full time 250  part-time 25

### ANNOTATION OF COURSE

The preparation of the specialists in the veterinary medicine gives a possibility to obtain deep theoretical knowledge and practice for working in different branches of veterinary medicine and is directed in deciding of modern problems of veterinarian providing of cattle breeding, pig breeding, sheep breeding, poultry breeding, treatment of domestic animals, veterinary sanitarian expertise of animal breeding production, veterinary pharmacology, laboratory diagnostics which gives possibility to work in the educational institutions which specialize in deciding of scientific questions in veterinary science whether to proceed its studying in postgraduate course.

### EMPLOYMENT

According to the state standard of "Veterinary Medicine" graduates get qualification of the veterinary medicine doctor and according to the state classification of the professions of Ukraine specialists which get qualification 2223.1 - the veterinary medicine doctor may be provided with a job in agricultural enterprises, state veterinary medicine, private veterinary medicine hospitals on the position of the veterinary medicine doctor at the agricultural subjects in the branch 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 which process cattle. Doctor of veterinary medicine (dispenser, chemist-toxicologist, biochemist, microbiologist, radiobiologist, virologist, immunologist, scientific employee).

### Master's programs of productive type

#### 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 PROVIDING OF THE 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 PROVIDING OF THE HORSE BREEDING

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

#### VETERINARY PROVIDING 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 PROVIDING 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 PROVIDING 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 PROVIDING 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 THE ANIMAL'S HEALTH PROVIDING

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.

### Master's programs of research type

#### 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'S 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.



## TECHNOLOGY OF KEEPING, CONSERVING AND PROCESSING OF THE MEAT

branch of knowledge

Food industry and Processing of Agricultural Production

course code

B.05170104

Form of study/training period, years

full time 1,5  part-time  externship

credits ECTS

90

licensed amount, persons

full time 30  part-time

### ANNOTATION OF COURSE

During the creation of meat industry in our country and its infrastructure, during formation of scientific views the biochemical imaginations were accepted as basis. That is why for qualitative installation of technological processes of keeping conserving and processing of meat it is necessary to extend the nets of the preparing and post preparing of the specialists in this direction. These days we observe the increase of effectiveness of the implementation of new technology. It is understandable that successful practical realization of solving of important problems in Ukraine's meat processing is possible through the education of specialists in "Technology of keeping, conserving and meat processing" according to the educational level "Master".

In NUBIP of Ukraine the students due to EQL "Master" due to course "Technologies of keeping, conserving and processing of meat" are educated, using modern achievements of informational technologies and progressive foreign and domestic experience. The basis for educational plans is a Law of Ukraine "about higher education", the concept of Ukrainian national school. The state national program of recreation of the education "Ukraine XXI century; strategy of education"

In process of studying the students get deep knowledge about the whole system, key terms about technological processes of the meat production and meat products, conducting of the scientific works, educational activity, managing activity in the different lineal and functional departments of the enterprises connected with organization of industrial processes in the meat branch. Given specialty discovers theoretical and practical skills about improvement of existing technologies of meat production.

### Master's programs of productive type

#### TECHNOLOGY OF MEAT AND MEAT PRODUCTS

The program includes the complex of the disciplines for students to obtain the perfect system of knowledge and key terms in technological processes of meat production and meat products, conducting of scientific works, educational activity, managing activity in different lineal and functional departments of the enterprise connected with an organization of production processes in meat branch. Given program discovers theoretical and practical skills about analysis of the tendency of the branch development, the finding of the problems of technological character and development of the propositions about improvement of the existing technologies of meat and meat products production.

Represented program completes basic tasks; increasing of high qualitative traditional and new food products production' implementation and development of new, intensive technologies. Modern development of home and foreign industry is being formed on the basis biotechnical industry with economically closed way of production which is represented like industry of principal processing of raw material into food products with specific apparatus design, systems of control, management and economy. Modern requirements about keeping, conserving and meat processing need usage of modern technologies which are based on the deep theoretical knowledge about specialties of meaty raw material, extension of technological researches, creating of new scientific schools, education of specialists for food and processing branches in the direction of keeping, conserving and processing of meat.



#### EMPLOYMENT

According to the branch standard of the higher education of Ukraine after the graduation from the faculty graduates gets a qualification of master of meat processing keeping and conserving. According to the classification of the professions of Ukraine specialists have a right to get a job in the industrial enterprises of meat branch, on the enterprises of the mixed branches, organizations and firms for completing organizational, productive, educational projective and research works connected with development of new and improvement of existing technologies connected with meat production on the particular positions: main engineer, main technologist, head of the work shop, laboratory manager etc.



## TECHNOLOGIES OF KEEPING AND PROCESSING OF WATER BIORESOURCES

branch of knowledge

Food Industry and Processing of Agricultural Production

course code

8.05170105

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 COURSE

In the recent years the main attention in the processing branch is given to the processing of fish and non fish marine products. Today also there is an increasing of effectiveness of new technologies in the food industry. It is understandable that successful solving of important for Ukraine tasks of fish processing enterprises is possible only in the way of improvement education of specialists of "Technology of keeping and processing of water bioresources", educational level "Master"

### EMPLOYMENT

According to the standard of the higher education of Ukraine graduates of educational level "Master" get the qualification "Master of technology of keeping and processing of water bioresources" and are prepared for the job in the industrial enterprises of the fishing branch, organizations and firms for accomplishing organizationally-management, industrial, educational, research works connected with the research of new and improvement of old technologies related to the fish production and fish products on the particular positions: head of the enterprises, main technologist, head of the working sector, senior scientific employee. In the higher and middle educational institutions of the corresponding direction master is able to accomplish professional work and can obtain primary position of the teacher in the schools and institutes, engineer in the cycle of special disciplines, head of the educational laboratory. Master is able to adapt to such kinds of connected professional activity as marketing.

### Master's programs of productive type

The program is directed on training of specialists that are able to work in the branch of fish culture in the direction of keeping, conserving and processing of fish resources and non-fish marine products and also on increasing its techno level; modern evolution of the keeping with usage of modern technologies based on the deep theoretical knowledge about fish culture.

Program includes complex of disciplines to teach students a perfect system of knowledge and basic terms related to the technological processes of fish and marine products production. Given program discovers theoretical and practical skills related to the analysis condition and tendencies in the process of branch's development, solving the problem aspects of technological character, development of propositions about improvement existing technologies of fish production and marine products.

The main factors of needs of specialists according to the given program are:

- the changes of the species of the raw fish, that twice changed the structure by extension of extraction in the opened ocean in 70-80s and following reduction of the industry in those regions.
- The increasing of catch of fish species, that live near shore, which is determined by the deficit of highly qualified staff, that could provide not only the processing of fish according to the traditional technologies, but also the increasing of technical level.
- The modern development of keeping, conserving and processing of fish needs new technologies, that are based on the deep theoretical knowledge about basis of raw fish, extension of technological fish culture survey, which are provided by the organization of specialized technological laboratories, increasing of the volume of technological information, creating of new scientific schools.
- The development of fundamental sciences - biology, biochemistry, microbiology, chemistry, physics, and practical mathematics, that serve as a basis for development of scientific basis of technology during preparing of particular level of specialists - process engineer.
- The education of the specialists according to the direction of processing conservation, is provided in small quantity, that slows down the implementation of market relations into fish culture branch.
- The appearing of new directions of evolution of processing of hydrobionts in fish culture that are connected with usage of new technological innovations, resource keeping technologies, directed on the increasing of effectiveness, that needs preparation of staff of high level.
- The development of fish farms that need a lot of specialists now, capable in the different professional disciplines; important deficit of highly qualified professionals - process engineer not only in the fish farms but in the ministries of water resources and non-fish marine products.
- Huge deficit of specialists process engineers in educational establishment of I-IV accreditation level of for providing the educational process scientific activity.





## FORESTRY

branch of knowledge

**Agriculture and Forestry**

course code

**8.09010301**

Form of study/training period, years

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

credits ECTS

90

licensed amount, persons

full time  100  part-time  75

### ANNOTATION OF COURSE

Full functioning of forestry under market economy conditions demands skilled specialists able to resolve certain tasks dealing with production and research activity.

The content of Master Programs is based on:

- correspondence between present and prospective needs of the forestry;
- providing flexible system of training specialists able to adapt themselves to quick-changing demands under conditions of national and international labor market;
- integration into educational, scientific, research and innovative activity grounded on the experience of the world prominent universities;
- interdependence between master and bachelor programs.

The content of Master Program is elaborated in accordance with Ukrainian educational standards, such as: educational and qualification characteristics; educational and professional training program.

### EMPLOYMENT

Master Course graduates might get the following positions in forest industry: State forestry industry; Forestry and Hunting Industry of State Agency Forestry Resources in Ukraine (forester, senior (or chief) forester, engineer in timber logging; forestry industry engineer; forest culture engineer; forest protection and conservation engineer; manager (chief) 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 personals training and retraining in forestry industry; related high educational schools of I-IV level of accreditation, zoological parks, nature and wildlife areas agencies; Ukrainian State Forestry Design Institute; Ministry of Ecology and Natural Resources of Ukraine (scientific employee).

### Master's programs of productive type

#### FORESTRY SCIENCE AND APPLIED FORESTRY

The mentioned program considers training of skilled personals which have profound interest in: forest nature, interrelation between forest and environment, forest cultivating and its application. All these grounds could provide successful adaptation of gradutors in forest industry.

#### FOREST RECLAMATION

Training of specialists in this sphere is realized through modern scientific and practical knowledge dealing with raising and application of protection plants that are compounds of zonal soil anti erosion schemes, as well as agri and forest landscape architectonic grounds.

#### FOREST PROTECTION

The student's training program is oriented to master professional knowledge and practical skills in: deducing and resolving the range of urgent problems concerning with bio ecological grounds of forest biogenesis protection and retreatment system; learning cause of plant diseases; elaborating system of measures to strive against diseases.

#### HUNTING SCIENCE

The student's training program is oriented to learn professional knowledge dealing with management of animal population and areas inhabited by wild animals, as well as their conservation, protection and rational using of animal resources. Besides, evaluation and optimization of hunting forests quality is introduced.

#### FOREST RENOVATING AND BREEDING

The student training program is oriented to master theoretical knowledge and innovative technologies in: development and exploitation of constant plant seeds storage; forest seed production; micro clone breeding of tree plants; forest and decorative plants; replication of forests based on ecologically oriented grounds; retreatment of soil disbalance caused by technological activity; methods which provide the increasing of forest culture productivity.

#### FOREST MANAGEMENT

The content of the program is producing by students the skills of inventorying forest plantations using the modern methods, ability to work with the 'Forest fund of Ukraine' database, to appoint the right forest economy measures, directed at the providing of the rational, perpetual and not exhausting using of forest resources.

#### FOREST RESOURCE MANAGEMENT AND FOREST INDUSTRY

Master program is oriented on skilled personals training and provides them with knowledge in economics and management needed for their future professional activity. These specialists are able to develop and to implement strategic measures in the sphere of forest management and to use it in different branches of economy under market conditions.

### Магістерські програми дослідницької спеціалізації

#### FOREST FIRE MANAGEMENT

This Master program provides future students with theoretical knowledge and practical skills. They learn to elaborate principals of regional and national politics in forest and landscape fire service. Besides, problems dealing with safety of personals, forest protection service and ecological safety fire service are introduced.

#### SCIENTIFIC GROUNDS OF FOREST REPLICATION BASED ON STABLE KEEPING

This program is oriented on learning modern problems dealing with: forests replication, ecological evaluation of forest replication and forest breeding, effectiveness of forest plant seeds technological processes; production of plants needed for garden and forest decoration, natural and artificial forest renovating plantation, forest growing and forest recultivation of landscape having anthropogenesis disbalance.

#### LANDSCAPE SCIENCE AND CITY FOREST

The program includes the discipline cycle dealing with area structures, regulation of forest plants which have protection characteristics; urban landscape phyto- reclamation; forest reclamation in arterial roads; monitoring of forest landscapes and their anthropogenic loading.

#### BIOLOGICAL AND ENERGETIC PRODUCTIVITY OF FOREST PHYTOCENOSIS

The program is oriented on mastering theoretical knowledge and practical skills. Students are able to resolve, to prove and to develop evaluation system and dynamics prognosis in phytomass components, as well as to define carbon deposit in trees within forest producing races in Ukraine.



## TECHNOLOGY OF WOODWORKING

branch of knowledge

Processing of Wood

course code

8.05180101

Form of study/training period, years

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

credits ECTS

90

licensed amount, persons

full time 50
  part-time 50

### ANNOTATION OF COURSE

Master program considers mastering students' theoretical knowledge and practical skills dealing with production of timber materials and goods, definition of their characteristics and quality level; learning methodic and techniques dealing with analysis of modern technological processes, planning and realization of scientific researches that optimize and improve technological processes in timber industry.

A graduate is able to resolve the following tasks:

- to analyze production technological processes of certain goods and make recommendations to improve mentioned goods;
- to analyze timber goods construction and recommend its improvement;
- to develop technological list dealing with production of certain timber goods;
- to construct and design certain timber goods;
- to produce certain timber goods;
- to calculate electrical parameters needed for certain technological process;
- to give scientific basis dealing with changes in designing of wood drying equipments.

### EMPLOYMENT

Students, that obtained Master Degree in "Technology of woodworking", might implement their qualification in educational establishment of I-II and III-IV levels of accreditation; state and commercial enterprises, producing and selling building materials, Ukrainian state enterprise "Resours"; state and commercial enterprises producing timber and furniture ( as engineer-technologist, timber industry expert, specialist, senior specialist, manager, chief (or manager) of enterprise). Besides, Master Degree permits to get position of scientific researcher, top (leading) scientific researcher, teacher or trainer, assistant in any Scientific and Research Institutions or professor assistant in university, to participate in any international scientific projects.

### Master's programs of productive type

#### MODERN TECHNOLOGY OF WOODWORKING

Master Program is based on knowledge and skills in timber processing and rational use of equipment, timber and energetic resources. Disciplines introduced in mentioned Master Program include theoretical and practical aspects of timber good technological processes, as well as modern tendencies in timber processing, peculiarities of modern timber industry, present requirements as for its production and quality, new materials used for its production, new decoration and application, methodic of calculating models for modern timber goods construction, ways of determination the elaboration of project and modeling technology, requirements for timber goods production, art design, furniture style, modern tendency in furniture production and way of its sales.



### Master's programs of research type

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

Master program is based on complex approaches dealing with learning timber resource saving technology and mastering skills dealing with balanced rational use of timber resources and quality service in timber goods production. 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 application, methods dealing with payment for timber goods, ways of design project development, requirements for furniture quality, art design construction and modeling, development of new furniture style characteristics, modern tendencies in furniture style and possible ways of its sales.

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

Master program is based on learning resource saving technology in timber drying processing and development balanced approaches as for management in drying process quality and rational use of energy resources.

Disciplines include theoretical and practical aspects dealing with timber drying processing and maximum nature protection and preservation of drying material, learning of anatomic and physic peculiarities of timber, device construction and modeling for timber drying processing, methodic dealing with quality evaluation, according to ISO, EN, DCTY, dust drying processing regime, prognosis of dust material drying quality, heat and electricity expense for dust production drying process and mixed timber, drying process cost price, define possible ways to reduce energy expense.



## Park-Gardening

branch of knowledge

**Agriculture and Forestry**

course code

**B.09010303**

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 COURSE

The content of Master Training Program is formed in accordance with present and perspective needs of the mentioned branch. The Program also considers providing flexibility in skilled personals training as well as their adaptation to quick-changing demands of national and international labor market; integration into educational, scientific, research and innovative activity based on the experience of the world prominent universities and in accordance with Bologna Convention dealing with personals training; logical interdependence between Bachelor and Master Programs.

Considering market needs as providing garden and park industry with skilled personals in both state and commercial structures, a range of Master Programs has been developed.

Programs dealing with training of skilled specialists for industry are developed by Decorative Gardening and Landscape Architecture Educational and Research Centre in alliance with graduates.

Master Programs are based on combined blokes of disciplines learnt by students of this course. Master Program as well as graduate's future job placement is defined by elective subjects that are chosen by both University and students themselves.

Mentioned Master Programs are formed in accordance with students needs. Important peculiarity of Master Program dealing with specialization in industry is its practical component. Students may master their practical skills at state leading enterprises, famous firms etc.

Besides, there are some master programs dealing with scientific and research activity. Their activity is based on scientific researches defined by departments responsible for graduate's training. These research master programs are elaborated and implemented by department that train postgraduate students.

### EMPLOYMENT

Graduate's qualification in accordance with curriculum is Master Degree in garden and park design.

In accordance with professional classification, graduate might occupy the following positions: junior scientific researcher, engineer of public welfare or landscape designer, green house master, nurseryman, master of planning and organization of public green services, gardener, green builder etc.



### Master's programs of productive type

#### LANDSCAPE ARCHITECTURE

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

#### DECORATIVE GARDENING

This program is aimed on learning theoretical knowledge and practical skills dealing with plant replication, as well as techniques considering growing of garden plants in green houses and decorative seed-plots for design garden and park objects.

#### SPORT GROUNDS AND GOLF FIELDS

This program turns students into skilled personals specialized in garden and park design. It introduces theoretical knowledge and practical skills that helps to provide future specialists with knowledge to develop, care and reconstruct sport grounds and golf fields.

#### OPENED AND CLOSED SOIL FLORICULTURE

This program is aimed to learn theoretical knowledge and practical skills dealing with growing certain floricultures, decorative plants variety. Besides, it introduces flower beds design, climate control regulation, new perspective seeds, as well as innovative technology in floriculture growing and breeding.

#### INTERIOR PHITODESIGN

Students study facts about history of design, variety of styles in floristic, scientific approaches as for phyto design in closed surrounding. They also obtain practical skills dealing with different style phyto compositions, form tropical and subtropical flower collection, analyze existed objects of phyto design and make retreatment projects.

#### NATURE PROTECTION OF PARK ZONES

This program is aimed on learning theoretical knowledge and practical skills in elaborating schemes about territorial park reserve organization, form scientific collection of rare plant variety, in learning value of nature heredity, in inspecting nature reserve park ecosystem, etc.

#### DECORATIVE SEED-PLOTS

The program learns master students theoretical knowledge and innovative technologies dealing with production of decorative seed-plots, generative, vegetative and micro clone replication of plants, trees and bushes, peculiarities of trees breeding and raising etc.

### Master's programs of research type

#### CONSERVING AND USING OF TREE VERITIES IN DECORATIVE GREEN PLANTATION: SCIENTIFIC BASICS

The program is oriented on learning students theoretical knowledge dealing with green plantation forming and caring, their protection and conservation in accordance with modern requirements for garden and park management. Scientific researches performed in parks and gardens possess applied characteristics and deal with perception of park and garden plantations and their complex nature. Students must learn methodology of investigations, techniques of scientific and cognitive activity. The course "Park and garden design" considers that students obtain practical skills needed in research activity dealing with plant and tree varieties in plantations.

#### PHYTODESIGN SCIENCE

Students study modern design, elaboration and implementation of different styles and forms and its history. Besides, they investigate ethic roots and national culture influence; define instruments needed to reach significance in their work.

## AGRICULTURAL MACHINERY AND EQUIPMENT PRODUCTION

branch of knowledge

Machine 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

90

licensed amount, persons

full time 50  part-time 50

### ANNOTATION OF COURSE

The course "Agricultural machinery and equipment manufacturing" gives opportunity to study specific skills and knowledge that are sufficient to perform professional tasks and duties of innovation character in engineering, design, control testing, certification, working, maintenance and utilization of agricultural machines and equipment.

### EMPLOYMENT

Graduates of course "Design engineer" are able to perform professional tasks and duties of innovative character that are meant for business activity of higher rank job positions of the following group of professions:

- administrative activity, education and research at laboratories of enterprises; scientific, research and design institutions;
- heads of enterprises; manufacture department managers;
- laboratory chiefs (education); heads of student design laboratories;
- heads of research laboratories; design engineers;
- machine engineers
- mechanical engineers;
- research engineers;
- assistants and teachers at educational institutions.

### Master's programs of productive type

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

Specialist obtains deep knowledge in engineering, design and control testing of agricultural machines manufacturing that is 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 takes place by means of formation, structuring and solving of optimization tasks of agricultural machines analysis and synthesis.

Thorough understanding of agricultural machine engineering as a complex mechanical system is provided. Both repaired and unrepaired systems quality assessment are carried out and these systems reliability is insured.

### Master's programs of research type

#### MECHATRONIC SYSTEMS OF AGRICULTURAL MACHINERY MANUFACTURING

Specialist obtains deep knowledge in innovative engineering and design of agricultural machinery manufacturing mechatronic systems that is based on classical and modern conceptions of mechatronics, mechanical motion control of machines applied with programmed drive component and theory of digital control. Thorough understanding of hydromechanical and electromechanical mechatronic systems engineering stages is provided. Usage of technical aesthetics and industrial design elements for creation modern products of agricultural machine engineering is insured. 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 performed.

## FORESTRY COMPLEX EQUIPMENT

branch of knowledge

Machine 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

90

licensed amount, persons

full time 50  part-time 50

### ANNOTATION OF COURSE

Course "Forestry complex equipment" gives opportunity to master specific skills and knowledge that are sufficient to perform professional tasks and duties of innovation character in engineering, design, control testing, certification, working, maintenance and utilization of forestry complex equipment.

### EMPLOYMENT

Graduates of course "Machine engineer" are able to perform professional tasks and duties of innovative character that are meant for business activity of higher rank job positions of the following group of professions:

- administrative activity, education and research at laboratories of enterprises; scientific, research and design institutions;
- heads of enterprises; manufacture department managers;
- heads of student development laboratories;
- heads of research laboratories;
- machine engineers
- mechanical engineers;
- design engineers;
- research engineers;
- assistants and teachers of higher educational institutions.

### Master's programs of productive type

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

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

Forestry complex equipment engineering takes place by means of formation, structuring and solving of optimization tasks of forestry complex equipment analysis and synthesis.

Thorough understanding of forestry complex equipment engineering as a complex mechanical system is provided. Both repaired and unrepaired systems quality assessment is carried out and these systems reliability is insured.

### Master's programs of research type

#### MECHATRONIC SYSTEMS OF FORESTRY COMPLEX EQUIPMENT

Specialist obtains deep knowledge in innovative engineering and design of forestry complex equipment mechatronic systems that is based on classical and modern conceptions of mechatronics, mechanical motion control of machines applied with programmed drive component and theory of digital control. Thorough understanding of hydromechanical and electromechanical mechatronic systems engineering stages is provided. Usage of technical aesthetics and industrial design elements for creation modern products of forestry complex equipment engineering is insured. 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 performed.

# MECHANIZATION OF AGRICULTURE

branch of knowledge

Technics and Energetics of Agrarian Industry

course code

8.10010203

Form of study/training period, years

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

credits ECTS

90

licensed amount, persons

full time 165 part-time 165

## ANNOTATION OF COURSE

Training highly-qualified engineers who are able to perform effective research and manufacture activity is a leading priority of higher education development. It must be carried out into practice through comprehensive, advanced Masters' programs. Master course "Mechanization of agriculture" provides productive and research specializations in the sphere of specialist training.

Programs of productive specialization contain tasks of innovative technologies and methods in agricultural manufacturing practical application. Programs of research specialization are aimed at top-priority areas of research in mechanization of agricultural production. Worked out and accepted curricula allow to put into practice the content of every Master's program. Performing of Masters' programs is carried out with the usage of corresponding material and technical resources that allow to do researches at high scientific and technical level in accordance with modern requirements. Training of masters according to accepted curricula is directly carried out in development and basic research laboratories of appropriate department.

## EMPLOYMENT

Graduate obtains complete higher education and qualification of research engineer in mechanization of agriculture. Having a scientific board letter of recommendation master can continue postgraduate studies in order to write and defend his Phd thesis. Many masters of productive specialization after graduating find employment at agricultural enterprises of different forms of ownership. According to classifier of professions SQ 003:2010 their professional level meets requirements of section 4.2 - professionals: 12 - heads of enterprises, institutions and companies; 1221 - heads of manufacture departments of agriculture, forestry and water management; 1221.1 - chief specialists - heads of manufacture departments of agriculture, forestry and water management; 1221.2 - heads (another leaders) and foremen of manufacture departments of agriculture, forestry and water management.

## Master's programs of productive type

### TECHNIQUES AND TECHNOLOGIES IN PLANT-GROWING

Optimization of mechanization of crop husbandry machine complexes and equipment for modern technologies of growing agricultural crops. Designing and organization of technological processes, investigation of durability and failure-free performance of machine design and equipment.

### TECHNIQUES AND TECHNOLOGIES IN ANIMAL BREEDING

Optimization of mechanization animal and poultry husbandry machine complexes and equipment for modern technologies of animal and poultry breeding. Research of durability and failure-free performance of machine design and equipment.

### TECHNIQUES AND TECHNOLOGIES IN PROCESSING PRODUCTION

Optimization of mechanization processing and preserving agricultural products machine complexes and equipment for modern technologies. Research of durability and failure-free performance of machine design and equipment in processing industry.

### TECHNOLOGIES AND EQUIPMENT OF SERVICE ENTERPRISES

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

### TECHNIQUES AND TECHNOLOGIES IN BIOSYSTEMS

Technological processes designing and substantiation of technical devices characteristics of biotechnical manufacture for complex converting of biomass into biofuel and utilization of agricultural complex wastes. Research of biofuel usage efficiency in modern engines.

### WORK SAFETY PRINCIPLES OF AGROBIOENGINEERING

Development of work safety management systems of energy and resources efficient use and engineering devices for negative effect prevention of agricultural complex manufacture processes and environment, technical devices safety characteristics substantiation.

## Master's programs of research type

### DESIGNING OF MECHATRONIC SYSTEMS OF AGRICULTURAL COMPLEX EQUIPMENT

Modeling and optimization of agricultural complex equipment motion modes. Designing of optimal motion control systems of agricultural complex equipment on the base of modern mechatronic systems. Choosing of mechatronic systems structure and configuration in relation to intended purpose of equipment. Development program devices for optimal agricultural complex equipment control.

### TECHNICAL SERVICE OF MACHINES AND EQUIPMENT

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

### OPTIMIZATION OF PROCESSES CHARACTERISTICS AND OPERATING REGIMES OF AGRICULTURAL COMPLEX EQUIPMENT

Increasing of agricultural equipment failure-free level on the base of structural analysis of its durability and substantiation of efficient technological processes, characteristics and operating regimes. Research of design of technological and kinematical schemes, aggregates, assembly units, operating elements.

### OPTIMIZATION OF HANDLING PROCESSES IN AGRICULTURAL COMPLEX

Research and design of agricultural weights handling operations performance efficient schemes. Substantiation and choosing of appropriate handling equipment and its constructive and technological characteristics in the process of agricultural freight transportation. Optimization of motion regimes 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 COURSE

Graduates in organization of transportation and management in transport obtains complete higher education and qualification of research engineer in transportation. Having a scientific board letter of recommendation master can continue postgraduate studies in order to write and defend his PhD thesis. Course allows obtaining 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. Course acquires a special urgency today when agricultural freights are transported under specific conditions of countryside. The problems of substantiation of requirements for considerable part of agricultural products transportation, optimal transport means construction fitness, look-ahead of freight stream chaos during harvesting are also important. A great number of master theses are recommended by SEB for practical application when organization of transportation and management in automobile transport for agricultural complex enterprises of different forms of ownership takes place.

### Master program of productive type

#### MANAGEMENT OF AGRICULTURAL PRODUCTS FREIGHT TRANSPORTATION UNDER CONDITIONS OF ECOLOGICAL AND ECONOMICAL LIMITATION

Design of freight transportation by motor-and-tractor devices and loading-unloading operations when agricultural products are manufactured. Objects of research are agricultural freights specificity and diversity, their transportation terms and conditions, mid- and long-distance freight streams.

### EMPLOYMENT

After having degree in this specialty graduates can work in accordance with the profession classifier SQ 003:2010: as traffic controllers, engineers of traffic service and logistic department managers of transport enterprises; transport department managers of 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 school, 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 COURSE

Graduates obtain complete higher education and qualification of research engineer in transport. Having a scientific board letter of recommendation master can continue postgraduate studies in order to write and defend his PhD thesis. Specialty allows to obtain knowledge and skills in theory of transport and pedestrian streams, traffic organization and control and transport streams control methods, development ways of communication and city, village transport planning, traffic accident inspection, fundamental organization of freight and passenger transportation (taking into consideration such state programs as buses for village schools). Problem of organization of agricultural products transportation during mass harvesting is actual today. Objects of research and study are intersection village roads with motor-roads and highways for development ways of traffic organization and control.

### Master program of productive type

#### TECHNOLOGY OF TRAFFIC DESIGN

Development of exploitation improvement methods in existing transport nets taking into consideration traffic safety, economy and its result for environment (taking into consideration the countryside conditions). Research of transport streams change during mass harvesting on critical sections of transport nets.

### EMPLOYMENT

After having Master degree in this specialty graduates can work according to the classifier of professions SQ 003:2010: 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, vacation schools and higher educational institutions.

# AUTOMATED CONTROL OF TECHNOLOGICAL PROCESSES

branch of knowledge

**Automation and Operating**

course code

**8\_05020201**

Form of study/training period, years

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

credits ECTS

**90**

licensed amount, persons

full time **35**  part-time **35**

## ANNOTATION OF COURSE

Automation of agrarian sector is an important indicator of scientific and technical progress in agriculture. Necessity of specialists in technology processes automation in agriculture is actual now and is caused by information technologies introduction into all spheres of agricultural manufacture. Automated control systems of technological processes and manufacture on the base of modern computer-integrated control systems of technological processes are broadly used on modern animal farms, poultry farms, hog farms, at dosed soil objects, vegetable depositories, electricity and energy supply objects. For solving professional tasks specialist in automated control of technological processes is trained to take part in all stages of research, design and development and exploitation of computer-integrated systems of technological processes control in agricultural complex; in working out of all kind of documentations for apparatus and program complex automation and control systems. Graduates from the faculty are able to carry out researches in specialty. They are trained to work as heads or specialists of departments where researching, designing, assembling, tuning and exploiting and repairing of devices, equipment and automated control systems of technological processes in agriculture are worked out.

## EMPLOYMENT

Graduates employment is carried out in agricultural and energy complexes in chosen specialty at agricultural enterprises of different forms of ownership, research institutions of NAS of Ukraine and NAAS of Ukraine. According to the specialty standard classifier of higher education of Ukraine after graduation from the faculty graduates obtain degree EQL "Master" and qualification of master in automated control of technological processes. Specialist is able to perform certain professional work in accordance with professions classifier and can occupy certain positions: 2131.2 - manufacture 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.

## Master's programs of productive type

### COMPUTER-INTEGRATED OPERATING SYSTEMS OF TECHNOLOGICAL PROCESSES OF ANIMAL PRODUCTS

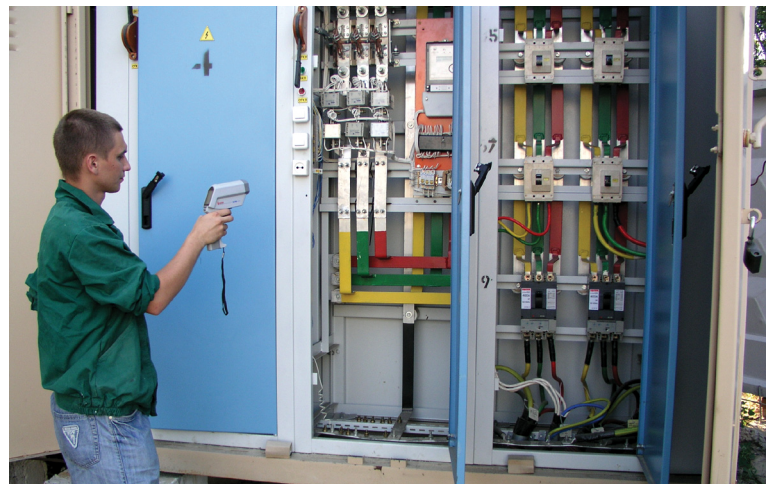
Specialist training provides them with knowledge in planning and research, carrying out organizing; working out and implanting of modern computer-integrated animal husbandry products manufacture technological processes control systems. Future specialist learns technology, mathematical modeling of animal husbandry products manufacture technological processes. He learns innovative approaches to implantation of animal husbandry products manufacture technological processes control automated systems.

### COMPUTER-INTEGRATED OPERATING SYSTEMS OF TECHNOLOGICAL PROCESSES OF PLANT PRODUCTS

Specialist training provides them with knowledge in planning and research, carrying out organizing; working out and implanting of modern computer-integrated crop husbandry products manufacture technological processes control systems. Future specialist learns technology, mathematical modeling of crop husbandry products manufacture technological processes. He learns innovative approaches to implantation of crop husbandry products manufacture technological processes control automated systems.

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

Specialist training provides them with knowledge in planning and research, carrying out organizing, working out and implanting of modern agricultural products processing and conserving manufacture technological processes control computer-integrated systems. Future specialist learns technology, mathematical modeling of agricultural products processing and conserving manufacture technological processes control computer-integrated systems. He learns innovative approaches to implantation of agricultural products processing and conserving manufacture technological processes control computer-integrated systems.



## Master's programs of research type

### ENERGY EFFECTIVE SYSTEMS OF BIOTECHNICAL OBJECTS OPERATING

Specialist training provides them with knowledge in planning and research, carrying out organizing, working out and implanting of modern biotechnical projects control energy effective systems. Future specialist learns technology, mathematical modeling of technological processes in agricultural complex. He learns innovative approaches to implantation of technological processes control automated systems in agricultural complex. Master's program provides with methodological fundamentals of economic, reliable, effective biotechnical objects control systems construction. Knowledge that students obtain forms their abilities and skills complex. And it permits them to solve difficult tasks of effective efficiency increasing both active systems and those ones that are planned. Great importance is given to master's objects and systems research abilities and skills development.



# ELECTRICAL SYSTEMS OF POWER CONSUMPTION

branch of knowledge

Electronics and Electrical Engineering

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 COURSE

Students receive thorough knowledge of power production, distribution and consumption. Considerable attention is given to the use of renewable and alternative energy sources. Graduates are experts in installing, commissioning and maintenance services of various power equipment: motors, oscillators, packaged transformer substations, overhead and cable transmission lines, lighting equipment and others. They are able to develop and to implement new systems of computer-integrated management of power consumption of energy system. Power consumption process being crucial part in production technology process provides for the distribution and consumption of electricity, sets the direction of management ways of customers 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 in technology of production, transmission, distribution and power consumption, understanding existing problems, ability to formulate goals, set aims and solve problems. Graduates from the faculty are able to research in electrical engineering and energetics in order to improve operational reliability of electrical equipment and to use energy resources and energy materials efficiently.

## Master's programs of productive type

### ELECTRICAL NETWORKS AND SYSTEMS

Training of specialists provides with knowledge of research planning and organization, 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, study innovative approaches to application of protectors of automatics and teleautomatics of power supply systems in AIC.

## Master's programs of research type

### ELECTRIC POWER PLANTS, SYSEMS AND NETWORKS

Training of specialists provides with knowledge of research planning and organization, development and implementation of energy saving technologies, electrical power plants and networks and systems. Specialists study generation plants, electric power plants, mathematical modeling and projecting of power-supply systems of AIC, study innovative approaches to rational transporting, distribution and usage of energy resources, operation of power-generating equipment. Master program provides methodological elements of construction economical, reliable and efficient power-supply systems for electrical energy consumers. Knowledge gained by students form their skills and abilities that enable them to solve complex problems concerned with efficiency upgrading of current and projected systems. Considerable attention is given to develop skills and abilities for systematic study of objects and systems of power supply.



## EMPLOYMENT

Employment of Master graduates is carried out in energy sector according to a chosen profession, in agricultural enterprises of different ownership forms, in scientific and research institutions of NAS of Ukraine and NAAS of Ukraine. According to the industry standard of higher education of Ukraine upon successful graduation at EQL "Master" graduates obtain qualification of Master of electrical power systems. This allows to occupy the following positions according to occupational classification: 2143.2 - power engineer; 2143.1 - research engineer (electrotechnics); 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 AGRICULTURE INDUSTRY

branch of knowledge

Technics and energetics of agrarian industry

course code

8.10010101

Form of study/training period, years

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

credits ECTS

90

licensed amount, persons

full time 100  part-time 100

### ANNOTATION OF COURSE

Students receive thorough knowledge of power production, distribution and consumption. Considerable attention is given to the use of renewable and alternative energy sources. Graduates are experts in installing, commissioning and maintenance service of various power equipment: motors, oscillators, packaged transformer substations, overhead and cable transmission lines, lighting equipment and others. They are able to develop and to implement new computer-integrated control systems in technical processes in AIC. Graduates from the faculty are able to research electrical engineering and energetics in order to improve operational reliability of electrical equipment and to use energy resources and energy materials efficiently.

### EMPLOYMENT

Employment of Master graduates is carried out in energy sector according to a chosen profession, in agricultural enterprises of different ownership forms, in scientific and research institutions of NAS of Ukraine and NAAS of Ukraine. According to the industry standard of higher education of Ukraine upon successful graduation at EQL "Master" graduates obtain qualification of Master of electrical power systems. This allows to occupy the following positions according to occupational classification: 2143.1 - research engineer (energetics in agriculture); 2143.2 - energy engineer; 2145.2 - extraction engineer in farming industry; 2143.1 - research engineer (electrotechnics); 2149.2 - research engineer (engineering); 2149.2 - engineer of adjusting and test; 2149.2 - operation and maintenance engineer; 2147.2 - ventilation engineer.

### Master's programs of productive type

#### 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

Training of specialists provides for gaining knowledge of research planning and organization, development and implementation of modern 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 TECHNOLOGY RESOURCES IN AIC

Training of specialists provides with knowledge of research planning and organization, development and implementation of modern 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.

#### ENERGYENGINEERING IN AIC

Organization of intergrated operations in projecting, installing, adjusting, commissioning and maintenance of power equipment. Reliability of technical systems and quality of energy resources and energy material. Innovative methods to improve 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.

### Master's programs of research type

#### ENERGY EFFECTIVE SYSTEMS OF BIOTECHNICAL OBJECTS OPERATING

Training of specialists provides with knowledge of research planning and organization, 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. Master program provides with methodological elements of construction economical, reliable and efficient control systems of biotechnical installations. Knowledge gained by students form their skills and abilities that enable them to solve complex problems concerned with efficiency upgrading of current and projected systems. Considerable attention is given to develop skills and abilities for systematic study of control objects and systems.

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

Research of methods of electric energy transformation, development of newest electric drivers with improved operating properties. Basic principles of research activity and modern theory of electromechanic transformation of energy. Technologies of researches of electromagnetic devices and electromechanic transformers of energy.

#### ELECTRICAL NETWORKS AND SYSTEMS

Projecting, commissioning, adjusting 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

Technics and energetics of agrarian production

course code

8.10010103

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 COURSE

Students receive thorough knowledge of power production, distribution and consumption.

Graduates are experts 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 to implement new computer-integrated control systems in technical processes in AIC. Graduates are able to research in electrical engineering and energetics in order to improve operational reliability of electrical equipment and to use energy resources and energy materials in modern farming industry efficiently.

### EMPLOYMENT

Employment of Master graduates is carried out in energy sector according to a chosen profession, in agricultural enterprises of different ownership forms, in scientific and research institutions of NAS of Ukraine and NAAS of Ukraine. According to the industry standard of higher education of Ukraine upon successful graduation at EQL "Master" graduates obtain qualification of Master of electrical power systems. This allows to occupy the following positions according to occupational classification: 2143.2 - farming industry electrification engineer; 2145.2 - technical processes mechanization and automation engineer; 2149.2 - operation and maintenance engineer; 2143.1 - research engineer (electrotechnics); 2149.2 - research engineer (engineering); 2147.2 - technical diagnostics engineer; 3152 - electric and heat energy control officer.

### Master's programs of productive type

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

Research, development and implementation of modern electrified technologies in production and processing of agricultural production. Design of managed electromechanic and executive mechanisms in a 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 modern electrified technologies in production and processing of agricultural produce. Design of managed electromechanic 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 modern electrified technologies in food processing industry. Design of managed electromechanic 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

Training of specialists provides with knowledge of research planning and organization, development and implementation of modern 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 of technical processes in AIC.

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

Training of specialists provides with knowledge of research planning and organization, development and implementation of modern 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.

### Master's programs of research type

#### ENERGY EFFECTIVE SYSTEMS OF BIOTECHNICAL OBJECTS OPERATING

Training of specialists provides with knowledge of research planning and organization, development and implementation of new energy-efficient control systems of biotechnical installations. Specialists study technology and mathematical modeling of technologic processes in AIC, study innovative approaches to introduction of computerized control systems of technological processes in AIC. Master program provides methodological elements of construction economical, reliable and efficient control systems of biotechnical installations. Knowledge gained by students form their skills and abilities that enable them to solve complex problems concerned with efficiency upgrading of current and projected systems. Considerable attention is given to develop skills and abilities for systematic study of control objects and systems.

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

Research of methods to improve farming industry efficiency through the use of new electrified technologies. Design of managed electromechanic and executive mechanisms in AIC. Research methods of processing quality in AIC.



## INFORMATION MANAGING SYSTEMS AND TEHNOLOGIES

branch of knowledge

Informatics and Computer Science

course code

8.05010101

Form of study/training period, years

full time 1,5  part-time  externship

credits ECTS

90

licensed amount, persons

full time 25  part-time

### ANNOTATION OF COURSE

The purpose of training for this specialty is to train new personnel who would have systematic knowledge in development of computerized information systems and technologies for various branches of science, industry and business, including: conducting systematic analysis of subject areas and their formalization; creating mathematical models of automation objects and processes; design and development of applied software and data and knowledge bases; the development of artificial intelligence systems.

While training future professionals get practical skills in the subject area as for development of software products; designing the systems for data processing and management with network solutions use, hardware platforms and software products of the world's leading producers; the ability to choose programming technologies relevant to the requirements of specific systems, and to develop applied programs in various subject areas; the ability to build effective computing algorithms, the ability to 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; to be aware of up-to-date methods of designing programs and software systems, the development of optimal solutions for the software content, algorithms of procedures and operations.

Graduates work for development and implementation of information managing systems. Graduates are future "generals" of information systems, system analysts who are familiar with planning methods of information systems, software and hardware needed for their functioning. Creating a competitive economy of Ukraine is impossible without modern systems of management and computer-based design.

Future specialists are trained to have genuine interest for scientific, research and pedagogical work, to be ready for thesis research work to pursue the scientific degree the candidates of sciences.

### Master's programs of productive type

#### INFORMATIONAL OPERATING SYSTEMS AND TECHNOLOGIES

The concept and overall goal of this master program of practical specialization is the need to train 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 system analysis and decision making while creating large and complex systems; operating the systems of artificial intelligence and software of automated systems and computers.

At the workplace a graduate may solve problems that refer to management and maintenance of complex information systems, do the analysis of subject area at the system level, designing data bases, development of applied software for implementation the management systems, computing systems, service applications, etc.

#### TELECOMMUNICATION ASSISTANCE OF INFORMATIONAL OPERATING SYSTEMS

The concept and overall goal of master program is the need of training the specialists with systematic knowledge in methodology, techniques and tools for building modern telecommunication systems and networks - the part of information managing systems of agroindustrial and environmental branches of economy. The program provides the following disciplines: "The global information infrastructure", "Telecommunication technologies and networks", "Mobile computer-integrated systems". The received knowledge in the development of scenarios, architecture, and models of systematic and scheme-technical designing of telecommunication systems, their technical exploitation and service using computer technologies and software tools, will let future specialists choose properly the technologies and technical means to implement the control and management schemes, to organize effective management of technological processes of agroindustrial and environmental branches of economy.

### Master's programs of research type

#### DISTRIBUTED INFORMATIONAL SYSTEM

In recent years new principles of constructing complex software systems have been actively used, its main role is 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 the need of training specialists with the skills of designing, creating and implementing 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

Future specialists will work in the IT industry, developing and supporting software. Master in specialty "Information Managing Systems and Technologies" is able to perform such professional tasks and occupy primary positions (according to occupation classification): 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 establishments.

The main tasks the graduate may solve in future: 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; ensuring the functioning of computers; providing information security of the company. In addition, the graduate 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 Business Activity

course code

8.03050201

Form of study/training period, years

full time 1,0  part-time 1,5  externship

credits ECTS

60

licensed amount, persons

full time 50  part-time 50

### ANNOTATION OF COURSE

In today's rapidly changing market environment when supply and demand require from economic system the ability to instantly restructuring, the need for specialists who can analyze, predict and make right and grounded management decisions based on analysis of market dynamics is dramatically growing.

These professionals should have knowledge in 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. The course of their studies should be based on knowledge system in special mathematics, theoretical and professional knowledge of new information technologies with use of computers in economy.

The purpose of this concept is the need of training the specialists with systematic knowledge in methodology, techniques and tools for constructing, economic analysis and application of economic and mathematical models in transformational economy environment.

The undoubted advantage of specialty "economic cybernetics" is its versatility. Cybernetician is a systems analyst who not only helps to choose the right solutions when problem evolves, but also allows to predict and to prevent such situations.

The received knowledge provides the adaptation of graduate to the place of future employment and gives an opportunity to 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. Cybernetician conducts analysis and forecasting the economic processes based on mathematical models implemented through information technologies.

### Master's programs of productive type

#### ECONOMIC-AND MATHEMATICAL MODELING

Economic and mathematical modeling becomes a tool to solve strategic tasks of management area.

Based on the transformation processes taking place in modern society and concept of economic processes development in agriculture in global informatization environment, there is a need for training specialists with analytical and algorithmic thinking, who can build mathematical models and use methods of optimization while studying actual tasks of agrarian economy of Ukraine

Modern development and implementation of information systems into agriculture require from educational institutions the training of specialists-managers with profound knowledge in modern information technologies and telecommunications, means of information collection, storage, processing and transfer, with skills of effective use of global information resources, the skills to develop and implement computer information and managing systems at all levels of agricultural sector management, to use modern GIS.

The principal issue in training masters by this program is the accumulation of knowledge and skills for mathematical modeling of industrial and management strategies of producers' behavior in competitive environment and studying the trends of modeling coordination processes in investment activity of economic systems. That is why the master program requires the studying the following subjects: "System Analysis", "Mathematical Models in Management and Marketing", "Modeling of investment activity".

### Master's programs of research type

#### CONCEPTUAL FORESIGHT OF SOCIAL AND ECONOMIC PROCESSES

The current state of the economy is characterized by using large arrays of data, but there is a lack for analysts with professional training, necessary for obtaining useful information from these data. Therefore the purpose of the program is to train specialists in methodology of economic reasons of future actions. The knowledge of principles and methods of foreseeing helps an expert understand more deeply the nature of phenomena that occur, coordinate the ongoing work with perspective tasks, make better decisions Master program is designed to meet the growing demand for professionals who have skills in specialized techniques for foresight analysis. The subject for the study according to curriculum is the set of methods, means and ways to develop social and economic foresights. The curriculum emphasizes the use of tools for data management and applied statistics and operations investigation, analysis methods of large real data arrays, the increase of return from investment, the increase of customer loyalty, the reduction of fraud and improvement of decision-making process.

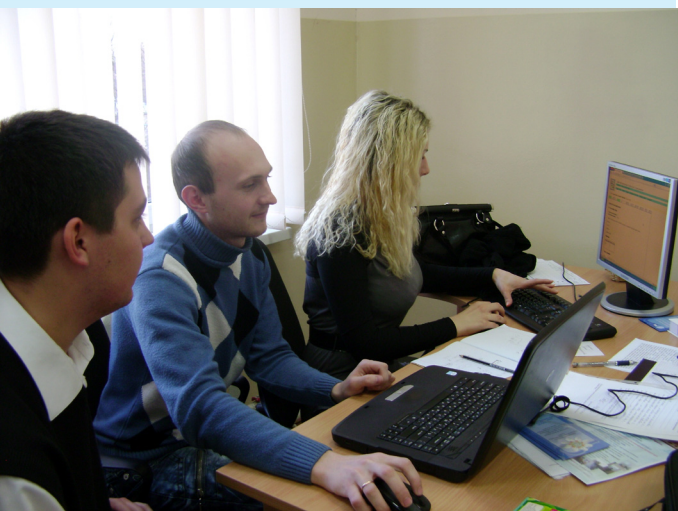
### EMPLOYMENT

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

Qualification according to curriculum is Master of Economic Cybernetics. Master of Economic Cybernetics is able to perform such professional tasks and to occupy primary positions (according to occupation classification): 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.

Therefore, this expert will be able to perform the tasks of:

- head of small enterprise;
- economist-mathematician in foresight area, planning and analysis of the enterprise activities of various business ownership forms;
- 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

B.08010103

Form of study/training period, years

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

credits ECTS

90

licensed amount, persons

full-time 90  part-time 85

### ANNOTATION OF COURSE

The concept of training in specialty "Land Management and Land Registry" is aimed to train highly-qualified specialists in land management, land protection, land resources management, geosystematic monitoring of environment and state land registry. Training involves the formation of such skills that will let the Master independently resolve complex tasks of land use, development the projects of land management and designing nature-conservation measures, monitoring and state control over reasonable land use and protection using modern information technologies of data processing as for the state of land resources and its changes; to create geodesic-cartographic base of land management.

### EMPLOYMENT

After graduation from Master course "Land Management and Land Registry" students get qualification of "Master of Land Management and Land Registry" and may work as: chief project engineer at 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 center of land registry; 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 the land use and protection; expert in property rights, expert in evaluation of land plots.

In the course of professional activity the graduates of the mentioned specialty may resolve the problems of atypical evaluation of real property, to predict the use of lands in administrative-territorial formations, form restrictions in land use and make their registration. They may 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 the statutory evaluation of lands, to perform inspection activity in land use and protection

### Master's programs of productive type

#### LAND MANAGEMENT AND LAND REGISTRY

The program is connected with 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 on territories of protected areas, health-improving, recreational and historical areas.

#### LAND PROTECTION

While studying by this program students gain skills and knowledge in the sphere of reasonable land use and protection, renewing the fertility of soil, increasing the productivity of forest fund lands, providing special treatment of protected areas, health-improving, recreational, historical and cultural areas. Special attention is paid to the problems of standardization and regulation in the sphere of land protection.

#### GIS in LAND MANAGEMENT

Future specialists get knowledge in the sphere of modern GIS software and computer-based design, managing automated land registry system for use in land information systems in land resources centers.

#### LAND EVALUATION AND REAL PROPERTY

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

#### GEODESIC AND CARTOGRAPHIC TECHNOLOGIES OF LAND MANAGEMENT

The program provides training specialists for geodesic-mapping supply of land management, performing geodetic and cartographic works, land inventory, accounting and registration of land plots. Considerable attention is paid to highlighting the technologies of creating maps and land use; zoning maps and zoning lands; optimization of land resources use; mapping modeling of land use problems, including through geoinformation technologies; characteristic feature of national infrastructure of geospatial data, etc.

### Master's programs of research type

#### LAND QUALITY EVALUATION AND FORESIGHT

The program provides training specialists for scientific work in studying and looking for ways out to solve urgent problems associated with application of modern approaches to evaluation of lands and the foresight of their qualitative state.

Students study: methodological framework for measuring the quality of agricultural lands; the impact of degradation on the quality of lands; evaluation and foresight 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 training specialists-researchers who would own methods of modern GIS technologies application, data of distance land sensing necessary while land management 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 who would own 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



## JURISPRUDENCE

branch of knowledge

LAW

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 COURSE

Trained masters in "Jurisprudence" acquire special skills and knowledge for professional tasks, namely: the ability to analyze the practical application of legislation of Ukraine, interpret and apply regulations in certain legal cases, provide development explanations and advice on legal questions, resolve disputes, prepare legal documents etc.

Professional required is the ability to think quickly and consistently, to have a good memory and the ability to speak clearly and vividly, to be psychologically stable. Since lawyers work with documents, they should have the makings to paper routine.

### EMPLOYMENT

According to industry-standard of the higher education in Ukraine after the graduation masters obtain qualification - Master of Law and are able to work in the following types of legal activity under control of professions SK 003:2010, namely: 2421 - professional in the field of Law and Public Prosecutions, 2429 - Legal Counsel, 1231 - General Counsel; 2419.3 - specialist legal adviser; 2310 - lecturer of the University and higher education establishment .

Also, future lawyers can work as legal advisers in the various entities in agriculture. In the process of professional activity graduates of this specialty resolve their respective issues legal security implementation of the client's intentions, and the protection of his rights and interests of violations by other persons and illegal actions by the authorities. A lawyer must act in the interests of client, but within the law, warning customers of illegal errors.

### Master's programs of productive type

#### AGRARIAN LAW

During study masters acquire knowledge of subjects:

"Current Problems of Agricultural Law" - The problems of legal regulation of land reform and property relations in the countryside, the development of agricultural market, including grain and sugar market, are researched. The basic directions of state support for agricultural producers, namely the system of preferential tax credit are studied. The problem of development of the concept of Agrarian Policy of Ukraine; forming a system of management and control in agriculture are investigated. The legal aspects of formation and development of agricultural cooperation in agrarian reform are considered. Prospects for development of productive, service cooperatives and credit unions.

"Actual problems of the agricultural law of foreign countries" - learning the theory of agrarian law of foreign countries, interpretation of national and international agricultural legislation including the positions of comparative analysis.

"Legal support of quality and safety of agricultural products" - examines the general provisions on the requirements and standards for agricultural products, taking into account the peculiarities of manufacturing and marketing of certain agricultural products. Analyzes the international experience and scientific achievements in the field of quality assurance and product safety in agriculture. The system of state and public control of the quality and safety products for health, and certification.

"The problems of environmental law" - examines the problems of legal regulation of the use and protection of natural resources, environmental safety, improve governance in the environmental sector, to ensure environmental human rights in Ukraine, issues of legal liability for environmental offenses.

"Recent developments in land law" - advanced mastering of the theory and methodology of land law, his study of contemporary issues and legislation on land, the formation of stable skills of its application in practice, making the students a new quality of legal thinking in the sphere of land law of modern Ukraine to identify objective reasons the need for land reform, establishing goals and objectives of reform, the nature and content of land reform in general and modern land reform.

The students study current problems of agriculture and land law and its application in practice, the legal regulation of land reform of property relations in the countryside, the development of the agricultural market, 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 outlook for production, service cooperatives and credit unions, the problems of legal regulation of the use and protection of natural resources in agriculture, food and environmental safety, improve governance in the environmental sector, to ensure environmental human rights in Ukraine, issues of legal liability for agricultural, land and environmental violations, etc.

### Master's programs of research type

#### LEGAL REGULATION OF AGRARIAN RELATIONS

At the present stage of development of legal education, the introduction of innovative technologies in the learning process increases the need for training highly qualified specialists. Especially urgent is the problem for the farming of legal science that is now in the making. Therefore, the theoretical training of young scientists able to conduct independent research and to promote agrarian law as an independent branch of law is necessary. Moreover, given the features that exist in the process of agricultural production and labor, training of legal personnel for the village is particularly important.

The training referred to the Master's program is realizing accordance with modern trends of state policy in agriculture, agricultural science and development rights of agricultural legislation. Getting knowledge provide adequate training of highly qualified specialists in agricultural law.



## ECONOMICS OF ENTERPRISE

branch of knowledge

Economics and Business

course code

03050401

Form of study/training period, years

full time 1,0

part-time 1,5

externship

credits ECTS

60

licensed amount, persons

full time 75

part-time 75

### ANNOTATION OF COURSE

Training at the Faculty of Economics is carried out according to branch standards of higher education in educational and professional training program for master's field of knowledge 0305 "Economics and entrepreneurship", the developed concept of integration of education, production and achievements of domestic and foreign education and science and best practices aimed at improving the quality of training by:

- development of creative abilities through the application of modern teaching facilities, enhance students' independent work;
- increasing influence of individual training in the process of development through the application of achievements and experience of educational institutions of advanced countries;
- use active forms of education, business games, tests and modern methods in the study of subjects;
- development of educational and industrial practices, practical situations in business activity that dominate in the market economy.

Master course "Economy of Enterprise" is for training economists analysts who know perfectly organizational and productive economic activity of agricultural enterprises in various categories and forms of management, master modern information technology and can work as managers of enterprises or its subdivisions.

### EMPLOYMENT

According to branch standards for higher education the graduates from master program can do the job according to the classification of occupations SK 003:2010 and can hold primary positions: Director (chief or other leader) enterprise manager (economics) department, Head of Planning and Economic Section, Head, chief specialist of trade, agricultural, commodity and industrial markets, economist, economist with the planning, tourism marketing, head of the subdivisions of government in the region, Business Consultant, columnist on economic issues.

### Master's programs of productive type

#### BUSINESS PLANNING OF ENTREPRENEURIAL ACTIVITY IN AIC

Involves studying the theoretical aspects of business planning, nature and organization of business planning for the agricultural enterprise, the structure and content of business plans, technology development of different types of business plans; presenting expert business plan computerization process of business planning.

#### ORGANIZATION OF PRODUCTION SERVICE OF AGRICULTURAL COMPANIES

Economics and organization of production services and logistics of agricultural enterprises, which involves studying the scientific principles of organization of agricultural services, economic relations between production and service areas of agriculture, optimization of operation and strategy of companies servicing areas on the basis of modern methods and techniques.

#### SOCIO-ECONOMIC DEVELOPMENT OF RURAL AREAS

Study and research of the rural sector structure, demographic and settling base, formation of labor potential of rural areas. The program includes the following issues: rural living environment, social sphere of the village, needs, income and expenditure of the rural population, the development of forms of farming, farmers and private farms, cooperative groups, credit unions, rural tourism, etc.

#### ANALYTICAL STUDY OF STRATEGIES FOR BUSINESS ENTITIES

Provides research methodology of strategy development entities and the role and importance for the analysis and prediction, diagnosis and assessment of trends in the analyzed sites, the development of methodological approaches and practical guidelines for analytical support for strategic development of agrarian formations.

#### ECONOMICS OF AGRICULTURAL SECTOR

The system of agricultural production relations in connection with the development of ownership in the countryside are studied. We consider the criteria and indicators of development of agriculture, ways and means of rational use of the accumulated potential. The need to support innovation and investment potential of the agricultural sector of Ukraine is disclosed and justified.

#### STOCK - EXCHANGE ACTIVITIES IN AGRICULTURAL MARKET

Preparation of highly educated, professional staff with the new style of thinking who deeply understand the features of a market economy, have special knowledge and skills of organization and functioning of the exchange infrastructure necessary for the preparation and conclusion of exchange agreements, specialists who can be leaders in the exchange industry in our country and to work effectively for the development of society.

### Master's programs of research type

#### PLANNING BUSINESS IN AGRICULTURE

Planning business in agriculture, provides comprehensive optimization of operation of agricultural enterprises in accordance with the requirements of environment and development strategy that promotes the principle to improve management efficiency of production based on modern methods and techniques (methods of quality management, reengineering business processes information technology and systems, etc.).

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

Brake degradation and decline of villages (rural areas) is possible only through a complex variety of activities; including especially providing qualified local governments. The current head of the village (town) council should have appropriate professional training on industrial economic base of rural areas, local government, and social development of rural areas; have the basics of organizational economic and legal rules for the small forms of farming, establishment of social partnership and social system and labor relations.

#### ECONOMICS OF INNOVATION ACTIVITY

The scientific and methodological principles of innovation in agriculture production are studied. The condition and ways to improve organizational and economic mechanism of innovation are determined. Further areas of innovation development of agrarian sector of Ukraine are substantiated. The methodological approaches to the formation of innovative strategies of agriculture enterprises are uncovered. The mechanism for evaluating the effectiveness and risks of innovation projects in territories of priority development are revealed.



# ACCOUNTING AND AUDITING

branch of knowledge

Economics and Business

course code

8.03050901

Form of study/training period, years

full time 1,0 part-time 1,5 externship

credits ECTS

60

licensed amount, persons

full time 150 part-time 150

## ANNOTATION OF COURSE

The course "Accounting and Auditing" is preparing professionals, who using theoretical knowledge and practical skills can organize accounting, management accounting and analysis of farm business entity according to international standards to improve the efficiency of management.

Masters programs directed at advanced study theory and practice of accounting, control and audit in the sector of the economy. The important directions of these programs are targeting students individual work, development of creative activity of finding effective solutions to the problems studied, acquiring skills to study the science literature, and legislation on this theoretical basis of the ability to critically evaluate the organization of your process, control and analysis of specific enterprises, to develop adequate proposals to improve economic accounting work.

Theoretical knowledge of accounting, control, audit testing must be approbated directly to specific companies. Master's programs are providing advanced study achievements of science and of best practical training, IT technologies that provide a high level of theoretical and practical training of students.

Production practice is forming professional practical knowledge of accounting, audit, analysis, professional skills in future graduates and ability to work excellent at choosing position.

Implementation of research into practice, realization of the ability to think creatively and to analyze the processes of accounting, control and revision is the urgent problem of training of scientists, which corresponds to the current system of training in NUBIP of Ukraine.

Formation of a new type of modern economic thinking is aimed to develop initiatives, to increase activity, to search for ways to improve people's life in a market economy.

## EMPLOYMENT

According to industry standard of higher education after the graduation alumni receive master's degree on "Accounting and auditing" can take a position according to the classification of occupations SK003: 2010 and can hold primary positions of chief accountant, chief cashier, chief inspector, head cashier, head of the guild accounting, head of control and revision department, chief of centralized accounting, auditor, accountant, accountant auditor, scientist.

## Master's programs of productive specialization

### 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 such as: securities transactions, bill transactions, non-cash payments, leasing, interbank payments, income and expenses of the banks, the 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.

Program objectives are to convey to students the economic content of financial and business transactions and to teach them using the accounting and audit 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 allows to identify quickly weaknesses in the management of the bank, that financial accounting, analysis and internal audit are tools of the bank; to learn accounting methods and procedures for financial accounting of basic bank transactions, to learn user 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 THE MANAGEMENT OF AGRICULTURAL ENTERPRISES

The program includes the study of trends and patterns of accounting registration in Ukraine during its reformation according to the principles of international standards and requirements of the Institute of European integration methods and accounting organization such as: non-current and current assets, equity capital, long-term and current biological assets, long-term and current liabilities, settlements with the tax system, the costs and revenues by activity, financial reporting, management accounting and cost calculation of production in agriculture, animal husbandry, subsidiary production, control, audit and analysis of objects of assets, liabilities and processes activities using computer technologies.

### ECONOMIC CONTROL OF ENTITIES IN AGRICULTURAL PRODUCTION

The program includes research of system of economic control and its reforming directions, the 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 results and control test, implementation of audit and inspection of materials and procedure for compensation of material damage.

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

The program includes the research of 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, especially the accounting and control of property funds and accounts, the use of IT technologies in accounting and control of budgetary organizations.

## Master's programs of research specialization

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

The program includes the research 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 and legal and accounting expertise of the farms, adaptation of international standards of accounting and auditing, IT technologies in accounting, auditing and analysis.

Main accent of research as priority of the organization and methods of control will provide a significant increase of quality of young professionals in the accounting, analysis and audit, that will be highly demanded and will help to build a market economy in Ukraine.





## FINANCE AND CREDIT

branch of knowledge

Economics and Business

course code

B.03050801

Form of study/training period, years

full time 1,0 part-time 1,5 externship

credits ECTS

60

licensed amount, persons

full time 150 part-time 150

### ANNOTATION OF SPECIALITY

There is a master program in "Finance and credit". Using special knowledge in banking system, accounting and analysis of the tax system graduates can manage the financial flows of enterprises of all forms of ownership and different organizational and economic structures. There is the possibility of employment in financial and credit institutions, insurance companies, tax inspections.

Master's program aims at deepening the learning 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, the development of creative activity of finding effective solutions to the problems studied, and acquiring skills to read the scientific literature, legislation and on this basis, the ability to form internal and external financial relationships, effectively use the financial management, successfully apply the methodological tools of financial management.

Training for Master's program provides market with professional that can independently make effective decisions regarding the provision of financial services to entrepreneurs in finance.

### EMPLOYMENT

According to industry standards of higher education after the graduation students receive a master's degree in "Finance and Credit" and they are able to pretend the position according to the classification of occupations DK 003:2010 and could hold such primary positions as: Director (chief or other head) of the company, the chief of financial department, professional to register of holders of securities professionals on corporate governance, professional securities trading, research fellow (financial and economic security of enterprises, institutions and organizations), analysis of financial and economic security, compliance officer of the bank (branch bank, other financial institutions), investment analyst, analyst with credit, an economist with taxes, tourism marketing, economic adviser.

### Master's programs of productive type

#### BANKING SERVICE OF AGRICULTURAL ENTERPRISES

Program about banking service in agriculture, formation of the students' theoretical and practical knowledge on the organization of banking activities in services and agricultural enterprises of the future professionals of finance and economic knowledge of the features of banks with enterprises of the agricultural sector.

#### CORPORATIVE FINANCE

This program is for preparation of finance professionals in the agricultural sector, for the formation of students' skills in cash management, analysis of financial statements, inside of corporate forecasting and planning methods of mastering complex evaluation of financial situation, financial risk management.

#### INSURANCE BUSINESS

The preparation of Master of the insurance business includes: the theoretical knowledge and practical skills of risk management of agricultural enterprises, the use of insurance for the timely neutralization of their negative impact on business enterprise, the definition of financial stability and soundness of the insurer; calculation of insurance rates, calculate the amounts of insurance policyholders and insurance them. Graduates work in insurance companies as a manager in the insurance industry.

#### EXCHANGE STOCK MARKET ACTIVITIES

The main task of the Master's program is to train professionals in finance for the stock market of Ukraine. In addition to performing the functions of employees of financial services to exchanges, graduates of master's program should possess the skills to conduct stock trading financial instruments both on the domestic markets and in global trade networks. Thus, conceptually this master's program provides staffing segment of the financial exchange market commodity and stock market financial instruments.

As a result of studying this Master's program students should know: 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.

Students should learn to: organize relations between firms and various financial institutions and exchanges brokers, stock transactions determine effectiveness of transactions, successfully use stock information in their work.

### Master's programs of research type

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

This program is for training specialists of scientific direction, engaged in research of bank activity in relation to servicing enterprises of agricultural sphere.

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

This program is for training of finance professionals in the agricultural sector and scientific institutions of Ukraine, the formation of coherent imagination to the process of scientific research in any field of human activity, including financial, economic, and practical skills in the correct application of certain methodological approaches for obtaining new knowledge.

#### THEORETICAL AND METHODOLOGICAL BASES OF AGRICULTURAL INSURANCE COMPANIES

Preparation of Master of insurance coverage of agricultural enterprises involves obtaining fundamental knowledge concerning: the essence of insurance management, its functions, methods and tools, the formation of agricultural insurance mechanisms of state support of insurance in the agricultural enterprises, priority of insurance coverage

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



# TAXATION

branch of knowledge

Economics and Business

course code

8\_03050803

Form of study/training period, years

full time 1, 0  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 the taxes. The current tax system of Ukraine is not quite perfect and not fully meets the requirements of time, causing the need to reform. This requires training, with deep theoretical and practical knowledge that can summarize the experience of countries with developed economies, develop an action plan to improve the tax system.

Education Masters in "Taxation" oriented to train qualified personnel for the tax authorities and to prepare financial corporate mergers agricultural sector to manage tax liabilities.

In the process of vocational training students receive theoretical knowledge on the activities of tax authorities and their management functions, advanced methods and tools tax management. In the course of practical training at university and in state tax inspections masters acquire practical skills in tax administration with businesses and individuals, working with professional computer programs and mutually beneficial relations of tax from taxpayers.

## EMPLOYMENT

According to industry standards for higher education the graduates receive a master's degree in "Taxation". They can work according to the classification of occupations DK003: 2010 and can hold primary positions: head of financial or economic unit, the head of small enterprises in agriculture, finance manager, inspector of tax service, inspector of customs, state tax auditor-inspector, consultant fees and taxes, research worker.

## Master's programs of productive type

### TAXATION OF AGRICULTURAL ENTERPRISES

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 the taxes. The current tax system of Ukraine is not quite perfect and not fully meets the requirements of time, causing the need to reform. This requires training with deep theoretical and practical knowledge may generalize the experience of countries with developed economies, develop an action plan to improve the tax system. Therefore, the main tasks of master's program is getting the basic theoretical and practical knowledge of: taxation of business entities, tax planning and forecasting, tax optimization, its methods and techniques in the 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 tax administration with businesses and individuals to prepare qualified for the tax authorities and corporate associations of agricultural and processing sectors.

List of specialist knowledge and skills after mastering this program:

- Self-assess the amount of taxes to be paid to the budgets, tax reporting form and check the correctness of its completion;
- Identify the most efficient tax system for taxpayers;
- Develop and implement tax strategies at the enterprise level;
- Make planning of tax payments of company, providing neutralizes and reduce their negative impact of taxation on enterprises;
- Analyze the effectiveness of tax policy of the company and develop methods to optimize and minimize tax payments legitimate methods;
- Manage the process of taxation and to ensure effective enforcement of tax laws.

Training for Master's program "Taxation of agricultural businesses" provides training that can independently make effective decisions to manage tax payments business and tax forms of the modern generation of workers.

## Master's programs of research type

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

At the present stage of development of Ukraine specialists in taxation should have theoretical bases of taxation of legal entities and individuals, to 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 charge and tax purposes and organizing tax work, and be able to develop tax policy in the company, aimed at optimizing the tax legally and make tax reporting.

Therefore, the main tasks of master's program is a fundamental theoretical knowledge and practical skills for the formation mechanisms of the business entity tax, tax planning and forecasting of analytical work to identify specific factors affecting the functioning of the tax system, a comprehensive assessment of the tax system, identifying reserves efficiency of the tax; quantitative and qualitative characteristics of the processes taking place in the country and specific sectors, tax regulation as part of the state fiscal management, and learning practical steps of planning the budget revenues of the state, regions and tax reasons.

List of specialist knowledge and skills after mastering this program:

- Self-assess the amount of taxes to be paid to the budgets, tax reporting form and check the correctness of its completion;
- To tax analysis to find reserves to enhance the functioning of the tax system;
- Evaluate the effectiveness of taxation as in the whole country, and in the agriculture economy in particular;
- Explore the trends in economic development to the assessment of progress and find resources needed to increase the efficiency of active fiscal policy;
- Assess the socio-economic impact of tax regulations in order to better decision making and management a rational system of taxation.

Training for Master's program "Theoretical and methodological principles of taxation and tax regulation" provides training that can independently carry out research work in the field of taxation, to make effective decisions in the functioning of the state fiscal management.



# INTERNATIONAL ECONOMIC ACTIVITY MANAGEMENT

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

90

licensed amount, persons

full time 150  part-time 150

## ANNOTATION OF SPECIALITY

Specialists received degree in "International economic activity Management" can work as managers of joint ventures and business units, heads of departments, consultants for the development of international activities and management of international payments business, work as customs brokers to carry out international market research and provide product promotion in international markets.

As a result, masters can make planning and forecasting activities of the subject of foreign economic activity (unit) prediction of the dynamics of demand for import-export products, the development and study of trends and market expansion of companies, an effective management decisions during foreign economic activity; organize foreign economic activities of the entity to achieve its mission, manage the quality and competitiveness of domestic products on world markets, the organization of business in international markets, monetary and financial management of foreign economic activity, the organization advertising the subject of foreign economic activity; image formation on the external market monitoring of foreign operations, the reporting of foreign trade.

Learning the course involves the use of many forms of learning, including lectures, seminars, workshops and self-study, attending joint ventures and representative offices of international organizations. Most of the workload assigned to study professionally oriented subjects on the basis of modern educational technologies with interactive teaching techniques (role-playing, production situation, case-study, etc.).

## EMPLOYMENT

Managers of business affairs and management (manager of the foreign economic activity), managers in other types of economic activity, experts in marketing, entrepreneurship and streamline the efficiency of production (Expert Foreign 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).

## Master's programs of productive type

### INTERNATIONAL BUSINESS MANAGEMENT

The main objective of master's training is that the fundamental economic and management training; to give students the possibility to acquire depth concrete economic and managerial knowledge and applied skills and abilities.

The program provides a combination study of business disciplines in the global context of understanding the specific cultural and social processes in different countries. Graduates are prepared for management work, which is important to consider the economic and cultural diversity of the real subjects of the market. In addition to fundamental knowledge in the field of foreign graduates acquire skills in market analysis, decision making, and the project activity. In addition, they will be able to understand the characteristics and peculiarities of other cultures, allowing them to work in different countries in a multinational, multicultural environment.

Attention is paid to the ways of entering the foreign market and the factors influencing the choice of contractors in foreign operations. The nature of market relations and provides flexibility to quickly respond to future specialist constantly changing external conditions. It is designed for students who plan a career in international business.

### INTERNATIONAL COMMERCIAL ACTIVITY

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

It contains a series of courses that include a variety of organizational and technical aspects of foreign commercial transactions, 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 offered the most important discipline, knowledge of which form the future of international economists. The program for masters built according to the current trends in international commercial and regulatory activities. Thus, great importance is attached to the problems of Ukraine entering the foreign market. They should consider taking into account the general economic situation of Ukraine and the agrarian economy, in particular, the characteristics of international business and place of Ukraine in international commercial relations.

It will be useful to all those who study about the practical arrangements for international economic activity, but also get profound and systematic knowledge in the specialty. The program will be useful for employees of business and for civil servants.

## Master's programs of research type

### RESEARCH OF WORLD MARKET SITUATION OF AGRICULTURAL MARKETS

The training of 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.

Task of this master's program is that students continue in-depth study of basic fundamental economic subjects, but focuses on training in a particular field of economic and managerial knowledge.

One of the main goals of this type of master's program is to learn students' analytical thinking and skills in research and teaching activities. In this context, research work for future professionals is an integral research department of the world's agriculture department.



# MANAGEMENT OF ORGANIZATIONS AND ADMINISTRATION

branch of knowledge

Management and Administration

course code

8.03060101

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 who have received master degree in "Management and administration" can work as managers at all levels of management, production specialists, logistic, economic, personnel and other functional departments. As a result, masters can perform as a systematic analysis of the organization, planning and forecasting activities of the organization (unit) planning needs resources (material, financial, labor), forecasting the dynamics of demand, the formation of the optimal product mix; combination of all kinds of resources and organization of collective labor to achieve the mission, organization and rationalization of jobs, the organization of administrative decisions; develop strategic directions of the organization, ensuring its competitiveness, develop and implement innovations, enterprises organize business contacts with the environment, manage the quality and competitiveness of products, to develop effective systems of motivation and remuneration. Good studying of the course involves the use of many forms of learning, including lectures, seminars, workshops and self-study, visit businesses and organizations. Most of the workload assigned to study professionally oriented subjects on the basis of modern educational technologies with interactive teaching techniques (role-playing, production situation, case-study, etc.).

## EMPLOYMENT

Managers of production units in commercial service (chief administrator), senior employees of the central government (head unit), senior staff workers of local government (chief specialist, head of Department, Head of Service), the heads of other major units in other areas (chief Inspector, Deputy head), managers of small businesses without staff (deputy chairman), managers of business and management (manager of public relations, advertising manager, HR manager, manager of administration), managers in other kinds of economic activity, economists (economist treaty and pretentious works, economist, adviser, consultant on economic issues, a columnist on economic issues, an economist with logistics), assistant managers.

## Master's programs of productive type

### MANAGEMENT OF STRATEGIC DEVELOPMENT OF COMPANY

Preparation of this program is important due to the fact that the transition to new models of innovation and strategic development of organizational units requires systemic changes in the business of strengthening their strategic orientation towards expansion to provide dynamic competitive sustainability of the operation. The program provides training for management activities and staffing in large commercial units and integrated services union organizational and strategic development activities that provides a comprehensive diagnosis of organizational systems, implementation of innovative approaches, through proactive crisis management system by creating an effective institutional mechanism to ensure the functioning subjects of corporate interaction.

### MANAGEMENT IN THE MARKET OF GOODS AND SERVICES

The essence of this program is that students master for the period of study should examine the characteristics of management in relation to market goods and services. The current situation shows that it is not enough of qualified personnel on the market of commercial products in Ukraine. The program includes study of the infrastructure components of the commodity market, managing a variety of market structure, market pricing system, security risks in the market of goods and services, the operation of trade and logistics organizations in the agribusiness and others.

### QUALITY MANAGEMENT

The program of training is to build a quality management system with the goals and policies in the information management quality, methodology and analysis of indicators of quality improvement processes functioning quality assurance system. Students of the program acquire complex knowledge of basic principles, categories, methods and tools of quality management in modern companies, advances the theory and practice in quality management, and construction management of quality that would meet the requirements of international standards.

### MANAGEMENT IN THE SPHERE OF ECONOMIC COMPETITION

The study of theoretical aspects of management in the field of economic competition is a the basis of this program. Need in training for management in economic competition is caused by increased competitive pressure on the business structure that requires a systematic approach to the formation of comprehensive measures to ensure competitiveness, competitiveness and competitiveness of enterprises.

### INFORMATION AND CONSULTING ACTIVITIES IN AGROINDUSTRIAL COMPLEX

This program is for training professionals in information and advisory activities that can use modern methods of forming advisory and organize, develop and evaluate programs and provide advisory services.

### RURAL GREEN TOURISM

The need of this program is due to the fact that rural green tourism in Ukraine and the world is becoming more popular. Anthropogenic pressure on the human body, especially in large cities, in the form of their residents desire to "break out of nature" where a person wants to have fun. So urgent is the need for specialists in recreation in the countryside in hospitable houses - agro dwellings. The program aims to study the theoretical and methodological and practical issues of green tourism in Ukraine and the world, its regulatory mechanism, economic, environmental and social aspects of activity, will provide knowledge management, marketing and organization, definition of quality and certification of agro homes and market tourism region and state.

## Master's programs of research type

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

The program of training of the formation and functioning of the management entities to market products and services focused 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 performance management functions based on the latest theories of government. Studying the theory and methodology of scientific creative research in addressing management issues of business and agriculture organizations will allow the students to achieve significant results of industrial activity and their effective functioning.



## MARKETING

branch of knowledge

Economics and Business

course code

B\_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

Marketing specialists are working in the fields of marketing, advertising, logistics, research and forecasting, international marketing and trade, they can work as managers of large and small companies or successfully develop their own business. Masters can make the formation of a market strategy of the enterprise, providing competitiveness of enterprises, the development perspective, current and operational plans of the enterprise, the organization of transport services of foreign economic activity, the organization of transport systems such as "just-in-time", "door-to-door," etc., the organization of the company in a volatile environment, assessment of factors risk in the implementation of marketing activities, measure of its size, and manage their insurance company image formation, public opinion and increase the effectiveness of marketing, the use of modern information technologies for support of marketing activities and more. Good mastery of specialty involves the use of many forms of learning, including lectures, seminars, workshops and self-study, attending marketing departments of various companies and market institutions. Most of the workload assigned to study professionally oriented disciplines on the basis of modern educational technologies with interactive teaching techniques (role-playing, production situation, case-study, etc.).

### EMPLOYMENT

Head of units material and technical supply, managers of small businesses without the apparatus of a commercial service, pricing economist, an economist with international trade, public sector services and marketing specialist in marketing, a specialist public relations and media relations, research officer (marketing), head of marketing, head of advertising and public relations manager of public relations, advertising manager.

### Master's programs of productive type

#### LOGISTICS

The need for such a program due to the integration and globalization of economic processes and structures based on the information society pushes to implement a recognized practice of developed countries, logistics management, which provides a synergetic effect, resulting mutually links stream processes along entire chain of commodity circulation.

The program aims to train specialists in the field of marketing logistics, capable of competently, professionally and responsibly carry out the basic logistics functions to facilitate the effective promotion of products from producer to consumer, introduce new organizational and economic technology in marketing. The program provides management training highly qualified, capable of creative professional activity and application of innovative methods in the field of logistics.

#### ADVERTISING MANAGEMENT

The need for a detailed study of features of the advertising business in modern conditions of reforming Ukraine's economy due to an urgent need to intensify promotional activities at the domestic enterprises by enhancing competition, first of all with foreign producers. Under the program provides training of management promotional projects, organizations and management of advertising the project and its implementation. Its goal is to familiarize students with modern communications technology, 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 that are able to competently, professionally and responsibly perform the basic functions of business, with all existing marketing tools promote goods from producer to consumer, introduce new organizational and economic technology in marketing. The need to improve and adapt methods of marketing management business of an enterprise in sales, development of methodological and practical areas of applications determine the main elements of the content of this master's program. In particular, we study: the concept and tools of marketing, satisfaction of consumer demand different categories of population, the growth of sales through effective utilization of industrial capacity, 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.

#### INTERNATIONAL TRADE

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

### Master's programs of research type

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

The program of training that can, based on new methodological approaches to marketing activities, develop strategic plans and recommendations for creating and implementing marketing programs, increase the competitiveness of market actors in strengthening the impact of international competition.



## SOCIAL PEDAGOGY

branch of knowledge

Pedagogical Education

course code

8.01010601

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 course "Social pedagogy" work in social and educational help centers, provide support, protection and rehabilitation of all categories of children and youth. Professional activities of specialist provides solution for industrial areas in the study of social and educational problems of socialization of children and young wards, of their public defense of advice on social and educational issues of their leisure time, assist in the education of persons who have this direct ratio.

Preparation of Masters foresees the creation in their knowledge, skills, personal and professional qualities that allow for professional features and perform tasks 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 training clients in entertainment, assist in the process of education;

Implementation of information and education programs, development and implementation of public service announcements;

- The teaching of social and educational courses in schools;
- Organization of social and educational research.

### EMPLOYMENT

After graduation graduates receive a state diploma of higher education with obtaining the profession "Social educator" allowing to work on the following positions: Inspector pensions; researcher (social protection, social sphere), teacher-methodologist , instructor, research assistant (in other fields of study), lecturer, teacher professional educational institution, methodologist. State Inspector, head centers, associations, clubs, director of social services and centers of specialized consultant services centers; researcher, analyst.

### Master's programs of productive type

#### SOCIAL AND PEDAGOGICAL ACTIVITY IN RURAL AREAS

The need for training of social workers in rural areas is due to unacceptably low levels of social development of rural children. These problems require increased psychological characteristics influence technology socio-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 above program includes the study of complex subjects to the organization of professional social and educational work aimed at social and educational assistance, support, protection and rehabilitation of rural children and youth. The resulting qualification provides for employment of graduates 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, game and festival, themed weeks, holidays, contests, shows, exhibitions, tours, interactive theaters, charity events, clubs and fairs.

Training in "social education" carried out in areas of theoretical and practical training focused on the harmonious combination of classroom hours and work directly on the bases of practical training that enables graduates to adapt to the place of future employment undergraduates studying complex subjects, conduct 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 works.

Contents of training menus in the study cycle disciplines of humanitarian and social and economic study (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), cycle 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) cycle disciplines 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 cycle courses chosen by the University (information technology in education, methods of social and pedagogical training, culture and broadcasting business communication, organization of various social groups) and students (advertising and information technology in social, management of social and educational work, professors).

### Master's program of research type

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

Specificity of Vital Functions of rural community, its dynamism, a certain ambivalence actions and behavior, allows to investigate a wide range of issues as "internal" purely secular and psychological as well as "external" - the social context of existence of different social groups.

Contents of this master's program include research, study, development, implementation and expert evaluation of the relevant instruments of socio-pedagogical monitoring of social groups.

Monitoring provides all participants of educational process quality information necessary on the one hand, to evaluate the work, on the other for management decisions, adjusting the process under investigation.

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

High-quality support 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

90

licensed amount, persons

full time  50  part-time  50

## ANNOTATION OF SPECIALITY

Specialty "Administrative Management" focused on training professional managers capable of managing agribusiness based on possession deep professional knowledge and skills with modern computer technology, innovation and knowledge in foreign languages. Experts have the right to occupy leading positions in 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 manager and most prestigious in the world of business education program. Specialty provides management training a new generation of higher-level, competitive labor market, capable of creative professional and innovative methods of managing in a global competition, providing students integrated system of knowledge that combine 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 is 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.

## EMPLOYMENT

Managers of production units in commercial service (chief administrator), senior employees of the central government (head unit), Chief of Staff of local authorities (chief specialist, head of Department, Head of Service), the heads of other major units in other areas (main inspector, deputy director of counseling, Deputy Head), managers (managers in agriculture, hunting, forestry and fisheries), managers in other types of economic activity, assistants leaders.



## Master's programs of productive specialization

### ADMINISTRATIVE MANAGEMENT AND MARKETING IN THE SYSTEM OF AGROBUSINESS

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

### MANAGEMENT OF DEVELOPMENT OF AGRICULTURAL BUSINESSES

Training program for managing the effective production of agricultural business entity through the introduction of intensive technologies, reduce costs and increase economic efficiency.

### INNOVATIVE MANAGEMENT IN AGROINDUSTRIAL COMPLEX

The program intended to the training a new generation of senior managers, competitive labor market, capable of creative professional and innovative methods of managing in a global competition.

### ENVIRONMENTAL MANAGEMENT IN AGROINDUSTRIAL COMPLEX

The program intended to study information about environmental management in the agricultural domain, environmental standards and certification, quality management mechanism through the harmonization of the "nature-society" and theoretical and methodological principles of management.

### ENERGY MANAGEMENT

This program of training is for energy management service companies in the system, technical diagnostics of power equipment, organization design objects agricultural energy.

### ENGINEERING MANAGEMENT

There program is about 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 of training is 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.

### LAND MANAGEMENT

The program of training is for land management, land use and land-based legislation and with the state machinery and land management technologies.

Organization of Management in Veterinary Medicine

The program of training for quality management and safety of animal products, management and marketing in veterinary medicine, veterinary service organizations and private veterinary practice, risk analysis in food production.

### ORGANIZATION OF MANAGEMENT IN VETERINARY MEDICINE

The program of training specialists for managing quality and safety of animal products, management and marketing of veterinary medicine, organization of veterinary services and private veterinary practice, risk analysis in producing food.

### MANAGEMENT IN PLANT PROTECTION

There is the program of training for management and marketing for the protection of plants by feasibility of their use, research methods and means of agrochemical service and taking into account phyto and sanitary rights and international cooperation in plant quarantine.

### MANAGEMENT OF COMPANIES (enterprises) OF PARK GARDENING ECONOMY

There is the program of training 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 of training is for management of state forestry enterprises using spatial analysis of forest sites, PS-mapping forest enterprises and long-term monitoring of forest ecosystems.

### MANAGEMENT IN CROP FIELD

### MANAGEMENT IN HORTICULTURE. VEGETABLE IN OPEN SOILS AND GREENHOUSES

### MANAGEMENT IN THE PRODUCTION AND PROCESSING OF PIG PRODUCTS

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

### MANAGEMENT IN DAIRY CATTLE

### MANAGEMENT IN THE PRODUCTION AND PROCESSING OF BEEF

### MANAGEMENT IN THE POULTRY INDUSTRY

### MANAGEMENT IN THE PRODUCTION AND PROCESSING OF BEEKEEPING PRODUCTS

### MANAGEMENT IN PRODUCING AQUACULTURE PRODUCTS (by types)

Programs of training 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

B.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

Integration of Ukraine into the World Trade Organization requires 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 the training students receive 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. Major issues focused 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 industry standard of higher education in Ukraine Masters are qualified as an expert on standardization, certification and quality and therefore of professions Ukraine (DK 003:2010) may occupy the following positions: head of the organization (business unit) standardization, certification and quality management; expert on standardization, certification and quality management as a quality engineer (leading, I category) engineer for standardization (leading, I category).

### Master's programs of productive type

#### 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 the training students receive the 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. Attention is paid to quality management of agricultural equipment in crop and livestock.

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

It examines 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 includes study of 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 includes the study of 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 masters to study 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.





## PEDAGOGIC OF HIGHER SCHOOL

branch of knowledge	course code	
<b>Specific Categories</b>	8.18010021	
Form of study/training period, years	credits ECTS	licensed amount, persons
<input type="checkbox"/> full time 1,5 <input type="checkbox"/> part-time 2,0 <input type="checkbox"/> externship	90	<input type="checkbox"/> full time 75 <input type="checkbox"/> part-time 75

### ANNOTATION OF SPECIALITY

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

The professional activity of the specialist under the profession of 'Pedagogic of higher school' provides for resolving the production problems in the directions of organization of educational process in colleges and technical colleges, organizing the methodical and scientific work. Such specialist can to hold the various actions, realize the educational and training activity and to promote the social development of youth, which study in the EHE. The main functions of the professional activity are the planning, organizing and executive ones.

Training of the holders of master's degree provide the forming of knowledge, abilities and skills, personal and professional qualities, which allow to realize the professional functions and execute the proper tasks of activity:

- planning and organizing of the educational activity of students concerning the studying of discipline of the professional and practical cycle;
- planning and organizing of the training of students in lecture's rooms and out of it;
- preparing the methodical supply for the educational and training process, organization of the material base of EHE;
- planning and organizing of the scientific and pedagogical researches in the establishment for higher;
- improving of own pedagogical skill.

### EMPLOYMENT

After graduating the students get the diploma of the state standard about the obtaining the qualification of the lecturer of the establishment for higher education that allows to occupy such posts as: assistant, lecturer of establishment for higher education of different accreditation standards (colleges, technical colleges, higher schools, institutes, universities, academies).

Annually near 120 of establishment for higher education of Ukraine fill up its staff with graduating students of



### Master's programs of productive type

- Studying methods of agrochemistry and pedology disciplines cycle**
- Studying methods of botany and recycling of plants production disciplines cycle**
- Studying methods of vegetable and fruit growing disciplines cycle**
- Studying methods of ecological disciplines cycle**
- Studying methods of fish culture and aquaculture disciplines cycle**
- Studying methods of technology of production and recycling of animals production disciplines cycle**
- Studying methods of system of land tenure disciplines cycle**
- Studying methods of forestry disciplines cycle**
- Studying methods of garden and park economy disciplines cycle**
- Studying methods of finances disciplines cycle**
- Studying methods of economics of enterprise disciplines cycle**
- Studying methods of accounting disciplines cycle**
- Studying methods of cycle on management of organizations disciplines**
- Studying methods of cycle on social and pedagogical disciplines**
- Studying methods of cycle of disciplines on constructing the machines for AIC**
- Studying methods of cycle of disciplines on mechanization of agriculture Studying methods of cycle of disciplines on electrification and automation of agriculture**
- Studying methods of cycle of veterinary disciplines**
- Studying methods of cycle of juristic disciplines**
- Studying methods of cycle of disciplines on woodworking industry**
- Studying methods of cycle of disciplines on transport technologies Studying methods of cycle on plants protection disciplines**
- Studying methods of cycle of disciplines on selection and seed growing Studying methods of cycle of informational technologies disciplines Studying methods of cycle of food technologies and engineering disciplines**
- Studying methods of cycle of disciplines on biotechnology**
- Studying methods of cycle of disciplines on construction**

The content of the master's degree programs was formed on the basis of received results 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 in the EHE. Received results were realized in the educational plan of training of the specialist with purposeful emphasizing of disciplines cycle over the student's choice. This plan is included to the list of studying methods on the direction of basic education. It allows to student to choose the studying of those or another methods, disciplines of which he has to teach in the future, at his own. Students choose the methods accordingly to the needs of regional EHE, where they are going to work. Materially, in this part are took into account the regional needs of EHE in specialists of certain specialization, traditions and achievements of scientific schools of these educational establishments.

The mentioned master's degree programs provide the mastering by the future specialist of complex of educational disciplines for the organization of professional 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 of professional 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 "Pedagogic of higher school" is directed to the realization of efforts concerning the organization of effective perceptual activity of students with the orientation point to the forming of creative potential of the specialist, developing of his intellect, maximum realization of personal capabilities, forming the moral and ethical culture, national consciousness, interests, habits, motives and values, and it provides:

- ? direction of the education to the science in its development (student masters 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 the scientific work;
- the unity of scientific and educational content, which provides the role of lecturer as the scientist (the specialist become not only the organizer of students' studying, but also the active researcher in that field, discipline of which he teaches);
- the through professional direction- all educational disciplines are oriented on the future profession of the lecturer;
- UNITY and the optimal correlation of theoretical and practical training of the specialists;
- ? humanistic direction of the educational process, introduction the personal approach as the basic value, which determines the character of interaction of the lecturer and the student.

## MANAGEMENT OF THE EDUCATIONAL ESTABLISHMENT

branch of knowledge

Specific Categories

course code

8.18010020

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

Students of the course "Management of the educational establishment" realize their work in the educational establishments of different types. Training of students provides the forming of their knowledge, abilities and skills, personal and professional qualities that allow to realize the 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 of activity 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;
- management of educational and economical activity of the educational establishment, control after the executing of planned tasks;
- forming the regular policy of educational establishment and contingent of students.

### EMPLOYMENT

After graduating the students get the diploma of the state standard about obtaining the qualification of the manager of establishment and organization (in the sphere of education and industrial education) that allows to work on such posts as: director (rector, superior) of establishment for higher education; director (superior) of professional educational and training establishment; director of advanced training courses, out-of-school establishment, preschool educational establishment, educational and industrial complex, educational (educational and training) center, educational center (branch), director of school (higher sport mastery, specialize children's and youthful, sport and technical etc.), superior (college, advanced training courses, educational center, school); dean; manager (postgraduate study, candidate of sciences study, intern study, educational and scientific basis, kindergarten, educational cabinet, department, courses, laboratory (education), out-of-school establishment); superior of educational center, supervisor of students' projected and constructed (research) office; manager of the department, section, center, sector.

### Master's programs of productive type

#### MANAGERIAL ACTIVITY IN THE EDUCATIONAL ESTABLISHMENTS OF THE GENERAL EDUCATION

The program provides for future specialist mastering of complex of educational disciplines on planning and organization of activity of establishment of the general education, supervision of educational and training activity of establishment of the general education, control after the executing of planned tasks, forming of regular policy of establishment of the general education and contingent of persons that study there.

Training of the specialist is realized in the directions of organization of theoretical and practical education, which are oriented on the harmonic combination of work in auditorium and 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 the manager of establishment of the general education is directed to realization of efforts concerning organization of effective and perceptual students' activity, oriented to form the creative potential of the specialist, development of his intellect, maximum realize the personal abilities, moral and ethic, culture and national consciousness, interests, habits, motives and values.

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

The program provides for future specialist mastering the complex of educational disciplines on planning and organization of activity of professional and technical educational establishment, management of educational, training and economic activity of professional and technical educational establishment, control after the execution of planned tasks, forming of regular policy of professional and technical educational establishment and contingent of persons that study there.

Training of the specialist is realized in the directions of organization of theoretical and practical education oriented on the harmonic combination of work in auditorium and 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 the manager of professional and technical establishment is directed to realization of efforts concerning organization of effective and perceptual students' activity, oriented to form the creative potential of the specialist, development of his intellect, maximum realize the personal abilities, form the moral and ethic culture, national consciousness, interests, habitudes, motives and values.

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

The master's degree program provides for the future specialist mastering of complex of educational disciplines on planning and organization of activity of the establishment for higher education of I-II accreditation levels, management of educational, training and economic activity of the establishment for higher education of I-II accreditation levels, control after the execution of the planned tasks, forming of regular policy of the establishment for higher education of I-II accreditation levels and contingent of persons that study there.

Training of the specialist is realized in the directions of organization of theoretical and practical education, oriented on the harmonic combination of work in auditorium and 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 the manager of professional and technical establishment is directed to realization of efforts concerning organization of effective and perceptual students' activity, oriented to form the creative potential of the specialist, development of his intellect, maximum realize the personal abilities, form the moral and ethic culture, national consciousness, interests, habitudes, motives and values.

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

The master's degree program provides mastering by the future specialist of complex of educational disciplines on planning and organization of activity of the establishment for higher education of III-IV accreditation levels, management of educational, training and economic activity of the establishment for higher education of III-IV accreditation levels, control after the execution of the planned tasks, forming of regular policy of the establishment for higher education of III-IV accreditation levels and contingent of persons that study there.

Training of the specialist is realized in the directions of organization of theoretical and practical education, oriented on the harmonic combination of work in auditorium and 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 the manager of professional and technical establishment is directed to realization of efforts concerning organization of effective and perceptual students' activity, oriented to form the creative potential of the specialist, development of his intellect, maximum realize the personal abilities, form the moral and ethic culture, national consciousness, interests, habitudes, motives and values.



# ERI OF CONTINUING EDUCATION FACULTY OF QUALIFICATION IMPROVEMENT AND RETRAINING OF AGRICULTURAL AND NATURE PROTECTION SPECIALIST STATE SERVICE

branch of knowledge <b>State Administration</b>	course code <b>8.15010005</b>
Form of study/training period, years <input checked="" type="checkbox"/> full time <b>1,0</b> <input checked="" type="checkbox"/> part-time <b>1,5</b> <input type="checkbox"/> externship	credits ECTS <b>69</b>
	licensed amount, persons <input checked="" type="checkbox"/> full time <b>50</b> <input checked="" type="checkbox"/> part-time <b>150</b>

## ANNOTATION OF SPECIALITY

Educational and professional master program in "State Service" is subordinated to the tasks of forming of new generation of government employees and officials of local government, of appropriate educational and qualification level, in Ukraine.

The program is built on the priorities of professional training of highly qualified responsible staff for the state management of AIC and local government that 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. The program is based on the ideology of introduction of public administration in Ukraine according to the political, economic and social European standards, especially the standards of public services. Education 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.

Educational process provides the teaching of such disciplines connected with mastering by audience of master programs of complex knowledge on state management, government post, agrarian policy, and psychology of management, social and humanitarian policy of AIC, social and economic development of rural areas.

## EMPLOYMENT

After graduating all Masters of the course "State Service" are placed for job in state jurisdictions and local government administrations.

Direction of the educational and scientific institute of after graduating education of NULES of Ukraine the dean's office holds the connections with state jurisdictions and local government administrations, where graduates can be placed for job.

Permanent communication with graduated students and their employers gives the ability to perfect the training of masters of the course "State Service" and make it according to the demands of market in this sphere.



## Master programs of productive type

### SOCIAL AND ECONOMIC DEVELOPMENT OF RURAL AREAS AND SELF-MANAGEMENT OF TERRITORIAL COMMUNITIES

The program directed at giving appropriate professional qualities to the chair of rural council, basing 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.

### STATE CONTROL OF AIC

The program is built on the priorities of professional grounding of highly qualified responsible staff for the state management of AIC and local government, 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 OF ORGANIZING AND LAW SUPPLY IN AIC

The program is directed at giving of the special knowledge, abilities and skills concerning the organization and management of activity of legal service in 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.

### STATE MANAGEMENT IN THE SECTOR OF USING AND QUARDING OF SOIL

The program is directed at training of the specialists of state management on soil resources, system of land tenure, soil guarding and control after it's using, who can competently execute the leading official functions of officers, with introducing into the life the state policy in the sphere of soil relations.

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

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

### MANAGEMENT OF FOREST ECONOMY

The program is directed at 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 GARDEN AND PARK ECONOMY

The program is directed at 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 SUPPLY OF AIC

The target of the master's degrees program consist in the training of specialists of state management of AIC 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.

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

The program is directed at giving of special abilities and knowledge of innovative character on state management of the sector, which supply the demands of society concerning the production, recycling and marketing of high quality, clean production for the domestic market and export providing the use of the most professional modern technologies.

### STATE MANAGEMENT IN THE SECTOR OF VETERINARY MEDICINE

The program gives the knowledge on 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 medicative 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 student gains the knowledge about the system of management and regulation of innovative development at the state, industrial and regional levels, and also directly at the level of enterprises and organizations, by the consistent level of training of the specialists with the higher education in that or another sector.

# INTERNATIONAL PROGRAMS



## Master programs prepared to be realized in NUBIP of Ukraine 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 environmental 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: Informational operating 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 recycling of meat Master'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 environmental**

Analytical and practical using of modern methods of analysis of soil, environmental, 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 informational 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, especially: 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 its surrogates**

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

Technology and equipment for the recycling of asters and oil's stuff, projecting and organization of works of recycling enterprises of different form of property, its improvement, developing of measures for betterment of quality of esters and oils 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: Garden and park economy**

**Master 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.

# INTERNATIONAL PROGRAMS

## Master programs realized in NUBiP of Ukraine together with foreign partner universities



### Wageningen University, Wageningen city (Netherlands)

**Specialty: Ecology and environmental protection**

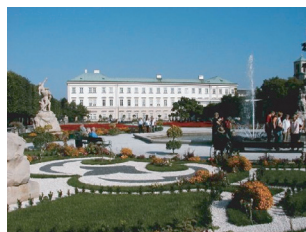
**Master program: Studying about environment**

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 program: Management, economy and consumer's 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 program Administrative management in agriculture**

Control after 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.



### University after Humboldt, Berlin (Germany)

**Specialty: Quality, standardization, certifying**

**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 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 after 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.

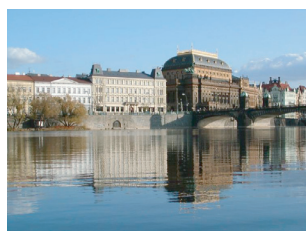


### Tokyo agrarian university, Tokyo (Japan)

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

**Master program International bio business, specialization – 'Surrounding environmental'**

System approach to the resolving of problems of clean 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.

# MASTER PROGRAMS OF SPECIALISTS' TRAINING IN APPLIED BIOLOGY BY THE SPECIALIZATION 'LABORATORY BUSINESS' OF EXPERT AND CONTROL SPHERE OF JOB PLACEMENT (EXPERTS-ANALYSTS)

## MESC animals' biology and laboratory diagnostic of their health and quality and safety of livestock raising's production

With each year the role of Ukraine in supplying the provision question in the world community become more and more powerful, while the problem of examination of quality and safety indices of agriculture raw materials and ready production become extremely actual. Corresponding state services (Ministry of agrarian policy and provisions, National committee of veterinary and phyto-sanitarian service, Ministry of Health, Ministry of ecology etc.), which nowadays supply the system of national control and inspection after 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 supplied biology at the specialization 'Laboratory business' will allow to audience, on the base of modern laboratories, master 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 recycling technologies of livestock raising products, Water bioresources, Technologies of preservation, canning and recycling of meat, Technologies of preservation and recycling of water bioresources

The program provides the training of specialists for work in the specialized diagnostic laboratories. Students master the modern methods of laboratory diagnostics in microbiology.

### Master program:

#### Immunological researches' methods

**Specialities :** Veterinary medicine, Production and recycling technologies of livestock raising products, Water bioresources

The program provides the training of specialists for work in the specialized diagnostic laboratories. 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 raising products, Technologies of preservation, canning and recycling of meat, Technologies of preservation and recycling of water bioresources, Water bioresources

The program is directed at the mastering of 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 researches methods

**Specialities :** Veterinary medicine, Production and recycling technologies of livestock raising products, Technologies of preservation, canning and recycling of meat, Technologies of

preservation and recycling of water bioresources, Water bioresources

The program provides the training of specialists for the work in 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 gained knowledge the specialists can work in the laboratories of veterinary medicine, diagnostic centers, analytical laboratories of enterprises, which work at production, recycling, preservation and realization of agricultural products.

### Master program:

#### Physical methods of diagnostics and treatment

**Specialities :** Ecology and environmental protection, Veterinary medicine

The program provides the training of specialists for the work in specialized diagnostic laboratories. 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 the preparation of specialists for the work in laboratories of veterinary and sanitary examination. Student 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 provides the training of specialists - doctors of veterinary medicine - virologists for the work in diagnostic laboratories of veterinary medicine. Students master the modern methods of laboratory diagnostics of animals' virus infections.

### Master program:

#### Immune and biotechnological researches' methods

**Speciality: Veterinary medicine**

The program provides the training of specialists- doctors of veterinary medicine- immune and biotechnologists for the work at the enterprises on production of immunological preparation. 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 immunotop products.

# MASTER PROGRAMS IN APPLIED BIOLOGY, COURSE 'LABORATORY BUSINESS' OF EXPERT AND CONTROL SPHERE OF JOB PLACEMENT (EXPERTS-ANALYSTS)

Master programs is devoted to training of professionals in applied biology on the course "Laboratory business" of expert and control sphere of job placement on the basis of educational and scientific laboratories of educational and scientific institutions (ESI) and Ukrainian laboratories of quality and safety of production of AIC (ULQSP AIC), that ensure the mastering of modern methods of chemical, physical and chemical, biological, ecological examination and estimating of quality and safety 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 economic of Ukraine (State veterinary and phyto sanitary service of Ukraine, Central state inspection of plants' protection "Golovderzhahyst", 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 protection of environment, State ecological inspection etc.)

## MESC of biology of plants and laboratory diagnostics of quality and safety of production of plants 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, Plants' protection, Ecology and protection of environment, Ecological biotechnology and bioenergy, Forestry, Garden and park economy

The program is for training of professional bacteriologists for the work in diagnostic laboratories of plant's 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 environmental management

**Specialties:** Agronomy, Fruits and vegetable and viniculture, Agrochemistry and pedology, Plants' protection, Ecology and protection of environment, Ecological biotechnology and bioenergy, Forestry, Garden and park economy

The program is for training of professional entomologists for the work in 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 environmental management

**Specialties:** Agronomy, Selection and genetics of agricultural cultures, Fruits and vegetable and viniculture, Plants' protection, Ecologic biotechnology and bioenergetics, Ecology and environmental protection

The program provides the studying of schemes of varietal certificating of seeds, assigned for the international trade according to the seeds' schemes OCCD, that now 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 the 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 bio technological molecular and genetic methods.

### Master program:

#### Methods of ecologic control of environmental objects

**Specialties:** ecology and protection of environment, agrochemistry and pedology, Forestry

Students are trained as eco toxicologists that are able 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 the 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

Special part of program gives the opportunity to master the applied aspects of eco toxicology, main methods of researches of toxic influence of pesticides and agro chemicals, gain the knowledge on eco toxicological estimation of technologies of agricultural cultures growing, and the practical part gives the opportunity to master the main rules of work in eco toxicological 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 and ecological and radiation safety of plants

**Specialty :** Ecology and environment protection

This program is for ecologists able to work in 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 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

The special part of the program gives the 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. The practical part of the program gives the 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 is for the specialists in reproduction and protection of natural ecosystems for the work in 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 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.

The special part of program gives the 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. The practical part of the program gives the 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.

## AGRONOMY

branch of knowledge

**Agriculture and Forestry**

course code

**8.09010101**

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  50

### ANNOTATION OF SPECIALITY

Graduates of the course "Agronomy" are capable to work in farm production, using methods and measures for high and stable crop production friendly to 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.

Master programs in course "Agronomy" provides the studying of modern ecological systems of crop varietal recourses major crops and their seed characteristics, standards in crop, scientific aspect in agriculture, energy saving 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 (phytocenoses).

### EMPLOYMENT

Graduates of Master' courses of "Agronomy" get the qualification 2213.1 "Agronomist- analyst" according to the industry standard of higher education of Ukraine and they are ready for the 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.

Agronomist-analyst is competent to occupy the posts of senior agronomist, chief of brigade, director of farmer's economy, director of small agricultural enterprise, agronomist-analyst, junior scientific assistant, scientific assistant, scientific assistant-consultant, agronomist, agronomist on seed growing, agronomist on plants protection, agronomist examiner, agricultural consultant or expert .

### Master programs of productive type

#### GROUNDING AND DEVELOPING OF SYSTEM OF ECOLOGICAL AND ADAPTIVE FARMING

Master's program is directed to the training of specialists on ecological adaptive farming and provides the 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-analyst 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's, soil's and climate's and market's conditions of concrete agro-formation for the production of planned volume and quality of plants' 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 CULTURES' CROPS

Master's program is directed to the training of specialists, competent for work as the main and leading specialists mainly in the 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 of country's population with food products of high quality, raw material for the recycling industry, supply livestock raising with foddors; in scientific and research establishments, that work at plants' sector improvement and developing of systems for agriculture cultures growing, for lecturer's activity in agrarian educational establishments of II-III accreditation level.

#### QUALITY OF PLANTS' PRODUCTS DEPENDING ON GROWING'S CONDITIONS, AFTER TAKEN PROCESSING, SAVING AND RECYCLING

Master's program is directed to the training of 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. Students are ready for the 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.

### Master's program of research type

#### SCIENTIFIC BASES OF MANAGEMENT OF BIOPRODUCTIVITY FORMATION OF AGRO-CENOSIS OF FIELD CULTURES

Master's program is directed to the training of 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

Students' knowledge and practical experience can be used in organizations and establishments of the Ministry of agrarian policy and provision of Ukraine, that work with issues of improvement of agricultural cultures' growing technologies, and also they can work as the lecturers of agrarian educational establishments of II-III accreditation levels.





## VETERINARY MEDICINE

branch of knowledge

Veterinary science

course code

8.11010101

Form of study/training period, years

full time

1, 0

part-time

0, 0

externship

credits ECTS

6 0

licensed amount, persons

full time

7 0

part-time

0

### ANNOTATION OF SPECIALITY

During achieving the educational qualification of "Master" students obtain special skills and knowledge enough to execute tasks and duties of professional activities that provided for primary positions.

Masters program allow predicting and conducting preventive maintenance and distribution of non-communicable, infectious and invasive diseases in the future professional activity. 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. Students who have educational qualification of "Master" 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. Masters of productive type at the faculty provides expertise that enable in production to veterinary-sanitary examination of food in the markets, control over the implementation of prevention, treatment and elimination of infectious, invasive and non-communicable diseases.

### EMPLOYMENT

According to the State classifier of professions of Ukraine the course graduates can get a position in area of "Veterinary medicine" with qualification "Master of veterinary medicine." According to their newfound qualification they have possibility to occupy the following positions: doctor of veterinary medicine in agricultural entities in cattle breeding, pig breeding, poultry raising; doctor of veterinary medicine of small animal; doctor of veterinary medicine of agricultural enterprise and institutions of veterinary medicine; doctor of veterinary medicine of meat processing of enterprise; veterinary medical expert; doctor of veterinary medicine in sanitary hygiene of enterprise from remaking production livestock; microbiologist, virologist, immunologist, parasitologist, pathologist; doctor of veterinary medicine in biotech companies; doctor or chief doctor of veterinary medicine, researcher; head of laboratory of veterinary medicine or departments, of district, or in regional and Republican administrations; head of the Department and so on.

Employment of graduates is possible in agricultural enterprises of different ownership, in state veterinary medicine, in private clinics, in veterinary medicine and so on.

### Master programs of productive type

#### DIAGNOSIS, TREATMENT AND PREVENTION OF BIRD DISEASE

During studying this course students 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

Graduates of this course get the skills of modern principles of general prevention of disease in animals. Within this master program, students learn methods of laboratory diagnoses and treatment of most common animals diseases and preventive measures for diseases of different organs and systems of their body.

#### TREATMENT AND PREVENTION OF SURGICAL DISEASES

After studying this course graduates get skills of treatment and prevention of the most common surgical diseases of farm animals, small animals (dogs and cats). Herewith considered the problems of traumatology, orthopedics, dentistry and ophthalmology animals.

#### CLINICAL PHYSIOPATHIONAL OF ANIMALS

Expertise includes study and analysis of the nature of disorders 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 of 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

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 the formation of skills in realization hygiene research and definition of veterinary welfare of food and technical raw materials of animal origin. Veterinary and sanitary examination covers the following 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

This course studies the peculiarity of treatment and prevention of the most common obstetric and gynecological disease agricultural and small animals. Considerable attention is paid to obstetric and gynecological clinical examination.

#### PATHOLOGICAL ANATOMY, AUTOPSY SECTION AND JUDICIAL VETERINARY

The course involves study of morphological changes with different pathology and sanogenesis and thanatogenesis. Also the study aspects activities of veterinary medicine doctor, forensic veterinary expert, forensic methods veterinary autopsy of animals and selection of materials for the criminological research laboratory..

### Master's program of research type

#### 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 disease with use of remote sensing and digital devices and nanotechnologies.

#### MODERN LABORATORY METHODS FOR EVALUATING THE IMMUNE STATUS OF FARM ANIMALS

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

Ecological morphology examines the general biological patterns of animal body structure that is the base in preparing the master of veterinary medicine. Learning the ecological morphology laid foundations of research methodology apparatus and systems, and structure of animals including species, breed and age aspects under the influence of environmental factors.



## FRUIT AND VEGETABLE GROWING AND VINICULTURE

branch of knowledge

Agriculture and Forestry

course code

8.09010104

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

After graduating students receive knowledge about modern technologies of production, storage and primary processing products of vine, fruit, berries, and grapes growing with energy and ecology saving systems of protection products and agrochemical of modern technological processes in fruit-growing, vegetable-growing and viniculture. It allows graduates to have sufficient theoretical and practical training to work in agricultural enterprises which specialize in manufacturing, storage and processing of fruit vine and vegetable growing or research institutions.

### EMPLOYMENT

According to industry standards for higher education of Ukraine graduates of the course get the qualification 2213.1 "Researcher of the vine, fruit and vegetable growing" and it is enough for such types of economic activity (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.

Graduates are able to do specified professional work in accordance with the classification of professions. They can hold positions: office chief agronomist, farm managers or farm manager, director (head) small farm, agronomist, researcher, agronomist-researcher with the vine, fruit and vegetable growing, young researcher, scientist, researcher consultant, agronomist, agriculturist from seed growing, agronomist with plant protection specialized in solving scientific in 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 counselor.

### Master's programs of productive type

#### GRADE TECHNOLOGIES IN VINICULTURE

Master's program is intended to train professionals in 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 National Academy of Sciences of Ukraine, advanced agricultural economies, and in universities that deal with conducting viticulture.

#### MODERN TECHNOLOGY OF PRODUCTION FRUITS AND BERRIES IN THE SOUTH OF UKRAINE

This Master's program is intended 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.

Specialists are trained for 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.

#### MODERN TECHNOLOGY IN VEGETABLE GROWING OF OPEN GROUND

Master's program intended to prepare professional agriculturists, gardeners various ranks and private entrepreneurs.

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 Food of Ukraine and other regions with similar climatic conditions.

### Master program of research type

#### RESEARCH AND INNOVATIVE WORK IN VINICULTURE

The program is devoted for training professionals to work in 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 specialist may work in manufacturing, in the agricultural enterprises of different ownership forms, research institutions, National Academy of Sciences of Ukraine, in leading agro industrial farms, and in universities.

#### RESEARCH AND INNOVATIVE WORK IN GARDENING

Master's program intended to obtain the knowledge about 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.

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 INNOVATION WORK IN VEGETABLE GROWING OF OPEN GROUND

Master's program intended to obtain 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.



## TECHNOLOGIES OF PRODUCTS OF FERMENTATION AND VINICULTURE

branch of knowledge

Food Industry and Processing of Agricultural Production

course code

8.05170106

Form of study/training period, years

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

credits ECTS

90

licensed amount, persons

full time 15  part-time 10

### ANNOTATION OF SPECIALITY

Professionals who finished the course "Technology products of fermentation and viniculture" are able to apply their knowledge of technology viniculture, beer and soft drinks, alcohol production technology in enterprises and in the process of research. Specialist should know the methods and measures to obtain the final products with minimal impact on the ecology and economic feasibility, be able to choose the right technology in accordance to logistical capabilities of particular food businesses.

In forming the master programs of "Technology products of fermentation and viniculture" provides study of modern systems of environmental security, economic development of companies, new developments in developed countries in the world.

### EMPLOYMENT

Graduates of the course 8.05170106 "Technology of products of fermentation and viniculture" are qualifying as "Master of the technology of products of fermentation and viniculture". Graduates can take the following positions: engineer-technologist, engineer, engineer-technician, agricultural expert advisor, head of department (research, project), head of department (bureau), registration of project materials, head of laboratory (research, preparation of production), head of research department, chief engineer of the project, teacher in professional and higher educational institutions and so on.

### Master programs of productive type

#### TECHNOLOGY OF PRODUCTS OF FERMENTATION AND VINEMAKING

Master's program intended to train specialists for the production of wine products, malt, beer, soft drinks and alcohol production.

In the process of teaching the master's program, master have to show the ability to solve simple and complex scientific technological and engineering issues, focusing on the problems of improving product quality, combating fraud, regulation of the range of produced wines, development of low-waste and energy efficiency technologies, utilization of waste production, improve the ecological environment, the ability to use computers.

Master's program consists of the following sections:

- Improving the quality of table wines by optimizing process, parameters technology process, cooking wine materials. Section of the program aimed at training professionals with the ability 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, the ability to conduct chemical analysis and organoleptic evaluation.
- The influence of enzyme preparations and dry yeast for quality table wines. Section of the program aimed at training 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 it is achieved energy savings and raw materials. Also part of the program is aimed at training scientists engaged in improving the quality of wine using dry yeast.
- Improving the technology of fortified wines that produced with the use of grape alcohol. Section of the program aimed at training wineries, possession methods and ways of obtaining high-quality grape alcohol, used in the production of fortified wines.

Final master's thesis describes the degree of learning masters of all disciplines in the curriculum of masters: the ability to set and solve scientific and technical tasks in technology of wines, to perform methodical, technical, economic and graphic design; using the latest achievements of science, best practices of leading companies and ability to use modern methods of research.



## TECHNOLOGY OF FATS AND SUBSTITUTES

branch of knowledge

Food Industry and Processing of Agricultural Production

course code

8.05170102

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

Undergraduates as a result of training obtain knowledge and skills in the production of fatty food products and essential oils. Training includes trends in oil and fat production in Ukraine and abroad; natural sources of fat products, markets of raw fat products, development of basic processes and equipment to prepare material for extraction of vegetable oils, development of technical bases storing oilseeds, study of flow diagrams and production equipment fat products (vegetable oils and animal fats). 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.

### EMPLOYMENT

The classification of master graduates job placement under the state classification of occupations of Ukraine "Master of technology of fats and substitutes". According to the obtained qualification of Master graduates are able to occupy the following positions: chief specialist head 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 (respect of the departments: research, design, automation of production processes, environmental protection, standardization, technical, technological, central plant laboratories, pilot production and others); chief engineer of the project, chief chemist, head (head) of department (research, project), head of department (bureau) design project materials, the head of the laboratory (teaching and research, production), the Head of Central Laboratory, head of research department of production, chemist-analyst, engineer, chemist, technician, engineer for the design of mechanized development, engineer of implementation new equipment and technology, research engineer, teacher in institutions, technology researcher for the production and processing of animal products, etc.

### Master programs of productive type

#### VOLATILE PRODUCTION TECHNOLOGY

Master's program is intended to getting knowledge and skills in solving production problems with the production of essential oils. Masters studying to this program are prepared 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 SUBSTITUTES

Masters of this program are prepared for 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

Technics and Energetics of Agrarian Industry

course code

B.10010203

Form of study/training period, years

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

credits ECTS

90

licensed amount, persons

full time 65  part-time 65

### ANNOTATION OF SPECIALITY

During the training 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.

### EMPLOYMENT

Qualification masters graduate in employment according to the state classification of occupations in Ukraine in "Agricultural Engineering" - engineer-researcher of agricultural production. According to the obtained qualification of Master graduates are able to occupy the following positions: research engineer with the mechanization of agriculture, researcher and consultant, engineering-designer of machinery and equipment and social and labor agricultural production engineer, chief engineer, head (chief) production lab, head of mechanization and automation of production processes, an engineer with the electrification of agricultural enterprises, teacher professional educational institutions and others. Employment of master graduates is in agriculture, forestry and transport enterprises of different forms of ownership, government departments, research institutions and NAAN 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.

### Master programs of productive type

#### MECHANIZATION OF AGRICULTURE

Modern 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 animals 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. 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 problem of the quality of processing and storage of agricultural products in 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 course of this program taught the principles of organization of technical services, studied in detail the features of its implementation on tractors, combines and agricultural machinery. 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. Graduates of this program may work as leading experts and heads of structural divisions of tractor and agricultural machinery.

#### STATE TECHNICAL SUPERVISION

During the implementation of this program the principles of organization of the State Technical Supervision in Ukraine are taught, the legal enforcement of technical standards and regulations studied in detail, also viewed the compliance with the state during production, maintenance, repair and maintenance service of tractors, combines, agricultural machinery and hardware. 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. Graduates of the program can work as an inspectors and experts of the State Technical Supervision Service of Ukraine.

### Master's program of research type

#### RESEARCH PROCESS OF MECHANIZATION OF WORK IN PERENNIAL PLANTS

The program is created for training professionals who works on development of scientific technology of machines that work in perennial plants. In addition, 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 master's programs is to develop creative thinking for future graduate, 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 it is presented 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. Master graduates of this program can work as teachers in institutions of 2 and 3 levels of accreditation, research assistants in research institutions and National Academy of Sciences of Ukraine, the research departments of universities or enter to graduate school.



## ECONOMY OF ENTERPRISE

branch of knowledge

Economics and Business

course code

8.03050401

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 "Economy of enterprise" involves the formation of 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.

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 material, reduce it to the table, group, study, plan. According to the plan and in case of unforeseen variations, economists take it into account, and give necessary recommendations to the leadership.

### EMPLOYMENT

After graduating Master course "Economy" person achieves qualification of "Master of Business Economics" and can chose such position as: economist, economist with contractual claims and work in management, economist adviser, adviser on economic issues, columnist on economic issues, instructor, teacher in professional academic institution, an expert on foreign affairs, director of production, director of enterprise, professional intellectual property, economist on accounting and analysis, economist of the international trade, economist of taxes and fees; member of the executive board, member of the audit department, a member of the supervisory board, director of economy, head of planning and economic section, head of the organization of labor and wages, director of small firms, industrial specialization.

### Master programs of productive type

#### ECONOMY AND ECONOMIC ANALYSIS OF AGRICULTURAL ENTERPRISES

Master's program is created for deepen knowledge of systems analysis of agricultural enterprises. It lets to get knowledge of the detection of internal reserves management of material, labor and financial resources. Intended to prepare chief managers of economy, economists-analysts, experts-consultants of the organization of economic work in the agriculture. Graduates of 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

Master's program allows you to deepen knowledge of wine production, wine subcomplex. Special attention is given to the study evaluating the effectiveness of agricultural production and the creation of grapes and wine. Graduates who have studied to this Master's program, using sufficient knowledge and skills can to 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 viticulture, wineries.

#### ECONOMICS OF AGRICULTURAL PRODUCTION AND RURAL TERRITORIES

Master's program allows you to deepen knowledge of the characteristics of social and economic development of village and business of the countryside. Special attention is given to studying the creation and functioning of effective forms of farming, is extend the understanding of the functioning of agricultural markets and the pricing mechanism for agricultural products, is intended to prepare managers and entrepreneurs in the agribusiness and rural services. Knowledge and skills gained by graduates can find developing measures to improve the quality of social and economic conditions of 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.

### Master's program of research type

#### METHODOLOGY AND ORGANIZATION OF ECONOMIC ACTIVITY IN ECONOMIC ENTITIES

Master's program designed for students who plan to engage in research and teaching activities. It provides learning the theoretical foundations of innovation entities and practical skills of its organization in market conditions. Graduates of this master's program have the opportunity to participate in the scientific substantiation of the individual performance of the farm as a whole and its individual units of production processes. 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 AUDIT

branch of knowledge

Economics and Business

course code

Б.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" involves getting knowledge and forming accounting skills needed to work effectively in enterprises of different ownership, in a market economy according to national standards of accounting, the ability to make optimal decisions as for improving organizational forms and methods of accounting. Accountant is a professional, competent in designing information systems, that can interpret and analyze data about enterprise and financial reports, make recommendations for management decisions, to audit, work with tax. Despite all the difficulties and the high demands of the profession of accountancy it 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.

### EMPLOYMENT

After graduating Master course "Accounting and Auditing" person can chose such position as: economist, economist of accounting and business analysis, economist in relations and pretenious works, methodologist for Economic Education, director of production, consultant on fees and taxes, teacher and higher vocational institutions, economic advisor, columnist for economic issues, member of Audit Committee, Member of the Supervisory Board, the chief auditor, chief accountant, chief economist, director of economics, head of department and so on.

### Master programs of productive type

#### THE ACCOUNTING IN THE SYSTEM OF FOREIGN ECONOMIC ACTIVITY

Master's program is created for deepening knowledge of accounting, auditing and analysis of foreign economic activity of agriculture. 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

Master's program allows to deepen knowledge of management accounting. It is intended for preparing 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. Accountant Analyst is an employee of accounting, that collects information for management decisions, and helps managers in carrying out the functions of planning, control, organisation 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

Master's program is created for the formation depth of knowledge and getting skills in land relations, conducting environmental audits. It is essential thoroughly study the characteristics of the assessment of land: compulsory, expert, legal. Students acquaint in detail with legal framework and established workflow, with account of land relations in rural farms. During the study of special subjects, students get skills of independent development of methods of accounting for state and movement of land and other operations associated with land. Graduates have sufficient theoretical and practical basis for the development of methodology for the assessment of land and capital costs for its improvement for agricultural enterprises.

### Master's program of research type

#### METHODOLOGY AND ORGANIZATION OF ACCOUNTING ACTIVITY OF ECONOMIC ENTITIES

Master's program is designed for those students who plan to continue engage in research and teaching. It is recommended for students who show a tendency to scientific work and educational activities. The program includes the study of scientific research methods in accounting. The aim of the Master, who studies the research program, is study the information base for management of the development, implementation and realization of innovations in agricultural enterprises. His task is to implement the directions creation and sales innovation, motivation and 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. Masters, who studies at the research training program should also formed ability to conduct research in the field of accounting and may continue to study.



# MANAGEMENT OF ORGANIZATIONS AND ADMINISTRATION

branch of knowledge

Management and Administration

course code

E.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

During studying course "Management and Administration" students acquire knowledge and form skills of analysis, planning, management and control of all areas of business, forming of an effective financial policy, corporate structure, developing effective schemes of functioning processes within its competence, organization and control departments. Well educated manager provides professional management of function in a market system of relations, understands the nature of administrative processes, is able to allocate responsibility for the levels of management, knows economics and marketing, information technology, is able to plan and predict. Masters in management organization and administration are well trained to make scientific analysis, to advice and guidance on the principles of consistency, creativity and innovation.

## EMPLOYMENT

After graduating Master course "Management and Administration" person can chose such position as: manager management organizations, manager and economist and can occupy the following positions: Director of Marketing, Head of Sales, Head of Commercial Department, Director (Head) of small agricultural enterprise, manager of regional development, manager of communication technology, marketing manager, manager, administration manager, logistics manager, supply manager, manager of public relations, manager of the foreign economic activity, advertising manager, HR manager, manager of consulting services, manager of quality systems, including public administration, environmental systems manager, systems manager of information security manager and corporate social responsibility, an analyst of the financial and economic security, researcher and consultant, consultant of business performance, marketing, rationalization of production and foreign trade issues.

## Master programs of productive type

### AGRIBUSINESS MANAGEMENT

Master's program allows you to explore the components of management of agricultural enterprises in more detail. Master's program designed for middle and senior management of administration of enterprises, generates knowledge and skills in strategy management and evaluation of management. Passing the practice in business organizations, 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. 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. 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 LOGISTICS SYSTEMS

Master's program is aimed at the formation depth of knowledge and acquiring skills in researching and solving logistical problems the agricultural market. It is essential 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 "Management of logistics systems creates knowledge and skills to solve logic problems, and systemic thinking and ability to analyze economic processes in agriculture. 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.

## Master's program of research type

### SCIENCE (THEORY) AND PRACTICE MANAGEMENT OF AGRICULTURAL ENTERPRISES

Master's program designed for students who plan to continue to engage in research and teaching. The program includes the study of scientific methods of management decisions and elements of successful career management. Graduates of this master's program learn in detail theoretical and practical principles of comprehensive management of agricultural enterprises, and based on acquired knowledge and skills become a very useful cell of modern enterprise. Combining grand methodological framework of agricultural management based on practical experience, 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, 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

**Б.08010103**

Form of study/training period, years

full time | 1,5 |  part-time |  externship

credits ECTS

90

licensed amount, persons

full time | 20 |  part-time

### ANNOTATION OF SPECIALITY

Professionals who complete the training in the specialty "Land Management and Cadastre" acquire knowledge and skills to perform tasks in their professional work, using modern technologies of geodesy, land management and cadastre.

Features of the educational process of master course based on the existence of industrial specialization and research specialty. The above allows graduates to be ready for the practice of land surveying, or research institutions that specialize in resolving scientific issues of geographic information technologies and systems, land surveying, or continue their education in graduate school, as well as teaching in schools.

Bases of the practical training of students of Master Course in "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 Crimea.

### EMPLOYMENT

Qualification of graduates of Master course in "Land Management and Cadastre" is enough for such job placement as: 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, engineer and land inventory, land evaluation expert, an expert in evaluating real estate agent for sale of land and real estate expert land relations, the registrar of land and real estate engineer urban cadastre, land registry engineer, engineer of forest inventories, engineer water inventory.

### Master programs of productive type

#### LAND MANAGEMENT, GEODESY SUPPORT LAND OPERATIONS, LAND AND ROOMY CADASTRE

Master's program aims to train specialists in the area of the Effective Use of lands and Land Management. Graduates are able 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

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.



### Master's program of research type

#### SCIENTIFIC BASIS of LAND MANAGMENT

Master's program aims to train professionals 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.



# ADMISSION TO MASTER COURSES OF NUBIP OF UKRAINE

There are two types of funding of Master Courses of NUBIP of Ukraine: state order (funding) and fees according contract with individuals or organizations. Persons that want to join Master Courses should have basic or higher education diploma on chosen specialty ("Specialist" or "Master") in accordance with approved rules of NUBIP of Ukraine.

Master Courses for persons with "Specialist" diploma are paid by physical (legal) persons (except entering the course "State service" of NUBIP of Ukraine). Joining the Master course 8.11010101 "Veterinary medicine (by types)" is also possible for persons with "Junior specialist" diploma on 5.11010101 "Veterinary Medicine".

According to the rules approved by the Cabinet of Ministers of Ukraine on 29.07.2009, № 789 "About admission for Master course in specialty "State Service", area of knowledge "State Management", and employment of graduates" the base institution NUBIP of Ukraine makes admission to the course "State Service". Persons that want to join this course should have higher education diploma, work in government agencies or local governments, have experience of state service or service in local government at least one year, the age under 45 years by the moment of entering,

Persons that want to join this course should submit to the selection committee the following documents:

- Request addressed to the Rector;
- Diploma and Supplements to it (original or certified copy);
- 5 color photos sized 3x4 cm;
- Referral, recommendation (to enroll for research specialization);
- Copy of the certificate of identification numbers;
- Copy of passport (1, 2 pages and a page with registration stamp);
- Application from companies, organizations, institutions and other places of future employment;(for persons entering for full-time studying by state order);
- Extract from the work records (for incoming correspondence and studying by state order).
- Passport and other documents confirming the right of entry must be filed in person.

Competitive ball of entering person is calculated as the total score of results of entrance examinations and the average score of the Diploma Supplement, which are rated on a scale of 100 to 200 points. Entrance examinations for Master Courses held in the form of tests on basic and professionally-oriented courses and foreign language programs studying during Bachelor course.

For persons entering:

- "Pedagogy of universities" and "Management of Academic institution" - Tests in humanities and foreign languages;
- "Quality, standardization and certification" - Tests in quality, standardization, certification and foreign language;
- "Administrative Management" - Tests in the basics of Economics and foreign languages;
- "State Service" - Tests on the basics of State and Law, basics of Economics and an interview on Public Administration.



Master Degree Programs  
National University of Life and Environmental Sciences of Ukraine

Under the general edition of  
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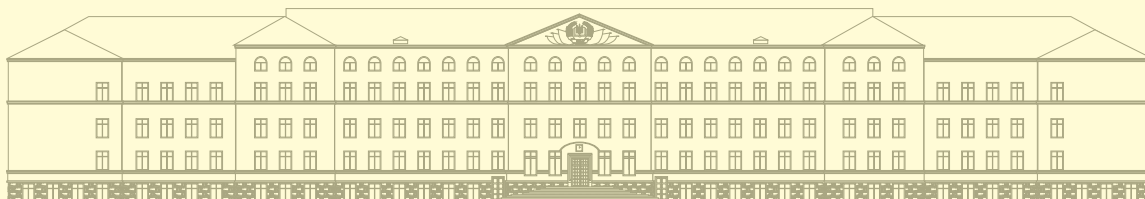
## Catalogue

# **MASTER DEGREE PROGRAMS National University of Life and Environmental Sciences of Ukraine**

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