

**NATIONAL UNIVERSITY OF LIFE AND
ENVIRONMENTAL SCIENCES OF UKRAINE**

**JUNIOR SPECIALISTS CURRICULA AND TRAINING
PROGRAMS**

2013

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CONTENTS

1. General information on Separated Subdivision of National University of Life and Environmental Sciences of Ukraine	
1.1. Separated Subdivision NULESU «Berezhany Agrotechnical Institute».....	7
1.1.1. Historical reference.....	7
1.1.2. Organizational Structure	7
1.1.3. Practical training of students	10
1.1.4. Academic and teaching staff.....	11
1.1.5. Characteristic of material and technical base	11
1.1.6. Information and Telecommunication provision	12
1.1.7. Library	13
1.1.8. Educational, cultural, sports and social work	13
1.1.9. Student Government.....	13
1.1.10. International activity	14
1.2. Separated Subdivision NULESU «Nizhyn Agrotechnical Institute»...	14
1.2.1. Historical reference.....	14
1.2.2. Organizational Structure	15
1.2.3. Practical training of students	18
1.2.4. Academic and teaching staff.....	19
1.2.5. Characteristic of material and technical base	19
1.2.6. Information and Telecommunication provision	19
1.2.7. Library	20
1.2.8. Educational, cultural, sports and social work	20
1.2.9. Student Government.....	22
1.2.10. International activity	22
1.3. Separated Subdivision NULESU «Irpın Economic College»	23
1.3.1. Historical reference.....	23
1.3.2. Organizational Structure	23
1.3.3. Teaching staff.....	24
1.3.4. Characteristic of material and technical base	24
1.3.5. Information and Telecommunication provision	24
1.3.6. Library	25
1.3.7. Educational, cultural, sports and social work	25
1.3.8. Student Government.....	25
1.3.9. International activity	25
1.4. Separated Subdivision NULESU «Zalishchyky Agricultural College named after Y.Khraplyvy»	26
1.4.1. Historical reference.....	26
1.4.2. Organizational Structure	26
1.4.3. Practical training of students	28
1.4.4. Teaching staff.....	29
1.4.5. Characteristic of material and technical base	29
1.4.6. Information and Telecommunication provision	29
1.4.7. Library	29
1.4.8. Educational, cultural, sports and social work	30
1.4.9. Student Government.....	30
1.4.10. International activity	30
1.5. Separated Subdivision NULESU «Crimean Agroindustrial College».	31
1.5.1. Historical reference.....	31
1.5.2. Organizational Structure	31

1.5.3. Practical training of students	33
1.5.4. Teaching staff.....	33
1.5.5. Characteristic of material and technical base	33
1.5.6. Information and Telecommunication provision	34
1.5.7. Library	34
1.5.8. Educational, cultural, sports and social work	35
1.5.9. Student Government.....	36
1.5.10. International activity	37
1.6. Separated Subdivision NULESU «Nemishaevo Agrotechnical College».....	38
1.6.1. Historical reference.....	38
1.6.2. Organizational Structure	38
1.6.3. Practical training of students	40
1.6.4. Teaching staff.....	40
1.6.5. Characteristic of material and technical base	41
1.6.6. Information and Telecommunication provision	42
1.6.7. Library	42
1.6.8. Educational, cultural, sports and social work	43
1.6.9. Student Government.....	43
1.6.10. International activity	43
1.7. Separated Subdivision NULESU «Bobrovytsia College of Economics and Management named after O. Mainova».....	44
1.7.1. Historical reference.....	44
1.7.2. Organizational Structure	44
1.7.3. Practical training of students	45
1.7.4. Teaching staff.....	46
1.7.5. Characteristic of material and technical base	46
1.7.6. Information and Telecommunication provision	47
1.7.7. Educational, cultural, sports and social work	47
1.7.8. Student Government.....	48
1.7.9. International activity	49
1.8. Separated Subdivision NULESU «Boyarka College of Ecology and Natural Resources».....	49
1.8.1. Historical reference.....	49
1.8.2. Organizational Structure	50
1.8.3. Practical training of students	51
1.8.4. Teaching staff.....	51
1.8.5. Characteristic of material and technical base	52
1.8.6. Information and Telecommunication provision	52
1.8.7. Library	53
1.8.8. Educational, cultural, sports and social work	53
1.8.9. Student Government.....	55
1.8.10. International activity	55
1.9. Separated Subdivision NULESU «Mukachevo Agricultural College»	55
1.9.1. Historical reference.....	55
1.9.2. Organizational Structure	56
1.9.3. Practical training of students	58
1.9.4. Teaching staff.....	58
1.9.5. Characteristic of material and technical base	58
1.9.6. Information and Telecommunication provision	59
1.9.7. Library	59
1.9.8. Educational, cultural, sports and social work	59

1.9.9. Student Government.....	60
1.10. Separated Subdivision NULESU «Bakhchisaray College of Construction, Architecture and Design».....	61
1.10.1. Historical reference.....	61
1.10.2. Organizational Structure	61
1.10.3. Practical training of students	62
1.10.4. Teaching staff.....	62
1.10.5. Characteristic of material and technical base	63
1.10.6. Information and Telecommunication provision	64
1.10.7. Library	64
1.10.8. Educational, cultural, sports and social work	64
1.10.9. Student Government.....	66
1.11. Separated Subdivision NULESU «Prybrezhne Agricultural College».....	66
1.11.1. Historical reference.....	66
1.11.2. Organizational Structure	67
1.11.3. Practical training of students	68
1.11.4. Teaching staff.....	68
1.11.5. Characteristic of material and technical base	68
1.11.6. Information and Telecommunication provision	69
1.11.7. Library	69
1.11.8. Educational, cultural, sports and social work	70
1.11.9. Student Government.....	71
1.11.10. International activity	71
1.12. Separated Subdivision NULESU «Crimean Technical College of Hydromelioration and Mechanization of Agriculture»	72
1.12.1. Historical reference.....	72
1.12.2. Organizational Structure	72
1.12.3. Practical training of students	73
1.12.4. Teaching staff.....	73
1.12.5. Characteristic of material and technical base	74
1.12.6. Library	74
1.12.7. Educational, cultural, sports and social work	74
1.12.8. Student Government.....	75
2. TRAINING PROGRAMMES FOR JUNIOR SPECIALISTS	
2.1 General Provisions.....	76
2.2 Annotations subjects of the curriculum.....	76
2.3. General education training	76
– 5.03040101 – «Jurisprudence».....	81
– 5.03050401 – «Economics of enterprise».....	87
– 5.03050701 – «Marketing activity»	94
– 5.03050702 – «Commercial activity»	100
– 5.03050801 – «Finance and credit».....	107
– 5.03050802 – «Evaluation activity».....	113
– 5.03050901 – «Accounting».....	120
– 5.03051001 – «Commodity research and commercial activity»	126
– 5.03060101 – «Organization of production»	132
– 5.04010602 – «Applied ecology».....	139
– 5.05010101 – «Maintenance of program systems and complexes»..	145
– 5.05010201 – «Maintenance of computer systems and networks»...	152

– 5.05020201 – «Mounting, maintenance of tools and systems of automation of technological production».....	158
– 5.06010101 – «Building and exploitation of buildings and constructions»	164
– 5.06010113 – «Mounting, maintenance of equipment and systems of gas-supply»	170
– 5.06010115 – «Equipment of buildings and constructions and Building design»	176
– 5.06010201 – «Architectural design and internal interior»	181
– 5.06010302 – Construction, maintenance and repair of hydromelioration buildings.....	187
– 5.07010101 – «Organization and traffic regulation»	193
– 5.07010102 - «Organization of transportation and management in road transport».....	199
– 5.07010602 – «Maintenance and repair of cars and engines»	206
– 5.08010102 – «Land administration»	211
– 5.09010101 – «Industrial floriculture»	216
– 5.09010102 – «Organization and technology of farming».....	221
– 5.09010103 – «Production and processing of plant products».....	227
– 5.09010201 – «Production and processing of livestock products» ..	235
– 5.09010301 – «Forestry»	241
– 5.09010303 – «Green construction and horticulture»	247
– 5.09020101 – «Fishery and aquaculture»	252
– 5.10010102 – «Mounting, maintenance and repair of electrical equipment in agroindustrial complex».....	258
– 5.10010201 – «Exploitation and repair of machinery and equipment of agroindustrial production»	263
– 5.11010101 – «Veterinary medicine»	268
– 5.14010301 – «Tourist service».....	274

1. GENERAL INFORMATION ON SEPARATED SUBDIVISIONS OF NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF UKRAINE

1.1. SEPARATED SUBDIVISION NULESU «BEREZHANY AGROTECHNICAL INSTITUTE»

1.1.1. Historical reference

Berezhany Agrotechnical Institute was founded by the order of the Ministry of Agriculture of Ukraine from 11.03.1959 № 2 as Berezhany College of Agricultural Mechanization.

The subdivision is located in Berezhany, Ternopil region, 50 km from the regional center of Ternopil, in the picturesque mountainous area. The town is known for its architectural monuments, preserved in their original form. Among the most famous are Castle (16th c.), Holy Trinity Cathedral (18th c.), Armenian Church (18th c.) and others.

Agrotechnical College was established on base of technical college in 1992 by a joint order of the Ministry of Education of Ukraine and the Ministry of Agriculture and Food of Ukraine from 07.07.1992 number 60/67.

The college became a member of the NAU in 1997 (CMU from 29.05.1997 № 526), and in 2001 it received the status of an institute (the decree of the Cabinet of Ministers of Ukraine of 06.05.2001 № 434). By SAC decision from 25.10.2001, protocol number 35, the Institute has been accredited and got the status of higher educational institution of III level.

The Institute provides training for the agricultural sector: engineers, electricians, ecologists, foresters, economists. Scientific research is aimed at studying the processes of production and use of biogas, bioethanol, biodiesel.

According to the rector's order from 19.06.2006 № 390 Institute was reorganized into a separate subdivision of NAU.

According to the rector's order from 15.12.2008 № 827 on the implementation of the Cabinet of Ministers of Ukraine from 30.10.2008 № 945 "Issues of National Agricultural University" the Institute was renamed into Separated Subdivision of National University of Life and Environmental Sciences of Ukraine "Berezhany Agrotechnical Institute".

1.1.2. Organizational Structure

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5.10010201 Exploitation and repair of machinery and equipment for agroindustrial production

5.07010602 Maintenance and repair of cars and engines

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1.1.3. Practical training of students

Practical training includes laboratory research and practical classes, training and production practices of students.

Laboratory research takes place in laboratories specially equipped with facilities for the academic process (laboratory models, equipment etc.). Laboratory research for the students of the departments and faculties of the separated subdivisions of NULES of Ukraine is conducted in real professional environment, namely at educational, production, scientific and industrial laboratories of the educational and research farms (ERF) of NULES of Ukraine.

Practical classes take place in classrooms or educational laboratories, equipped with all the necessary technical means and are computerized.

Training practices take place in the first and second year of doing Bachelor's (Junior Specialist) degree in educational, educational and scientific, educational, scientific and industrial laboratories, workshops, the fields of educational and research farms as well as at the leading enterprises, organizations and institutions of the region and the district.

Training is supervised by scientific and teaching staff and the leading specialists of our ERF. According to the director's order they are responsible for training practice programs to be completed. Training is also supervised by the staff of the center for students' practical training, assisting directly on ERF ensuring the training program tasks to be done.

Production training is to be taken in the last years of training by undergraduates (Bachelor's and Junior Specialist training programs). Such kind of training takes place in the educational, research, scientific and research laboratories of NULES of Ukraine, the leading enterprises of Ukraine according to the signed contracts. Training is supervised by the scientific, teaching staff of the departments, cycle commissions and by the chairs and top management of the staff of farms, enterprises, organizations and institutions

Graduation practice is the final stage of practicing and is the preparatory stage of working on graduation course papers for EQD "Junior Specialist". Undergraduates take it during their last year of studying aiming to generalize and sharpen their skills, to gain experience in their profession, to get ready for their future work without supervision and to find data for their graduation course papers.

Places for practical training of students

Places for the practical training of students in SS of NULES of Ukraine "Berezhany Agrotechnical Institute" are educational, scientific and research laboratories of the Institute, its own basis for practical training, the farms of the region and district according to the contracts signed.

Own basis for practical training:

- Educational and industrial workshop with such bays as: metalwork, blacksmith's, welding, mechanical processing of metals, repair and running of engines.
- Dendrology Park "Raivskyi" having the area of 25 hectares.
- Holytsia Botanical and Entomological Reserve.
- Nursery of dendrology plants.
- Educational and industrial basis for practical training "Garden – Zaberezky".
- Educational, scientific and industrial laboratory "Biotechnologies".
- Vehicle test track.
- Fleet of agricultural machinery – 36 units.

1.1.4. Academic and teaching staff

There are 10 departments and 6 cycle commissions functioning in the Institute. 157 members of the academic staff: scientific and teaching (100), teaching (75) provide the academic process.

Among the scientific and teaching staff there are 4 Doctors of Sciences, 52 Candidates of Sciences and 44 Lecturers.

The staff taking postgraduate programs: 2 – full-time, 2 - extra-mural, 27 – searchers and 1 is doing doctoral program.

4 of the members of teaching staff have completed their postgraduate programs and are working on defending their dissertations.

Training for EQD "Junior Specialist" is provided by 57 lecturers.

Among them there are:

Lecturer and Methodologist – 3;

Senior Instructor – 9;

Qualification: higher -21, first – 15, second and specialist -11.

Members of the university staff were awarded honorary titles and rewards for their persistent and honest work:

Honorary title "Honored Worker of Education of Ukraine" – 15;

Honorary title "Honored Worker of Public Education of Ukraine" – 1;

Honorary title "Honored Worker of Education and Science in Agriculture" – 5;

Honorary title "Honored Worker of NULES of Ukraine" – 1;

Honorary title "Honored Lecturer of NULES of Ukraine" – 7;

Honored Worker of Physical Training and Sports – 1.

1.1.5. Characteristics of material and technical base

Total area of institute is 6,59 hectares, total area of buildings is 18216 sq.m including 14368 sq.m for educational area.

Educational and Material Resources	Indicators
1. Educational buildings	7
2. Hostels / seats (places)	2/260
3. Laboratories and academic buildings	
- Total area, m ²	18216
- Educational area, m ²	14368
- Per student, m ²	10,2
4. Laboratories	69
5.1. Classrooms	51
6. Training grounds	3
8. Industrial practice workshops	2
9. Gym (m ²)	938,6
10. Stadium (area m ²)	4700

11. Sports ground (sq.m area)	4200
12. Assembly hall (places)	360
13. Food Items: - Dining room (seats) - Buffet (seats)	120 20
14. Reading Room (seats)	120
15.1. Reading room in the hostel (seats)	62
16. Computer classes, number of classes / number of computers	22/258
17.1 Computer Classes at the hostel, number of classes, number of computers	1/6
18. Information and Publishing Centre	1
19. Class with video surveillance	1
19. Medical aid station	1

Educational work is carried out in specialized laboratories and 120 classrooms with total area of 10340 m, including training 8250 m².

There is educational and industrial base "Sad-Zaberezky" including 11.65 hectares of arable land, training workshop of 1348 m² and 70 pieces of equipment.

There is educational, scientific and industrial base "Dendropark", botanical reserve "Holytskyi."

Reading hall for 62 seats, 2 gyms and medical aid station are in the hostel. There is a stadium and 3 sports grounds on the territory of Institute.

Material base of laboratories and classrooms allows carrying out training of students of all licensed directions and specialties.

1.1.6. Information and Telecommunication provision

To make the efficient use of ICT in teaching process of institute there is information and educational environment in which the following components are distinguished: development of computer infrastructure, software platforms, information and educational resources management system.

Infrastructure of Institute provides students access to information and educational resources. There are 253 computers in Institute (it is about 5-6 students / 1 computer). Their work is provided by servers on free software Unix Free BSD and Linux. All educational buildings and hostels have main cables of local network with capacity up to 1 Gbit / in each direction, network equipment working on technologies W- Fi, and on its base is created separate local network with a free access to the Internet. To provide teaching and research Institute uses "MEGACOM" provider with capacity of 200 Mbit / s in foreign and Ukrainian segment of the Internet.

It is used: Education and Reference Portal (moodle.bati.ber.te.ua), which includes e-learning courses for students. Part of subjects that are taught to students with electronic support in the form of e-course with theoretical material, resources for laboratory and practical work, self-study, interim and final evaluation.

1.1.7. Library

Institute Library provides teaching, methodological, organizational and educational work with documentary and informational resources. One of important activities of library is work aimed at bibliographic orientation of students in education of their culture, reading skills and bibliographic search.

General Fund has more than 53,000 documents. The total area occupied by the library is 270 m² including 158 m² to store funds. Units of library service are for 3,000 users.

Library constantly improves bibliographic apparatus, edits alphabetical and systematic catalogs. Appropriate conditions are created for using library fund, there is qualified help in selection of necessary documents.

1.1.8. Educational, cultural, sports and social work

Education at the institute is orientated on mental, moral, physical perfection of students. Plan of educational work was developed to achieve this purpose.

Together with the Department of Humanities, cyclic commission of physical education and sports, student government organize and coordinate the educational work of the Institute.

During the academic year the institute regularly conducts events, holidays, celebrations, amateur performances, meetings with war veterans, theme parties, sports competitions.

For gifted students there are different sport clubs, societies, and recreational groups.

Ensembles and groups:

- a student choir;
- a vocal ensemble "Forward time" vocal studio;
- an academic solo singing;
- choreographic ensemble "Enjoyment";
- student group amateur "Student Cinema";
- student readership circle.

Sports sections:

- football;
- -basketball;
- volleyball (boys, girls);
- Athletics;
- aerobics.

1.1.9. Student Government

The activity of student council aims to improve the educational process, training and spiritual culture of the students, their active life position and responsibility.

Every year student Council organizes a lot of cultural and religious events, including the most notable: "KVN", student scientific conference "Cossack fun", karaoke, a day of solidarity with HIV-infected of HIV-infected of HIV-infected of HIV-infected, the annual beauty contests and promotions on the day of St. Nicholas.

Primary trade union organization of students is the structure that brings together all the students of the institute. Trade union consists of future landscape designers and electricians, engineers and economists, ecologists and programmers.

The task of this organization: protecting rights and freedom of students, collaboration with the hostel administration to provide necessary conditions for their habitats, material assistance to vulnerable categories of students.

Trade union cares about the welfare of all students of the university. Providing financial assistance is a major step in the implementation of programs improving. The following categories of students may receive the financial assistance: orphans, students with single-parent families; disabled, students with serious illnesses or after serious operations; married students or students with children, students from low-income families.

1.1.10. International activity

The cooperation of the Institute with foreign partners is aimed at:

- education and training of students and teachers abroad;
- scientific cooperation in the field of biogas production;
- cooperation for the production of biogas plants.

In the field of scientific cooperation aimed at the research of the alternative sources of energy the following achievements have been made:

- the cooperation with Wismar University of Applied Science, Technology, Business and Design has been set up (Germany); Hochschule Wismar, University of Applied Science, Technology, Business and Design;
- an agreement with Wismar University of Applied Science, Technology, Business and Design about the cooperation in the field of educational, scientific and research work has been signed (Germany); Hochschule Wismar, University of Applied Science, Technology, Business and Design;
- all the necessary technical and economical substantiation for building biogas technological plant has been elaborated in cooperation with the company “Stirl – Technology of Units” Ltd. and the company “Hartmut Dybek Institution for Economic and Structural Development” Ltd. (Germany); “Stirl - Anlagentechnik” GmbH, “Hartmut Dybek Gesellschaft für Wirtschafts- und Strukturentwicklung mbH”;
- the cooperation with D. Fraineker and A. Plank Firm has been set up in order to produce wheat straws pellets and for the production of biogas.

International scientific relations:

1. Wismar University of Applied Science, Technology, Business and Design (Germany); Hochschule Wismar, University of Applied Science, Technology, Business and Design.
2. “Stirl – Technology of Units” Ltd.; Stirl - Anlagentechnik” GmbH.
3. “Hartmut Dybek Institution for Economic and Structural Development” Ltd. (Germany); “Hartmut Dybek Gesellschaft für Wirtschafts- und Strukturentwicklung mbH”.
4. “German Institution of International Cooperation” Ltd., Regional Centre Meklenburg-Vorpommern (Germany); Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Regionales Zentrum Meklenburg-Vorpommern.

1.2. SEPARATED SUBDIVISION NULESU «NIZHYN AGROTECHNICAL INSTITUTE»

1.2.1. Historical reference

The history of Nizhyn Agrotechnical Institute has its roots in the nineteenth century, when in 1895 the vocational school was opened in the beautiful ancient town with more than a thousand years of history in the Chernihiv region. There were two departments in it- mechanic-technical and agricultural-engineering that trained carpenters, mechanics and machinists to work on steam boilers and specialists of other professions required at that time of craft workshops of Nizhyn.

During the period 1920-1933 school developed from Nizhyn vocational school to Nizhyn technical school of mechanization of agriculture. Technical school of

mechanization according to the Order of the Ministry of Agriculture of Ukraine from 04.08.1993 № 214 was reorganized into Nizhyn Agrotechnical College, which trained specialists in engineering and energy and lately specialists in economy and agricultural production.

In 1996, the educational establishment became a member of the NAU as Nizhyn Agrotechnical College (Resolution of the Cabinet of Ministers of Ukraine of 23.04.1996 № 448), and in 2001 received the status of institution (Resolution of the Cabinet of Ministers of Ukraine of 16.05.2001, № 508). In 2005 Institute was given the status of higher educational establishment of IIIrd level according to the decision of State Accreditation Commission of 21.06.2005, protocol number 56

The Institute provides training of specialists for agriculture such as: mechanics, electricians, machine gunners, transport managers and specialists in economics. Research investigations are conducted in such areas biologization of agriculture (studying elements of "biologization" and receiving environmentally safe vegetable products selection of legumes, energy-saving technologies).

The Institute was reorganized into a separate subdivision of NAU according to the Rector's Order of 19.06.2006 № 392 Institute was renamed into the separated subdivision of the National University of Life and Environmental Sciences of Ukraine "Nizhyn Agrotechnical Institute" according to the Rector's Order of 15.12.2008 № 827 on the implementation of the Resolution of the Cabinet of Ministers of Ukraine of 30.10.2008 № 945 "Issues of National Agricultural University"

1.2.2. Organizational Structure

Director – Candidate of pedagogical Sciences, Associated Professor, Honored Worker of Public Education of Ukraine, Exemplary Teacher of Agrarian Sciences and Education of Ukraine, Exemplary Teacher of Public Education of Ukraine **Vasyl Lukach**

Tel./fax: (04631) 2-52-70

Email: natinau@ukr.net

Address: 16600, Chernihiv region, Nizhyn, 10, Shevchenko str.

FACULTY OF MECHANIZATION OF AGRICULTURAL

Dean – Candidate of technical Sciences **Volodymyr Vasylyuk**

Tel: (04631) 2-45-37,

E-mail: dekan.msg@gmail.com

Arrangement of educational building, room 109

Faculty organizes and coordinates educational process in training Bachelors in area:

6.100102 «Processes, machinery and equipment of agroindustrial production»

Specialists in specialty:

7.10010203 «Mechanization of agriculture»

Chairs:

Machines and equipment of agriculture

Tel: (04631) 2-52-70,

E-mail: dekan.msg@gmail.com

Head of chair – Doctor of technical Sciences, Professor, **Yevheniy Khrapach**

Operation of machines and technical services

Tel: (04631) 2-52-70,

E-mail: dekan.msg@gmail.com

Head of chair – candidate of pedagogical Sciences, Associated Professor **Ilyom Makhmudov**

General Technical Disciplines

Tel: (04631) 2-52-70,

E-mail: dekan.msg@gmail.com

Head of chair – Candidate of pedagogical sciences, Associated Professor **Oleh Lytvynov**

FACULTY OF ELECTRIFICATION AND AUTOMATION OF AGRICULTURE

Dean – Valery Lementaryov

Tel: (04631) 2-36-81,

E-mail: natinau@ukr.net

Arrangement of educational building, room 221

Faculty organizes and coordinates educational process in training Bachelors in area:

6.100101 «Power engineering and electrotechnical systems in agroindustrial complex»,

Specialists in specialty:

7.10010101 «Energetics of agricultural production»

Chairs:

Automation and Electrified Technologies in Agricultural Production

Tel: (04631) 2-36-81,

E-mail: dekan.easg@gmail.com

Head of chair – Candidate of pedagogical sciences, Associated Professor **Yurii Klimentovskyi**

Natural and Fundamental Disciplines

Тел: (04631) 2-36-81,

E-mail: dekan.easg@gmail.com

Head of chair – Candidate of pedagogical sciences, Associated Professor **Mykola Mukvych**

Physical Education

Tel: (04631) 2-36-81,

E-mail: dekan.easg@gmail.com

Head of chair – Senior Teacher **Serhii Lysenko**

FACULTY OF ECONOMICS AND MANAGEMENT

Dean – Nataliya Tsaruk

Tel: (04631) 2-31-30,

E-mail: natinau@ukr.net

Arrangement of educational building, room 120a

Faculty organizes and coordinates educational process in training Bachelors in areas:

6.030601 «Management» 6.030509 «Accounting and auditing»

Specialists in specialties::

7.03050901 «Accounting and auditing»

7.03060101 «Management of organizations and administration»

Chairs:

Agrarian Economics

Tel: (04631) 2-31-30,

E-mail: natinau@ukr.net

Head of chair – PhD (Agricultural Sciences), Associated Professor, **Victor Stryhun**

Accounting, Analysis and Audit

Tel: (04631) 2-31-30,

E-mail: economyfaculty@mail.ru

Head of chair – Candidate of economic Sciences, Associated Professor, **Zoriana Ovcharyk**
Management

Tel: (04631) 2-31-30,

E-mail: economyfaculty@mail.ru

Head of chair – Doctor of Economic Sciences, Professor **Ihor Tyvonenko**

Social-Humanitarian Disciplines

Tel: (04631) 2-31-30,

E-mail: economyfaculty@mail.ru

Head of chair – Candidate of historic Sciences, Associated Professor **Oleksandr Sydorovych**

DEPARTMENT OF TRAINING OF JUNIOR SPECIALISTS

Head – Olena Lytovchenko

Tel: (04631) 2-45-37,

E-mail: natims@i.ua

Arrangement of educational building, room 104

Department organizes and coordinates educational process in training Junior Specialists in specialties:

5.10010201 «Exploitation and repair of machinery and equipment for agroindustrial production»

5.10010102 «Mounting, maintenance and repair of electrical equipment in agroindustrial complex»

5.05020201 «Mounting, maintenance of tools and systems of automation of technological production»

5.05010201 «Maintenance of computer systems and networks»

5.03050901 «Accounting»

5.07010102 «Organization of transportation and management in road transport»

Cycle commissions:

Cycle commission of general educational subjects

Tel: (04631) 2-45-37,

E-mail: natims@i.ua

Head of cycle commission – Specialist of the Highest Degree, Teacher-Methodologist, Exemplary Teacher of Public Education of Ukraine **Mykola Novikov**

General technical subjects

Tel: (04631) 2-45-37,

E-mail: natims@i.ua

Head of cycle commission – Specialist of the Highest Degree, Senior Teacher, and Exemplary Teacher of Public Education of Ukraine **Svitlana Pryhodko**

Social and humanitarian subjects

Tel: (04631) 2-45-37,

E-mail: natims@i.ua

Head of cycle commission – Specialist of the Highest Degree **Volodymyr Shevchenko**

Physical training

Tel: (04631) 2-45-37,

E-mail: natims@i.ua

Head of cycle commission – Specialist of the Highest Degree, Teacher-Methodologist, **Yuriy Bulavenko**

Technical service and maintenance of machines and equipment

Tel: (04631) 2-45-37,

E-mail: natims@i.ua

Head of cycle commission – Specialist of the Highest Degree **Mykola Ikalchyk**.

Maintenance and repair of electrotechnical installations and systems of automation of agroindustrial production

Tel: (04631) 2-45-37,

E-mail: natims@i.ua

Head of cycle commission – Specialist of the Highest Degree **Nataliya Solomko**.

Maintenance of computer systems and networks

Tel: (04631) 2-45-37,

E-mail: natims@i.ua

Head of cycle commission- Specialist of the Highest Degree, Teacher-Methodologist **Lidiya Yakubinska**.

Special economic subjects

Tel: (04631) 2-45-37,

E-mail: natims@i.ua

Head of cycle commission – Specialist of the Highest Degree **Mariya Rozvodovska**.

Organization and management in transportation on motor transport

Tel: (04631) 2-45-37,

E-mail: natims@i.ua

Head of cycle commission – Specialist of the Highest Degree **Volodymyr Stryzhak**.

Practical training

Tel: (04631) 2-45-37,

E-mail: natims@i.ua

Head of cycle commission – Specialist of the First Degree **Viktor Horbach**

1.2.3. Practical training of students

Practical training includes laboratory and practical training, education and practical training of students.

The main base of practical training of students is educational scientific and production subdivision of the Institute. It provides a combination of practical training of students with industrial activity of workers.

Last year about 500 students had practice at the base of the Institute in the following laboratories: crops production, stock-breeding, farming, technical and engineering services, biological agriculture, energy efficiency, quality and safety of agricultural production, marketing ties (company store "Dary laniv").

Students have practice at major agricultural and conversional enterprises: JV "Druzhba-Nova", Ltd "Magnat", Ltd "SPE "Metekol", Ltd "KROK-AGRO", Ltd "Zemlya i Volya", Ltd "Nizhyn cannery", Pac "Plant "Nizhynsilmash", PAE "Piskivske", agricultural holding "Mriya" and others. Nizhyn Agrotechnical Institute has cooperation agreements with all enterprises, databases practices.

The main task of teaching students is to train real specialists for the agricultural sector who can confidently compete in today's job market.

1.2.4. Academic and teaching staff

Educational process and research work at the Institute is conducted by almost 200 academic and teaching staff.

Among academic staff there are 18 doctors and professors, Candidates of Sciences and Associated professors – 78 persons.

Among teaching staff 19 persons have the Highest Category, 3 persons are Teachers - methodologists, 7 persons are Senior teachers.

At the Institute work:

Honored Worker of Public Education of Ukraine - 1 person;

Exemplary Teachers of Public Education of Ukraine - 12 persons;

Exemplary Teachers of Agrarian Science and Education of Ukraine - 10 persons;

Honored Workers of NULES of Ukraine - 3 persons;

Honored Teachers of NULES of Ukraine - 7 persons.

Training of teaching staff of the Institute is conducted at doctoral and post graduate courses of NULES of Ukraine. In 2012, one person was trained: at the doctoral courses, 10 persons - in the post graduate school, 8 persons as seekers.

In 2012, five employees of the institute defended candidate theses.

1.2.5. Characteristic of material and technical base

Educational process, practical training, practical training of students is conducted in 6 academic buildings, as well as at the educational and scientific- production unit.

The total area of the institution is 1067.93 hectares; the total area of buildings is 27320 square meters, including training area 17368 square meters. The Institute carries out its own reconstruction of the central part of the academic building.

There are 3 hostels for 760 seats in the students' campus which is located in Nizhyn near the academic building of the Institute that provides lodging for non-resident students at 100%. There are rooms for rest, disco hall, facilities for self-training, sports, and health center with the area of 36m² in the hostels. The "Lady Club" and the conference hall with 50 seats for general educational activities and foreign language classrooms are situated in campus.

A sports complex that includes a modern outdoor stadium, three playgrounds and a gym is created at the Institute for physical culture and sports lessons. The area of the gym of the Institute is 1312 m².

Canteen with 200 seats provides students and staff of the Institute with breakfasts, dinners and suppers.

There are 9 computer classes at the Institute which are equipped with LAN and connected to the Internet.

Information Centre is equipped.

Educational scientific and production subdivision includes a research farm with total area of 1052.01 ha (698.24 ha of arable land), industrial workshop with area of 1176 m² and 74 pieces of equipment, such research laboratories as energy saving technologies, biological agriculture, teaching and industrial crops and livestock laboratories, processing of agricultural production, technical and technological services, farming. This subdivision works effectively.

1.2.6 Information and Telecommunication provision

An important direction of the institute work is the introduction of information and computer technologies in educational process. The department of technical training, information and distance learning, equipped with modern computers operates at the institute for this purpose.

In SS of NULESU "Nizhyn Agrotechnical Institute" based on OpenSuse installed and functioning system of distance learning Moodle (<http://moodle.nati.org.ua>) – object-

oriented dynamic learning environment focused on the interaction between teacher and students, organizing distance learning courses, and support stationary education. Today about 90% of subjects brought into this platform, which allows students of the Institute remotely, with the help of the Internet, to learn training material and pass the test control knowledge in academic discipline.

Presently, due to the creation of the educational-informative portal, a student has a possibility to get all packages of necessary educational materials to the course with access in a separate computer laboratory, computer intranet of institute, virtual library, or through the system of the Internet. The elements of the distance education are inculcated in an educational process; further development gets informatization and computerization of the process of testing. Having a multimedia complex allows teachers to conduct lectures and workshops using innovative technologies and multimedia with the following control level learning.

The local network of institute works under the management of the server operating systems of Windows Server and OpenSuse, which combines education, research and administrative units. The educational process is provided by the work of 19 computer labs.

1.2.7. Library

Library of the Institute executes the most important functions: informative, educational, cultural-educational, communicative. The present fund of library provides students with necessary teaching and reference books on 100%.

Library fund is diversified. The library gets more than 70 kinds of magazines and newspapers every year. The average number of copies of educational literature, which one full time student can get is 70,48. One of acquisitions of library is a fund of a rare book, which counts 126 books (from 1859 year). The real pearls of fund are books of Weisbach of Julius "Theoretical and practical mechanics" T.1, "Encyclopedic dictionary" Brokgauza (1890), "History of mathematics" (1883), "Goethe Collection" (1878) and others like that.

The program IRBIS functions – Library Automation System that meets the international demands, supports all variety of traditions of library business. In 2012 all the information of library's retro fund of the institute was added to the electronic catalogue. The program consists of five databases that reflect the general fund (29160 entries).

The library of the Institute is equipped with 13 computers, printers, scanners. Except teaching and research fund of the Institute's library, educational and material resources of relevant departments, cyclic commissions, and educational, scientific and industrial laboratories are used for the training of the specialists.

In the case of necessity students get possibility to use the funds of libraries of the National University of Life and Environmental sciences of Ukraine and scientific establishments, to conduct the planned researches and supervision on the base of front-rank enterprises of the Chernihiv region.

1.2.8. Educational, cultural, sports and social work

The purpose of educating students is getting to the young generation social experience, inheritance spiritual heritage of the Ukrainian people, achieving high culture of international relations, developing the spirituality, physical perfection, mental, moral, artistic, esthetic, legal, political, labor and environmental culture.

Teachers and tutors work for purposeful organization of the educational process, maintaining discipline and order at the students' hostels.

Lectures, workshops, seminars, individual work on the education of healthy lifestyles and prevention of antisocial phenomena, contests for the best rooms, sporting

events, organized design of wall newspapers are held for students hostels residents by the tutor.

Organizational and educational work in the faculties (departments) is presented by the work of tutors of academic groups and student organizations of the faculties. Work of the tutors is regulated by "Regulations on academic tutor group (of course)".

Department of educational work and student government organizes and coordinates the educational work of the Institute, provides consultative and methodological assistance to students in the protection of their rights, develop and implement an incentive system to life for the best students of the institute, community activists, members of teams of amateurs, leading athletes of the Institute.

Nowadays there are 11 collectives of amateur art in the Institute, which involve about 300 students: "Narodne Dzherelo" choir, folklore ensemble "Barvy Polya" vocal group of girls "Spivanochky", dancing ensemble "Perlyna Polissya", ensemble "Troisti Muzyky", ensemble of wind instruments "Accent", theater of variety song "Vivat", drama group "Fairy", studio of contemporary dance "Astrum", collectives of solo singing, art and dramatic reading.

The department of art organizes the work of collectives of amateur art.

Students of the Institute actively participate in traditional international festival "Holosiyivska Vesna", in which for many years got prize-winning places. Students also are winners of festivals and competitions "Sofiyivski zori", "Barvy oseni", "Vesnyana hvilya", "Session", "Siver-tone."

Movement "Bright, Clever and Curious" actively develops. Combined team of the Institute participates in the city, regional and all-Ukrainian competitions.

The celebrations on the occasion of Agricultural Workers Day and Day of Teachers, dedication in students and deliveries of diplomas to graduates are always popular and bright. Honored guests and graduates usually take part in these celebrations.

The Chair of Physical Education and Sports Club "Prometey" coordinates gymnastic movement at the Institute. All opportunities for going in for sports are created at the Institute. There are gymnasium, fitness, tennis facilities, and playgrounds.

More than 270 students are involved in sports clubs. They are as following: volleyball, basketball, football, table tennis, martial arts, tourism, lifting, athletics, chess, shaping.

The Institute has a group of "Health". The team of teachers and staff is one of the five best teams among agrarian universities of III-IV level accreditation.

Sports and entertainment competition "Come on, guys," "Come on, girls!", Olympics among freshmen hostels residents, among faculties and staff have become traditionally at the Institute.

The Institute is proud of its students-sportsmen who represent the educational establishment at Olympic Games, Championships of the World and Europe and become winners in sledding, rocket sports powerlifting.

About 20 sportsmen get the first grade every year. Majority of the students get the youthful grade in different kinds of sports. We have five sport-masters and ten candidates of sport-masters.

Social support of students is provided by Vice director of Humanities and international Affairs. The main tasks are:

- Organization students' sanitation;
- Accounting and organization of work of the payment of compensation to students who are victims of the Chernobyl accident;
- Monitoring of financial support for the respective types of student aid to orphans and children deprived of parental care;

- Formation of project orders and materials for admission to full state support of orphans and children deprived of parental care.

The necessary conditions for sanitation, rest of students and staff are created at the Institute. Sports camp (village Kladkivka, river Desna) is functioning. Students can actively relax in summer on the Black Sea coast in the sports camp "Academic" (Illichivs'k, Odessa region), and at Teaching and Research Center of Biology and Ecology subtropical Plants and Landscape (village Nikita, Yalta, Crimea).

1.2.9. Students' Government

Student self-government protects the rights and interests of the students. Representatives of the youth are the members of the Academic Council, the general meeting of the working group, the selection commission of the Institute. All questions concerning the students are solved with the consent of the student self-government.

Head of Student Councils together with the Deans of faculties held the meetings of monitors of academic groups, conduct the monitoring of the learning process.

Bright page in the student self-government activities is international student scientific conferences. Intellectual and academic competitions are constantly conducted. The participation in the scholarship, industrial programs and grants have become very important for students in recent years.

The student labor units were organized to improve the material and technical base of the Institute. These units help in repairing work at the academic buildings and improving living conditions in the hostels. Students are actively involved in the work at teaching, research and production subdivision of the Institute.

Student Council together with the administration of the Institute conducts job fairs, workshops, roundtables regarding employment. The Institute tries to give the job to the best graduates. Over the past three years, almost 20 graduates have taken leadership positions in the most responsible sections of the Institute.

Parties, meetings with psychologists, health professionals and social services have become traditional and popular among students living in the hostels. Winners of the annual competition for the best room awarded with valuable gifts - home appliances.

Students are the initiators and organizers of many artistic, sporting and environmental programs at the Institute.

1.2.10. International activity

Nizhyn Agrotechnical Institute has rich experience in international cooperation with the partners from different countries.

The bright period in the history of the Institute was a three-year program of collaboration between educational establishments of Ukraine and the USA. The best students of Nizhyn Agrotechnical Institute took an active part in this unique project which was organized by NULES of Ukraine. The staff of the Jefferson-Scranton school of the state Iowa, the US, was their partner in the cultural exchange program.

In 2012, an agreement on cooperation between the Institute and the Industrial-Economic College named after academic H.S.Seytkasymov (Republic of Kazakhstan) was signed.

Nowadays the Institute closely collaborates with Poliske State University (Belarus), Belarusian Agricultural Academy, Velykolutskaya State Agricultural Academy (Russia), Mar'yinhorskiy Agricultural and Technical College after V.Lobanka (Belarus), Consular Department of the Embassy of Poland in Ukraine, the Public Affairs Section of the U.S. Embassy in Ukraine.

Annually over 50 students of the Institute take practical training abroad.

Young research workers communicate with the representatives of Fulbright Scholar Programs. Scientific-research collaboration with a Dutch Agrarian "Nunems" and a German-French-Ukrainian firm "Aventis" is fruitful.

1.3. SEPARATED SUBDIVISION NULESU «IRPIN ECONOMIC COLLEGE»

1.3.1. Historical reference

The educational establishment was created according to the order of the USSR Ministry of Agriculture since July 21, 1956 № 483 as agricultural technical school of accounting. Location of educational establishment is in Irpin City in the central part of Kyiv Region, at the distance of 27 kilometres from Kyiv - megalopolis with the developed business infrastructure, stipulated preparation of specialists of economic profile.

In accordance with the order of the Ministry of Agriculture and Food of Ukraine since 29.09.1992, № 103 Irpin agricultural technical school of accounting was renamed into Irpin economic technical school.

According to the resolution of CMU since 29.05.1997 № 526 the establishment entered the structure of the National Agrarian University as Irpin economic technical school and was given the status of college.

According to the rector's order since 20.01.2005 № 21 the college was reorganized in Separated Structural Subdivision of the National Agrarian University.

According to the rector's order of the university since 15.12.2008, № 827 on implementation of the Resolution of Cabinet of Ministers of Ukraine since 30.10.2008 № 945, the educational establishment was renamed into separated subdivision of the National University of Life and Environmental Sciences of Ukraine "Irpin Economic College".

1.3.2. Organizational Structure

Headmaster – Serhiy Mykhailov, Candidate of Economic Sciences, associate professor

Tel./fax: (4597) 6-20-04 E-mail: iek@irpin.com

Address: 08200, Kiev region, Irpin, Haharin str., 9.

ACCOUNTING AND AUDITING DEPARTMENT

Head of the department – a teacher of higher qualification grade **Lilia Chayka**

Tel.: (04597) 6-20-06 E-mail: speakerprof@ukr.net

The department organizes and coordinates the educational process of bachelors training in direction:

6.030509 «Accounting and Auditing»

Head of the department – a teacher of the first qualifying category **Viktoriya Sova**

Tel.: (04597) 6-20-07, E-mail: sova-vik@ukr.net

The department organizes and coordinates the educational process of junior specialists training in directions:

5.03050801 «Finance and Credit», 5.03050802 «Evaluation Activity», 5.03050901 «Accounting»

Cyclic committees:

Philology disciplines:

The head of cyclic committee – a teacher of the first qualifying category **Oksana Fedorovska**

Accounting disciplines:

The head of cyclic committee – a teacher of higher qualification grade **Tetiana Talko**
Finance and economics disciplines:

The head of cyclic committee – a teacher of higher qualification grade **Larysa Hurska**

MERCHANDIZING AND COMMERCIAL ACTIVITY DEPARTMENT

Head of the department – a teacher of higher qualification grade **Tetiana Semenenko**
Tel.: (04597) 5-42-20, E-mail: t_semenenko@ukr.net

The department organizes and coordinates the educational process of bachelors and junior specialists training in directions/ specialties:

6.030510 «Commodity research and Trading»,

5.03051001 «Commodity research and commercial activity»,

5.03050701 «Marketing Activity»

Cyclic committees:

Marketing and trade

The head of cyclic committee – a teacher of the first qualifying category **Svitlana Berezynets**

COMPUTER SYSTEMS AND NETWORKS DEPARTMENT

Head of the department – a teacher of the second qualifying category **Nataliya Biloshytska**

Tel.: (04597) 6-20-05, E-mail: biloshytska@ukr.net

Location: educational building № 2.

The department organizes and coordinates the educational process of junior specialists training in Specialty:

5.05010201 «Maintenance of computer systems and networks»

Cyclic committees:

Humanitarian and general disciplines:

The head of cyclic committee – a teacher of higher qualification grade **Nataliya Dal**

Informatics and computer technologies:

The head of cyclic committee – a teacher of the first qualifying category **Svitlana Demyanenko**

1.3.3. Teaching staff

Educational process is provided by 86 pedagogical workers, among them: 2 – Doctors of Science, 13 – Candidates of Science, associated professors; 29 – teachers of higher qualification grade; 5 – teacher-methodists, high achievers of agrarian education and science of Ukraine – 7.

1.3.4. Characteristic of material and technical base

Educational institution of SS of NULES of Ukraine «Irpineconomic college» is situated in Irpin on Gagarin street 9. Educational process and practical training of students are realized in four educational buildings.

To students' services – modern library, a 5 – storied hostel for 360 places, sports gyms, outdoor sports buildings – a stadium and sports ground. The first-aid station works to provide students with technical service. For nutrition of students the college has a dining-room for 160 people.

1.3.5. Information and Telecommunication provision

Computer network of the college consists of 280 computers and 6 servers. There are a number of different resources in college that provide students with electronic

educational and scientific materials. There are some points of wireless access to the Internet network on the base of WiFi technologies in educational buildings and on the territory of college. College participates in educational programs organized by Microsoft and gives students access to education of Microsoft Office service 365 (in the process of implementation).

1.3.6. Library

The library college occupies the area of 589,8 sq. m. There are 2 reading halls in the library. The fund of the college library consists of almost 50 thousand issues of books, magazines and other types of printed materials. More than 40 items of periodical professional magazines are written.

Reading-room of the library is equipped with a customer-activated terminal and 10 personal computers with the access to the Internet and local network. For the visitors of the reading-room was given an access to the Internet network by means of wireless technologies of WiFi. The e-catalog of available literature is being formed.

1.3.7. Educational, cultural, sports and social work

The primary objective of the college is youth education, forming positive motivation to life, harmoniously developed personality with profound professional knowledge, high national consciousness. Such college activities as Freshman Day, Student's Day, Memory Line of S.Lantushenko - college graduate who died in Afghanistan, events devoted to the occasion of receiving diplomas, "Cossack entertainments", Day of health and others are held in the college.

In the college 7 there are collectives of artistic independent action work: 2 dancing ensembles; a vaudeville ensemble; a vocal ensemble; an ensemble of drummers; a literary studio "Debiut".

The teachers of physical education have organized work of 10 sport sections of such types of sport as volley-ball (boys), volley-ball (girls), basket-ball, track-and-field athletics, table tennis, football, chess, checkers, weight sport, athletics gymnastics, aerobics. The leader of physical education coordinates work of sport groups.

Students have an opportunity to work and to have active rest on the black Sea coast in ICC "Artek" in summer period.

1.3.8. Student Government

Administration and trade-union committee of college create all terms for spiritual and intellectual development of students who are an active participant of preparation and realization of all events. Students' self-government in the college has been working during 13 years. The executive branch of student self-government is Student Committee of college. Student Committee of college together with a pedagogical collective and student trade-union committee conduct considerable work on preparation to the holidays, thematic evenings, conferences, in realization of works on planting of greenery, equipping hostels with modern amenities, work on territory of college, parks and public gardens of city etc.

1.3.9. International activity

The college began an international activity in 2003. Since then about 150 students passed productive practice on the farms of Germany, Sweden, Denmark, Czech Republic, Finland. The aim of practice is an integration of national agrarian community to outer educational space, fixing theoretical knowledge of students and study of practical experience of agriculture conducting in countries with the developed agrarian sector of economy. During practice students have the opportunity to become familiar with front-rank technologies of growing, processing, transporting, storage and

realization of agricultural production, study the experience of modern technique application, purchasing skills.

1.4. SEPARATED SUBDIVISION NULESU «ZALISHCHYKY AGRICULTURAL COLLEGE NAMED AFTER Y.KHRAPLYVY»

1.4.1. Historical reference

Educational institution was established in 1940 as Zalishchyky agricultural college on the base of gardening school, which had been functioning since 1898.

By resolution of the Council of Ministers of Ukraine, March 11, 1975 № 142 Zalishchyky farm-college was formed.

From July 11, 1988 № 189 Kopychyntsy agricultural college of accounting was joined to Zalishchytsky farm-college.

By decision of Cabinet of Ministers of Ukraine, May 29, 1997 № 526 Zalishchyky farm-college transferred under the governing of the National Agricultural University, preserving its legal entity.

By the order of rector of NAU №80 of March 2, 2001 the title "Zalishchyky Technical school of NAU" was changed into "Zalishchyky State Agricultural College named after Y. Khraplyvy of NAU"

By the order of rector of NAU № 391 of June 19, 2006 on the basis of "Zalishchyky State Agricultural College named after Y. Khraplyvy of NAU" was created Separated Structural Subdivision of NAU «Zalishchyky Agricultural college named after Y. Khraplyvy»

According to the resolution of Cabinet of Ministers of Ukraine on October 30, 2008, № 945, «Zalishchyky Agricultural college named after Y. Khraplyvy» became the Separated Subdivision of the National University of Life and Environmental Sciences of Ukraine.

1.4.2. Organizational Structure

Director of College – teacher-methodologist, honored educator of Ukraine, **Volodymyr Glova**

Tel.: (03554) 02/12/50, 2-32-50, E-mail: vp_nubipu@zakyh.org.ua

Address: 48600, Ternopil region, Zalishchyky, 52 Krushelnytska str.

Location: building №1 r. 216

Deputy Director for Academic Affairs – Mykhailo Sopylyuk

Tel.: (03554) 2-17-97, E-mail: smv@zakyh.org.ua

Location: building № 1 r. 215-A

The deputy director of educational work, practical training and employment promotion – candidate of economic sciences, **Ivan Mehedyn**

Tel.: (03554) 2-25-97, E-mail: zav_pract@zakyh.org.ua

Location: building № 1 r. 205

The deputy director on educational work – Lyudmyla Atamanchuk

Tel.: (03554) 2-19-76, E-mail: vyhovna@zakyh.org.ua

Location: building № 1 r. 211

Deputy Director for training and production work – Yaroslav Romanovych

Tel.: (03554) 2-66-19, E-mail: ndg@zakyh.org.ua

Location: building № 1 r. 203

ECONOMIC DEPARTMENT

Head of Economic Department – Larysa Strilchuk

Tel.: (03554) 2-28-97, E-mail: strilchuk@zakyh.org.ua

Location: building № 1 r. 215-A

Department organizes and coordinates the training process trains young specialists and bachelors by specialities and directions

5.03050901 "Accounting"

Cyclic commission of Accounting and bookkeeping disciplines

Head of cyclic commission – **Mariya Papushko**

Tel.: (03554) 2-28-97b E-mail: accounting@zakyh.org.ua

5.03050801 "Economics of enterprise"

Cyclic commission of Economic disciplines

Head of cyclic commission – **Yaroslava Padus**

Tel.: (03554) 2-28-97b E-mail: ekonomiks@zakyh.org.ua

5.03050702 " Finance and credit"

Cyclic commission of Financial discipline

Head of cyclic commission – **Yaroslav Hoholyk**

Tel.: (03554) 2-28-97b E-mail: finance@zakyh.org.ua

5.03050401 " Commercial activity"

Cyclic commission of Commercial disciplines

Head of cyclic commission – **Galyna Sytnyk**

Tel.: (03554) 2-28-97b E-mail: komerce@zakyh.org.ua

6.030509 "Accounting and Auditing"

Cyclic commission of accounting financial and economic disciplines

Head of cyclic commission – **Mariya Papushko**

Tel.: (03554) 2-28-97b E-mail: ekonomiks@zakyh.org.ua

AGRONOMIC DEPARTMENT

Head of Agronomic department – Roman Andrusyk

Tel.: (03554) 2-28-97, E-mail: zav_vid@zakyh.org.ua

Location: building № 1 r. 215-A

Department organizes and coordinates the training process trains young specialists and bachelors by specialities and directions:

5.04010602 "Applied Ecology"

Cyclic commission of Environmental and natural sciences

Head of cyclic commission – **Valentyna Peryt**

Tel.: (03554) 2-28-97b E-mail: ecology@zakyh.org.ua

5.09010103 " Production and processing of plant products"

Cyclic commission of Agronomic disciplines

Head of cyclic commission – **Lyubov Sopivnyk**

Tel.: (03554) 2-28-97b E-mail: agronomy@zakyh.org.ua

5.09010102 "Organization and technology of farming"

Cyclic commission of Agronomic disciplines

Head of cyclic commission – **Lyubov Sopivnyk**

Tel.: (03554) 2-28-97b E-mail: agronomy@zakyh.org.ua

5. 05010201 " Maintenance of computer systems and networks

Cyclic commission of Computer Science and Computer Engineering

Head of cyclic commission – **Orysa Oziminska**

Tel.: (03554) 2-28-97, E-mail: agronomy@zakyh.org.ua

6.090101 "Agronomy"

Cyclic commission of Agronomic disciplines

Head of cyclic commission – **Lyubov Sopivnyk**

Tel.: (03554) 2-28-97b E-mail: agronomy@zakyh.org.ua

CORRESPONDENCE DEPARTMENT

The head of correspondence department – Vasyl Gagalyuk

Tel.: (03554) 2-19-76, E-mail: zav_vid@zakyh.org.ua

Location: building № 1 r. 209 of

Department organizes and coordinates the training process trains young specialists and bachelors by specialties and directions:

5.03050901 "Accounting"

Cyclic commission of Accounting and bookkeeping disciplines

Head of cyclic commission – **Mariya Papushko**

Tel.: (03554) 2-28-97b E-mail: accounting@zakyh.org.ua

5.09010103 "Production and processing of plant products"

Cyclic commission of Agronomic disciplines

Head of cyclic commission – **Lyubov Sopivnyk**

Tel.: (03554) 2-28-97b E-mail: agronomy@zakyh.org.ua

5.09010102 "Organization and technology of farming"

Cyclic commission of Agronomic disciplines

Head of cyclic commission – **Lyubov Sopivnyk**

Tel.: (03554) 2-28-97b E-mail: agronomy@zakyh.org.ua

6.030509 "Accounting and Auditing"

Cyclic commission of Accounting financial and economic disciplines

Head of cyclic commission – **Mariya Papushko**

Tel.: (03554) 2-28-97b E-mail: ekonomiks@zakyh.org.ua

6.090101 "Agronomy"

Cyclic commission of Agronomic disciplines

Head of cyclic commission – **Lyubov Sopivnyk**

Tel.: (03554) 2-28-97b E-mail: agronomy@zakyh.org.ua

1.4.3. Practical training of students

Practical training is aimed at conducting laboratory and practical classes, education and practical training of students.

Students have practice at various enterprises of different ownership forms (farms "Danastra" "Perspective", "Volya" Zalishchyky district peasant farm "Mriya", Husiatyn District Agricultural Society with limited liability "Mayak", "Druzhba", "Galicia", "Dobrobut", "Fortuna", and others, total amount 40 farms, Ternopil, Chernivtsi, Ivano-Frankivsk and Khmelnytsky region).

Students of economic departments have practice at different enterprises which use advanced technologies in labor and production organization: farms, processing and

provision companies (organizations), enterprises (organizations) in the field of procurement supply and Pension Fund, Department of the Treasury, Department of Social Protection, Finance Department of the Regional State Administration, Department of Statistics, as well as leading banks - Sberbank, Privat, Raiffeisen Bank "Aval" UkrSibBank, Nadra Bank etc.

1.4.4. Teaching staff

In Separated Subdivision NULESU «Zalishchyky Agricultural College named after Y.Khraplyvy» there are 114 teachers. Among them: Full-time faculty – 97; Part-time – 17 people. Among full-time teachers there are: Candidate of sciences – 3; pedagogical title "Teacher-methodologist" – 21; pedagogical title "Senior Lecturer" – 6; Higher level of proficiency – 46; honorary title "Outstanding educator of Ukraine" – 15; honorary title "Honored Worker of National Education of Ukraine" – 1; honorary title "Outstanding Educator of Agricultural Science" – 2; honorary title "Honored Teacher of NULESU of Ukraine" – 3.

In 2012 – 12 teachers were certified. During the year 15 teachers had advanced training.

1.4.5. Characteristic of material and technical base

Educational, residential base of the college is located in a new built complex, which was put into operation in 1988. Academic building is designed for 960 students.

There is a dining room for 160 seats, a gym of 540 sq.m. There are two block type dormitories for 900 seats.

Forty-six classrooms and laboratories are equipped with separate rooms for classroom, laboratory and practical classes. All are equipped with technical facilities, projection equipment, tape-recorders.

There is a sports complex in the college, which includes: volleyball and basketball courts, mini-football court, sector in long jump, sector for jumps, circular running track, gymnastic camp with nonstandard equipment, soccer field, a study of theoretical training, gym, athletic gymnastics gym, shooting gallery, a wrestling room, chess class.

1.4.6. Information and Telecommunication provision

Information Support of the College plays an important role in the training process. There is a local computer network, which connect to the Internet all the hosts. The laboratory is created for lectures in on-line regime, where the teaching staff of the NULESU over bilateral telecommunication portal (software «Policon PVX») conducts lectures for college students. On College site (www.zkol.org.ua) a reference and consultative nature resource is created for part-time students' «Correspondance-course student information Newsletter» (<http://mail.zakyh.org.ua>), with which you can maintain bilateral relationship with students in terms of subject tasks performance and bring to their attention relevant information.

Database of e-books, a catalog of different disciplines teaching materials and the module-oriented dynamic learning environment "Moodle" are created on the server of the college.

All PCs are connected to the Internet in college. Supply of Internet channel is by provider of "Arhokom" of 20 Mbit / s.

1.4.7. Library

One of the main objectives of college library is to develop library fund in accordance with the profile of the college and the information need of all categories of users.

Today the library is equipped with 16 computer workstations, photocopying equipment, multimedia equipment. The library stock is 60,000 units and matches the content of educational, training and information library functions, which includes educational, scientific, popular science, reference, information, bibliographies in Ukrainian and foreign languages.

The library and reading room have a modern interior, comfortable and convenient for the readers and staff of the college.

1.4.8. Educational, cultural, sports and social work

Educational work has always been, is and will be an important part of the educational process. Its main goal - to create individual, endowed with social responsibility, national identity, high spiritual values, family and patriotic feelings, to create conditions for the development of creatively gifted young people, their individual qualities. Educational process of the college is done by: educational classes, meetings with interesting people, by involving students in amateur art activities, interest clubs, Y. Khraplyvy museum, library with internet centers, sports clubs, students' government.

In order to identify gifted students, the development of their creativity - a work of art groups and societies is organized in college: an amateur song and dance ensemble "Khlibodary", teachers and students choir, the choir of students (junior group), vocal ensemble "Namysto", female vocal trio vocal group "Namystynky", vocal group "Sokoly", circle pop singing (solos, duets, trios, quartets), dramatic circle "Provesin", clubs of interests "Svitoglyad", "Moloda simya", "Suchasnyk" CFW and sports clubs: basketball, volleyball, table tennis, soccer gym, wrestling, acrobatics, fitness group, football, weight-lifting sport, armwrestling, armsport (fight on the hands), athletics (basketball, volleyball, indoor soccer).

1.4.9. Students' Government

Students' Organization is a voluntary association of students' self-management, which includes: Students' Parliament, Students' Council leadership of college and primary trade union organization of students. The purpose of their work is a single students' environment, establishing constructive cooperation between the students' government, a comprehensive presentation of students' rights and interests, forming or improving leadership skills, basic skills in management areas.

Representatives of the student self-management participate in the scholarship committee meetings of other committees of College, which prepare issues relating to the learning environment, accommodation and students life.

With the initiative of the student union every month student newspaper "Success" is issued, the editors of which are students themselves.

1.4.10. International activity

College provides national and international cooperation, which aims to study the experience of experts training, information exchange about the latest educational technologies, creating conditions for training abroad, participation in various programs, improving work efficiency and strengthening existing partnerships.

College is developing cooperation in the following areas:

- Cooperation with French seed company "Tezier" Czech seed company "Moravosid", American company United Genetics (USA) by Nong Woo Bio (South Korea) and others in the field of vegetable growing;
- Students and teachers exchange with Union Field crops Schools (c. Namysliv, Poland), with educational institutions commune Kosice (Poland) and the Netherlands;

- International scientific conferences on research work of students and teachers;
- Organization of training college students in Germany and Austria for programs of NULESU of Ukraine, training in Denmark for the program of young farmers Union of Ukraine.

1.5. SEPARATED SUBDIVISION NULES OF UKRAINE «CRIMEAN AGROINDUSTRIAL COLLEGE»

1.5.1. Historical reference

History of the college began in 1828 from the State Magarachskiy vocational school of viticulture and winemaking, which later became Technical School of southern specific cultures, and in 1936 - Yalta Agricultural College.

In 1964 it was moved to the village Malenke of Simferopol region and reorganized in state farm – college of Crimean Experimental Station of Horticulture (Resolution of the Council of Ministers of the USSR on August 12, 1964 number 856) in 1993, reorganized in Crimean Agroindustrial College (Order number 265/ 155 from 27.09.1993, the Ministry of Education of Ukraine, and Ministry of Agriculture of Ukraine). According to the Order of the Ministry of Agrarian Policy of Ukraine from July 16, 2002 № 198 the College entered the structure of Crimean State Agrotechnological University.

According to the rector's Order of 05.01.2005, № 4 the College joined the National Agrarian University. According to the rector's Order of 21.11.2008, № 759 it was renamed into Separated Subdivision NULESU «Crimean Agroindustrial College».

Separated subdivision conducts training for the country's agricultural sector, agronomists, horticulture and olericulture specialists, wine growers and plant protection specialists, organizers and technologists of farms, experts in accounting and audit, assessment experts.

Research is aimed at studying the stability of new and promising varieties of vegetable crops, tillage methods, fundamentals of management consulting, assessment of the financial condition and balance sheet of the agricultural sector enterprises, and test of promising new varieties of fruit crops, biological impact on the efficiency of ahrofoska absorption by cereals in central zone of the Crimea and etc.

1.5.2. Organizational Structure

Director – Candidate of Economic Sciences, Associate Professor, Honored Worker of Education of Ukraine **Viktor Sochenko**

Tel./fax: (0652) 310-672

E-mail: aic-crimea@mail.ru

Address: 97517, Autonomous Republic of Crimea, Simferopol region, v.Malenke, Studentska Str., 1.

DEPARTMENT «ACCOUNTING AND AUDITING»

Head of the Department is Candidate of Economic Sciences **Yevgeniya Smernitska**

Tel. (0652) 325-617, E-mail: aic-crimea@mail.ru

Location: educational building № 2, room 48

Department organizes and coordinates the educational process of bachelors in the specialty:

6.030509 «Accounting and auditing»

And junior specialists in specialties:

5.03050901 «Accounting»

5.03050802 «Assessment activity»

DEPARTMENT «AGROTECHNOLOGIES AND PLANT PROTECTION»

Head of the Department is a teacher-methodologist, Excellence in Agricultural Education and Science of Ukraine **Lyubov Pronina**

Tel. (0652) 325-618, E-mail: aic-crimea@mail.ru

Location: educational building № 2, room 47

Department organizes and coordinates the educational process of bachelors in the specialties:

6.090101 «Agronomy»

6.090105 «Plant protection»

And junior specialists in specialty:

5.09010102 «Organization and farm technology»

DEPARTMENT «PRODUCTION AND PROCESSING OF AGRICULTURAL PRODUCTS»

Head of the Department — Valeriya Chechet

Tel. (0652) 325-549, E-mail: aic-crimea@mail.ru

Location: educational building № 1, room 26

Department organizes and coordinates the educational process of junior specialists in specialty:

5.09010103 «Production and processing of plant products»

DEPARTMENT OF PART-TIME EDUCATION

Head of the Department Excellence in Agricultural Education and Science of Ukraine **Iryna Lekh**

Tel. (0652) 325-549, E-mail: aic-crimea@mail.ru

Location: educational building № 1, room 13

Department organizes and coordinates the educational process of bachelors in the specialties:

6.090101 «Agronomy»

6.030509 «Accounting and audit»

Department organizes and coordinates the educational process of junior specialists in specialties:

5.09010103 «Production and processing of plant products»

5.03050901 «Accounting»

Cycle commissions:

General educational disciplines

Head of the cycle commission – teacher-methodologist, Honored Teacher of Ukraine

Lyudmila Cheremisina

Tel. (0654) 325-549, E-mail: aic-crimea@mail.ru

Socio-humanitarian disciplines

Head of the cycle commission – teacher of the highest category **Oleksiy Gubin**

Tel. (0654) 325-549, E-mail: aic-crimea@mail.ru

Professional-oriented disciplines

Head of the cycle commission – teacher of the highest category **Natalya Syvakova**

Tel. (0654) 325-549, E-mail: aic-crimea@mail.ru

Accounting and economic disciplines

Head of the cycle commission – teacher-methodologist **Natalya Remizova**

Tel. (0654) 325-549, E-mail: aic-crimea@mail.ru

Special disciplines

Head of the cycle commission – Candidate of Biological Sciences, teacher-methodologist **Vira Vetrova**

Tel. (0654) 325-549, E-mail: aic-crimea@mail.ru

Physical Education

Head of the cycle commission – teacher-methodologist **Lidiya Orlova**

Tel. (0654) 325-549, E-mail: aic-crimea@mail.ru

1.5.3. Practical training of students

Practical training includes laboratory and practical training, education and practical training of students.

Bases of practical training of the College are educational, scientific, educational, scientific and industrial laboratories of the basic institution of the University, its separate units.

The College uses such bases of practical training:

- Institute of Agriculture of NAAS of Ukraine and Crimea its departments - Department of intensive gardening, Department of Microbiology, Laboratory of vegetables and melons, Department of crop seed production and sort studies, Department of cultivation technology of aromatic and medicinal plants, Research Institute of Grapes and Wine "Magarach" NAAS of Ukraine, Nikitsky Botanical Garden, State enterprise (SE) "Crimean Garden";

- Phytosanitary Inspection Service of the Autonomous Republic of Crimea;

- OJSC "Privatbank", "Inprombank", Black Sea Bank for Reconstruction and Development.

The total area of land that is subject to these structures, is more than 23 thousand hectares, including about 10 hectares, experimental fields, greenhouses, orchards, vineyards, fields crop, tractor fleet, workshops, training grounds, workshops of fruit storage, winery and more.

Feature of bases for practical training of college is that laboratories and workshops, training and production practices are held in real production environment. Open report on the production (undergraduate) practice by best students is held in the production in front of the Commission (3-4 members), which includes experts from the enterprise and College Faculty.

1.5.4. Teaching staff

Educational process and research in SS NULESU "Crimean Agroindustrial College" is provided by more than 70 people scientific and teaching staff, including 9 Candidates of Sciences, teacher-methodologists – 20, teachers of the highest category - 28, the first category - 12 people, the second category - 6 people, professionals - 15 people.

26 people have state awards, honors and other distinctions: the title of "Excellence in Education of Ukraine" – 7; the honorary title "Honored Worker of Education of Ukraine" – 1; the title of "Excellence in Agricultural Education and Science" – 5; the honorary title "Honored Worker of NULES of Ukraine" – 6; the honorary title of "Distinguished Lecturer of NULES of Ukraine" – 1; the honorary title "Honoured Teacher of Ukraine" – 1; the honorary title "Honored teacher of the ARC" – 2; the honorary title "Honored Worker of Education of the ARC" – 4;

Currently in post-graduate school full-time and part-time 8 teachers lead the research work, 4 teachers are preparing to the defense of a thesis.

1.5.5. Characteristic of material and technical base

Separated subdivision has three academic buildings and mechanization Hall with total area of 10860 m², 6 dormitories for 620 seats, conference hall for 300 seats, a dining room for 250 people and buffets. Educational work is carried out in 36

classrooms and 24 specialized laboratories, six computer rooms equipped with modern office equipment. Information Centre is equipped.

The students and faculty can use library with 53,240 copies, more than 30 thousand titles of books, magazines and other printed matter, a reading room with 160 seats in a school building.

In the dormitories there is a room to relax, room for homework, there are sports grounds along with dormitories. Medical center is equipped in the dormitory №1. College has a rubber coated stadium, sport hall, gym.

Research farm is operating with a total area of 103.05 ha (86.98 ha of arable land), training and production workshops with area of 128 square meters and 70 pieces of equipment, problem research laboratory "Technologies of industry", "Crop Protection", and laboratories of Planting, Botany, Chemistry, Agricultural chemistry, Agricultural machinery, Information systems and Technology in the accounting, offices of foreign languages, special laboratories "Educational Bank "(with Pryvatbank), "Beekeeping".

College has hot water and heating.

Mini greenhouse with total area of 370 m² is constructed.

1.5.6. Information and Telecommunication software

Computerization of educational process in college is one of the main directions of improving the quality of training. 5 computer classrooms, more than 100 seats are equipped. 60 computers are combined into LAN and connected to the Internet. Multimedia laboratory is created, Information Centre is equipped, the library operates an automated information system IRBIS. Park of computers is constantly updated with machines of new generation.

The college has created and constantly updated information resources:

- College website (<http://nubip.edu.ua/node/1261>), which contains information about the institution, reflecting the events of its versatile life;
- Electronic Reading Room (<http://aic-crimea.narod.ru>), which provides students with training and teaching materials.

Each dormitory has the trunk cable bandwidth of 100 Mbit / s with the connection to the local network and Internet.

Establishment in 2013 throughout the college WiFi-zone with free access to the local network and the Internet raises informational and communicational software to a new level, creating new opportunities for the introduction of innovative interactive learning technologies.

1.5.7. Library

The main objective of the library is the quality provision with textbooks, manuals, additional and fiction literature for teachers and college students. Library provides library and information service for users to ensure all areas of the educational process of the college, program and extracurricular requirements, scientific and technical and research and independent work.

The area occupied by the college library is 240 m². Reading Room for 160 seats is situated at the educational building. Library Fund is universal, consists of about 54 000 copies (of which 44 000 are books and 10 000 are magazines). Each year the library subscribes about 36 titles of magazines and about 10 different newspapers. The Fund is completed with educational literature from all areas and specialties. College Digital Library Fund consists of about 200 documents, including electronic books and tutorials, lectures and practical tasks in all disciplines, methodological development of college teachers.

Library service is provided on subscription (academic and fiction) and reading room. Number of subscribers registered on all points of service is 2,490 people. The total number of visits to the library is 49220 people.

Total number of the given periodicals is 61,639 copies per year.

For the purpose of self-training, students have access to the internal LAN (electronic database in the specialty), the Internet. Electronic Reading Room provides full access of students and teachers to the database.

College Library works with the software "IRBIS". Analytical description of the articles is adjusted by which reference and information services to readers are organized based on electronic catalogs.

1.5.8. Educational, cultural, sport and social work

At educational work main attention is paid to the formation of citizen conscience, professional and social competence, democratic and law prospect, art and aesthetic education, development of creative skills physical perfection, labor, ecological and moral culture.

The Conception of educational work was established. A comprehensive plan of educational work is formed every year and according to it departments, cycle commissions, curators, dormitory educators, social teacher, teacher-organizer make their plan of educational work for this year.

The college established educational centers: Museum of the institution, exhibition of teachers and students' works, ethnographic exposition, clubs, press center, student council and student government, trade union, Student Research Center, University Student Health, "School Leaders" and "School success", monitors' council.

Art Board directs the work of amateur clubs, art groups and art clubs: "Harmony," "Red Cranberry", "The Magic Violin", "Dance line", "Best boys", "Vivat". There are clubs, historic and local history groups, literary rooms in the commissions of social and humanitarian disciplines and general educational disciplines.

Full number of students, faculty, college staff who participate in the amateur art clubs is more than 100 people. The structure of the group consists of amateur choral, vocal and dance group, whose repertoire is rich and varied: national, academic, modern songs and dances, "Crimean halo", STEM.

Traditional holiday celebrations and concerts, theatrical performances and shows, parties, Weeks of departments and cycle commissions, public meetings of subject groups are popular among students, faculty, staff,.

Amateur groups and its active participants are laureates, diploma and prize winners of international, national, republic festivals and competitions "Holosiivo spring", "Sofia stars", "Crimea is the pearl of Ukraine", "Golden Prague" and so on.

Sports Base of Separated subdivision of NULES of Ukraine "Crimean Agricultural and Industrial College" built in 1982 meets the modern requirements of physical education classes:

- 648 sq.m gym with fitness area;
- 9800 sq.m. stadium with a synthetic surface "Olympic", treadmills 350 m;
- Gymnastic floor 80 sq.m.;
- Chess club;
- Sports rooms in dormitories.

In college there are 8 sports sections in the following sports: rhythmic gymnastics, mini Soccer, athletics, athletic gymnastics, basketball, volleyball (women), volleyball (men) and table tennis.

College Athletes are Republican student winners of numerous sports competitions among universities of I-II accreditation levels of the Ministry of Agrarian Policy of Ukraine' on volleyball (women), mini-football, athletics, winners of Republican

Student Sports Day among universities of I-II accreditation levels of the Ministry of Education ARC on volleyball, mini-football, basketball.

The traditions of College are fall and spring sports, Care Day, Athlete Day, morning exercises.

To deliberate addictive education and a healthy lifestyle in college the program "Peer", "Isthmus" is working, which hold workshops, training, situational learning, business games, annotated reading.

Educators of dormitories, teacher-organizer and social pedagogue lead purposeful work with students to prevent associative phenomena, design wall newspapers, sporting events. In the councils of dormitories mass sports committee is created, coordinating the organization of sports activities in the dormitories.

The College has the social center of student support, which includes: a lawyer, a social pedagogue, head of the student union organization, members of legal, housing and household, sports and recreation commissions of student organization.

The main objectives of the center of social support for students are:

- accounting, organization and monitoring of financial support appropriate types of orphans and children deprived of parental care and social grants to other categories of students according to the legislation of Ukraine;
- formation of the draft order and materials for admission to full public support students from orphans and children deprived of parental care, as well as providing them with appropriate assistance for free accommodation in student dormitories, food, purchasing textbooks, clothes, shoes and soft equipment, providing annual financial support and assistance in finding employment after graduation;
- monitoring of reduced price meals in student canteens, college buffets;
- creation of the necessary conditions for recovery and rest of students;
- provision of medical centers and medical rooms;
- management of the shop and chemist's work;
- annual medical examinations of students and the organization of medical groups;
- assistance in organizing retreats for students outside the college on the related recreation (labor camps in Eupatoriya, Feodosiya in the Crimea, sport and health promotion "Student republic" based on SS NULES of Ukraine "Prybrehnensky Agricultural College");
- organization of student clubs, hiking in Crimea.

1.5.9. Student Government

Student Government is a school of leader education who gain not only business and management skills at the same time, emerging professional and social competence, creativity and research skills. Future specialists are given the opportunity for self-improvement and self-realization. Representatives of student organizations are members of the pedagogical council, the administrative council, scientific and technical council of the college.

Students are actively involved in the development and management decisions that affect the life of college, helps youth to self-realization in different kinds of social and meaningful activity. The main content of the student organization is the project "Sport and Health", "Culture and Creativity", "Science", "Socially useful work". The event organizers are the students, combined in the creative teams.

Student Organization includes Student union organization, Student Research Center, which includes Student Science Club "Intelligent", Student Scientific Society. There are press-center, video club, University of health "School of the leader."

The main objectives of the student government:

- Intensification of teaching and learning;
- Development and implementation of creative abilities;
- Stimulation of the interest of students to improve their intellectual level;
- Improvement of vocational training;
- Organization of intellectual competitions at various levels of "Student of the Year", "Best Student of the year of NULES of Ukraine", "Legal Proceedings" and so on;
- Development of tasks for intellectual contests;
- Summarizing, making proposals for material and moral incentives winners.
- Organization of students in academic centers;
- Organizing and conducting student conferences, seminars, round tables;
- Scientific information and publishing;
- Liaising with institutions, organizations and enterprises.

1.5.10. International activity

International activities in college started in 1970 in the following areas: organization of international conferences at the college, participation in international conferences of teachers, partnerships with relevant universities.

During this period, teachers and students to share experiences, participate in joint practical activities of agricultural establishments, visited Hungary, Bulgaria, Czech Republic, Canada, United States of America. At a college there were five international projects organized by the Association of Farmers of ARC:

- Agricultural Marketing in Ukraine (with the assistance of USAID, USA);
- Advanced storage technology of agricultural products (with the assistance of USAID, USA);
- Technologies of packaging products (Petryzalek, Switzerland)
- Workshop on using business model farming (Informica, USA).

Since 2006, the trial practice of students has begun at agricultural school Fachhochschule, (Soyest, Germany).

Since 2008 in cooperation with the Revenue-Vegetable Union of Baden-Vurtemberg (LVEO), organization "AgrarKontakt Internationale" (AKI) college students have undergone practical training in Germany farming.

Today the College cooperates with the Chisinau National College of viticulture and winemaking (Moldova), the Association of German farmers "AgrarKontakt Internationale", Praskoveysk Agricultural College (Russia), Higher College of Agrobusiness and Regional Development of Institute of Agriculture and Seed "Samples chiflik" (Bulgaria, Ruse), Central Institute of surveillance and control in agriculture (Czech Republic, Brno).

Teachers and students of educational institution are involved in international projects:

- RITA / STP-Study Tours to Poland "The principles of good governance and support activities for European integration in the Crimea";
- BRITISH COUNCIL "School of healthy lifestyle";
- German-Swiss project FIBL "Organic Farming in Ukraine".

1.6. SEPARATED SUBDIVISION NULES OF UKRAINE «NEMISHAEVO AGROTECHNICAL COLLEGE»

1.6.1. Historical reference

History of the college begins in 1912 with the opening of agricultural school in the village Myrotske, Kyiv region. This agricultural school trained specialists for the implementation of Stolypin agrarian reforms in Kyiv district council.

The school was built on the lands and resources prosperous farmer M.A. Kulyk. A minor part of the money was also made by council. These funds were built academic building for 120 people and living quarters for teachers. Academic building was preserved to this day. It's a building number 3.

During the period several times school changed its name and the direction of training. December 4, 1920 Myrotskyi agricultural college was opened in place of Myrotska agricultural school.

In 1965, the order of the Ministry of Agriculture of the USSR from 08.06.1965, № 487 the institution was renamed in Nemishayeve Agricultural College. The specialists from veterinary, breeding, agronomy, and later fish breeders and electrical engineers were trained there.

Later, on the base of Nemishayeve agricultural college and the farm "Ukraine" (v.Mykulychi, Borodianka district, Kyiv region) by the Resolution of the USSR Council of Ministers from 23 December 1968 № 651 was created Nemishayeve farm - college.

Order of the Ministry of Agriculture and Food of Ukraine from May 27, 1997 № 168 - Nemishayeve Farm College was reorganized into Nemishayevo Agricultural College and was transferred to the National Agrarian University. According to the Order of rector from 20.01.2005 № 23 College was reorganized as separated structural division of NAU.

According to the Order of rector from 15.12.2008, № 827 on the implementation of the Cabinet of Ministers of Ukraine from 30.10.2008 № 945 "Issues of National Agricultural University" College was renamed as Separated subdivision of the National University of Life and Environmental Sciences of Ukraine «Nemishayevo Agrotechnical College".

1.6.2. Organizational Structure

Director – Candidate of Agricultural Science **Valentyn Rozhko**

Tel. / Fax: (04577) 41-1-55

Email: nat_college@twin.nauu.kiev.ua

Address: 07854 Technikumivska Street, 1 Nemishayeve – 1, Borodianka district, Kyiv region 07854

Department «Veterinary Medicine»

Head of the department – **Pavlo Lazarenko**

Tel. (04577) 41-2-90

Email: nat_college@twin.nauu.kiev.ua

Location: building № 5, room 519

Department organizes and coordinates the training process of junior specialists in **specialty 5.11010101 "Veterinary Medicine"**

Department «Mechanization of Agriculture»

Head of the department – **Petro Bezdushnyy**

Tel. (04577) 41-2-90

Email: nat_college@twin.nauu.kiev.ua

Location: building № 2, room 214

Department organizes and coordinates the training process of junior experts in the field:

5.10010201 "Exploitation and repair of machinery and equipment for agroindustrial production";

5.07010101 "Organization and traffic regulation";

and training of bachelors in the direction:

6.100102 "Processes, machinery and equipment of agroindustrial production"

Department «Electrification and Automation of Agriculture»

Head of the department – **Olexander Sanchenko**

Tel. (04577) 41-2-90

Email: nat_college@twin.nauu.kiev.ua

Location: building № 8, room 812

Department organizes and coordinates the training process of junior specialists in specialty:

5.10010102 "Mounting, maintenance and repair of electrical equipment in agroindustrial complex"

and training of bachelors in the direction :

6.100101 "Power engineering and electrotechnical systems in agroindustrial complex'

Department «Agronomy»

Head of the department – the candidate of agricultural sciences **Lesia Malynka**

Tel. (04577) 41-2-90

Email: nat_college@twin.nauu.kiev.ua

Location: building № 2, room 228

Department organizes and coordinates the training process of junior specialists in specialty:

5.09010103 "Production and processing of plant products"

and training of bachelors in the direction :

6.090101 "Agronomy"

Department «Economics and Entrepreneurship»

Head of the department – **Viktor Zhyla**

Tel. (04577) 41-2-90

Email: nat_college@twin.nauu.kiev.ua

Location: building № 9, room 930

Department organizes and coordinates the training process of junior experts in the field:

5.03050401 "Economics of enterprise";

5.03050801 "Finance and Credit"

Department «Technology of production and processing of livestock products»

Head of the department – **Olexander Vergeles**

Tel. (04577) 41-2-90

Email: nat_college@twin.nauu.kiev.ua

Location: building № 4, room 409

Department organizes and coordinates the training process of junior experts in the field:

5.09010201 "Production and processing of livestock products";

5.09020101 "Fishery and aquaculture"

Extramural department

Head of the department – **Galyna Khomenko**

Tel. (04577) 41-2-90

Email: nat_college@twin.nauu.kiev.ua

Location: building № 4, room 432

Department organizes and coordinates the training process of junior experts in the field:
5.10010201 " Exploitation and repair of machinery and equipment for agroindustrial production";

5.10010102 "Mounting, maintenance and repair of electrical equipment in agroindustrial complex" and the process for bachelors following areas:

6.100102 " Processes, machinery and equipment of agroindustrial production";

6.100101 " Power engineering and electrotechnical systems in agroindustrial complex"

Cycles Commissions:

Socio – Humanitarian disciplines

Head of the commission – **Nataliya Kostyuk**

Tel. (04577) 41-2-90

Physical training and Motherland defence

Head of the commission – **Tetiana Atamanchuk**

Tel. (04577) 41-2-90

Mathematics and Natural sciences and Information technology

Head of the commission – **Tetiana Lukerchenko**

Tel. (04577) 41-2-90

1.6.3. Practical training of students

Practical training includes laboratory training, education and practical training of students.

The college has its own base for production practices:

- training and production workshop by area of 693 sq.m. with sections : fittering, turning, forging, welding, repairing of auto-tractor engines, carpenter, service station cars and tractors, mechanical processing of wood;

- industrial and educational laboratories of repairing: electrical equipment of agricultural machinery; power systems of internal combustion engines, hydraulic equipment, instrumentation and automation equipment, electric motors .

- educational and industrial base which has 852.1 hectares of land, livestock complex for 293 cattle, mechanized machines and tractors yard; training and production units: a laboratory of plants and animal laboratory.

The basic bases of practices: CJSC "Borodyanka SPMK -15", Institute of Agrarian Sciences of potato, Borodyanka state variety-research station, Ltd."Agro-Contrast", Ltd AP "Borodyanka - Auto", Borodyanka state district hospital of veterinary medicine.

1.6.4. Teaching staff

179 people are attracted to teaching at the college. Among them 166 people are at full-time faculty, 13 people work part-time.

Among full-time teaching staff are: Candidate of Sciences – 7 people, associate Professor rank - 1 person, pedagogical title "Methodologists" - 14 people, pedagogical title "Senior Lecturer" - 8 people, higher category - 54 people, labor title of "Honor" - 6 people, honorary title of "Excellent specialist in Education of Ukraine" – 3 people, honorary title "Honored specialist in Education of Ukraine" - 1 person, honorary title "Honored specialist NULES of Ukraine" - 1 person, honorary title "Honored Lecturer NULES of Ukraine" - 6 people, honorary title "Excellent specialist of education and science" - 8 people.

During the year improved their qualification 40 teachers and 10 masters of industrial training.

10 people are getting education at the Pedagogical Faculty at NULES of Ukraine.
 4 people study at the extramural department at post-graduate school, 1 person is a seeker.
 1 person in 2012 maintained thesis for Candidate of Science degree.

1.6.5. Characteristic of material and technical base

The total area of the college is 852.1 hectares; the total building area is 29269 sq. m., including 19231 sq.m. for training area. It has 3 hostels for 980 seats, conference hall for 360 seats, library with reading room for 120 seats, a dining room with 160 seats.

There are 7 computer classes in the college. Computers are connected to the Internet, provided unlimited access to the network for teachers and students.

In the hostels there are rooms for relaxation, disco, self-study. First-Aid Post. There are 3 reading rooms with 120 seats in the dorms. It has stadium, sport hall, gym, 4 playgrounds.

General information about the material and technical base is given in the table
 Information about educational material base

Objects educational and material resources	Indicators
1. Educational buildings, number	9
2. Hostels / seats	3/ 980
3. Laboratories and academic buildings	
- Total area, m ²	29269
- Study area, m ²	19231
- Per student, m ²	11.97
4. Laboratories, number	48
5. Rooms, number	66
6. Educational range, number	2
7. Equipment, the number	198
8. Equipment, the number	198
9. Training and production workshops, number	3
10. Gym (area m ²)	519
11. Stadium (area m ²)	1/ 6448
12. Playground (area m ²)	4/6928
13. Hall (seats)	1/360
14. Food Items :	
- Dining room (seats)	160
- Buffet (seats)	40
15. Reading Room (seats)	1/120
15.1. Reading room in the hostel (seats)	3/120
16. Computer classes, number of classes/number of computers	7/82
17. Computer classes in the hostels, number of classes, number of computers	-
18. Publishing Center	-
19. Class for Distance Education	1
20. First-Aid Post	1

Function complex of pre-conscription training of young man 310 sq.m. athletic and sports complex with area of 13376 sq.m.

Educational work is carried out in specialized laboratories and 114 offices with total area of 29269 sq. m., including training 19231 sq.m.

Educational and industrial laboratory operates with total area of 6.2 hectares, which includes training and production workshops area of 693 sq.m and 92 units of equipment, training and production laboratories crop animal breeding.

1.6.6. Information and Telecommunication provision

College computer network is a single network that unites 9 academic buildings and 3 hostels with access to Internet resources, a study of distance learning.

The base of electronic books was created and constantly update.

The college has English and Ukrainian website www.natk.ucoz.net, which continues to expand information. Useful Internet resources are used to obtain further education, choice of career and sphere of activity, constant improvement of professional knowledge, skills and so on.

Informational and communicational technologies enhance the role of active perception and distance learning. According to the requirements of the Bologna process the proportion of students in self-educational work with all curriculum subjects increases. Information and communication technologies and distance learning institution used by the college give an opportunity for students to provide e-learning resources for self-study tasks for independent work; can realize an individual approach to each student.

The use of information technology at the lessons allows making them more dynamic, interesting and memorable. Presentations, video lectures and speeches by experts in the field under study, and others are used

1.6.7. Library

College library puts its main objectives to ensure the necessary literature teaching and educational process at college, forming maximize resources, complete and quality service teachers and students, operational bibliographic information and services to users based on extensive access to library collections and global information resources.

The area occupied by the library is 566 sq.m. There are subscription and bright, cosy reading room with 120 seats.

The modern fund of the library is multipurpose. It has 125187 copies. Among them are: 32642-scientific, 56967-educational, 25127-fund of art, 10199- periodicals, valuable rare books - 252. Electronic database of books and educational books on non-traditional media supplement the fund of library.

Computerization of the library began in 2006. The library is equipped with 5 modern PC with software Irbis- 32, 3 printer, copier and scanner.

College Library serves 3010 users on a single reader form. There are 5896 users in the reading room and in the subscription. The average number of visits per year is 192078 people, 224087 copies of the books are given.

For the purpose of acquiring basic bibliographic skills to first-year students are held "Lessons of information culture ", in which students learn to search for information in an electronic catalog and through traditional directories and files, work skills with book, technique of writing essays, learn to make lists of references under to the new standards.

Library staff conducted informational and cultural events to help in the training and educational process. They are the days of information when users are informed about new items in the library, and the weeks of cycle commissions. Cultural work of

college library includes various forms and methods: literary evenings, reading conferences, meetings with writers of Kyiv region, etc.

1.6.8. Educational, cultural, sports and social works

The educational work in the college aims at forming harmonious development of the individual student, the education of patriotism and a healthy lifestyle. While in college, students are involved in active training in artistic groups and sports clubs, have the ability to be creative and to develop their professional skills. It was worked up the whole system of work with students in extracurricular time.

The department of educational and student affairs with the artistic directors of the college's House of Culture, teachers of cycle commissions of physical education and defence the Motherland, teachers of humanitarian disciplines, student government, curators of groups organizes and coordinates the educational activities.

Educational work in college is systematic, very rich genre and thematically. Traditional holidays are very important in the planning of this work, because tradition links the past with the future. This combination is felt in such activities as: Knowledge Day, graduation parties, funny festivals, festivals associated with folk customs and traditions, historical events in which our students, members of amateur develop their creativity. The most popular among students are performances of commands CFC club and annual competition "College Girl".

Students and workers of the college can show their creative ability in different clubs and circles constantly working amateur. There are amateur groups: vocal ensemble "Zoretsvit", dance ensembles "Art - Drive" and "Folk-Dance", a dance band "Zorbas", CFC club (96 people), and involving 188 full-time students.

There are 10 teams in the following kinds of sports: armwrestling, basketball, volleyball for boys and girls, weight sport, athletics, indoor soccer, table tennis, chess, checkers. More than 347 students are involved in sports clubs. More than 120 students are trained in the gyms. Teams constantly take part in the competitions at regional and national levels.

1.6.9. Student Government

Student government is widely introduced in the educational process. College Student Council is a voluntary association of college student government offices, established to attract young people to the socio - meaningful activities. Government operates on a voluntary basis, legality and transparency and equality of all its members. Student Council is independent of the effects of political, religious and civic associations or organizations.

A student union committee and council hostels operates at the level of the institution. Student team cooperates with regional and district organizations. The primary trade union organization of College Students was established with the purpose of representation, realization and protection of economic, social, labor, professional, religious rights and interests of its members.

1.6.10. International activity

College cooperates with the universities of Great Britain, Germany, Denmark, the Czech Republic, France, Italy where students are trained. The educational institution is a member of the international exhibitions, including "AGRO", where was notable by the awards at various levels, including the Gold Medal.

1.7. SEPARATED SUBDIVISION NULES OF UKRAINE «BOBROVYTSIA COLLEGE OF ECONOMICS AND MANAGEMENT NAMED AFTER O.MAINOVA»

1.7.1. Historical reference

Bobrovytsia College of economics and management named after O. Mainova, one of the oldest educational institutions of Ukraine, was founded in 1891 as Mainivska agricultural school. The school was opened in the town of Bobrovytsia which is situated in the south of Chernihiv region. The school name originates from the name of a local landowner O. Mainova in accordance with the will of whom that school was built. The school trained specialists for practical agricultural activity, agents for agronomic and cooperative organizations.

In 1920 the educational institution was reorganized into Mainivsky technical school. In 1964 on the basis of Mainivsky technical school there was created Mainivsky state farm – technical school which was renamed into Bobrovytsia state farm – technical school in 1980.

In 1997 Bobrovytsia state farm – technical school was reorganized into Bobrovytsia state agricultural technical school which was renamed into Bobrovytsia state agricultural and economic technical school in 2004.

According to the order of the Cabinet of Ministers of Ukraine dated December 7, 2005, № 497-r Bobrovytsia state agricultural and economic school was joined with National Agrarian University. In accordance with the order of Rector dated January 19, 2006, №20 there was created Separate Structural Subdivision «Bobrovytsia agrarian – economic technical school» of NAU, which was renamed into Bobrovytsia College of economics and management named after O.Mainova according to the order of Rector dated March 03, 2007, № 110.

College trains junior specialists - economists, financiers, accountants, managers and agronomists and zootechnicians, too.

In accordance with the order of Rector dated January 15, 2008 №827 the college was renamed into Separate Subdivision of National University of Life and Environmental Sciences of Ukraine «Bobrovytsia college of economics and management named after O. Mainova» in order to carry out the decree of the Cabinet of Ministers of Ukraine dated October 30, 2008 № 945 “The problem of National Agrarian University”.

1.7.2. Organizational Structure

Director - teacher-methodologist, excellent worker of education of Ukraine, Holder of the Order of Princess Olha, 3rd grade **Olha Hordienko**

Tel.: (04632) 2-53-01, fax: (04632) 2-53-02

E-mail: baetnau@rambler.ru

Address: 19, Chernihiv Street, Bobrovytsia, Chernihiv region, 17400

Deputy Director for academic affairs – teacher of the higher category, excellent worker of agricultural education and science **Yulia Petrenko**

Tel.: (04632) 2-53-08

E-mail: baetnau@rambler.ru

Location: educational building, room 16

Deputy Director for educational–practical activity – teacher-methodologist, teacher of the higher category, honoured pedagogical worker of National Agricultural University **Mykola Hudzenko**

Tel.: (04632) 2-53-07

E-mail: baetnau@rambler.ru

Location: educational building, room 6

Deputy Director for educational work – teacher-methodologist, teacher of the higher category **Natalia Shapoval**

Tel.: (04632) 2-53-07

E-mail: baetnau@rambler.ru

Location: educational building, room 3

Full-time department

The Head of department – teacher-methodologist, teacher of the higher category, excellent worker of education of Ukraine **Maria Martyshevska**

Tel.: (04632) 2-53-04

E-mail: baetnau@rambler.ru

Location: educational building, room 26

Correspondence department

The Head of department – teacher-methodologist, teacher of the higher category, excellent worker of education of Ukraine **Nina Zmihrodska**

Tel.: (04632) 2-53-09

E-mail: baetnau@rambler.ru

Location: educational building, room 37

Cycle commission of general educational disciplines

The Head of Commission– teacher-methodologist, teacher of the higher category **Tetiana Maliukh**

Tel.: (04632) 2-53-04

E-mail: baetnau@rambler.ru

Location: educational building, room 47

Cycle commission of socio –humanitarian disciplines

The Head of commission – teacher of the higher category **Alla Konyk**

Tel.: (04632) 2-53-04

E-mail: baetnau@rambler.ru

Location: educational building, room 42

Cycle commission of economic and accounting disciplines

The Head of commission – teacher of the higher category **Andriy Tkachenko**

Tel.: (04632) 2-53-04

E-mail: baetnau@rambler.ru

Location: educational building, room 80

Cycle commission of technological disciplines

The Head of commission – teacher of the first category **Valentyna Filatova**

Tel: (04632) 2-53-04

E-mail: baetnau@rambler.ru

Location: educational building, room 9

1.7.3. Practical training of students

Practical training involves carrying out practical and laboratory classes, educational and industrial practices of students.

Bases for practical training of the college students are:

- educational and educational-industrial laboratories of the college;
- experimental field of the college with the area of 3 hectares;
- research stations and research-training farms of the university;

- educational-scientific center of biology and ecology of subtropical plants and landscape studies of NULES of Ukraine (Yalta, the Crimea);
- botanical garden of NULES of Ukraine;
- leading companies, organizations and institutions of Bobrovytsia district: companies "Zemlia and Volia", "Svitanok", "Kozatske", PAE "Oberih", JSC "Rudkivske", company "Spivdruzhnist", financial administration, tax inspection, administration of pension fund.

1.7.4. Teaching staff

The educational process at SS of NULES of Ukraine «Bobrovytsia College of Economics and Management named after O. Maynova» is provided by 38 pedagogical workers with appropriate special education and working experience:

- pedagogical title «Teacher-methodologists» – 15;
- pedagogical title «Senior lecturer» – 15;
- higher qualifying category – 22 people;
- the honorary title «Excellent worker of education of Ukraine» – 6 people;
- the honorary title «Excellent worker of agricultural education and science» – 2 people;
- the honorary title «Honoured worker of NULES of Ukraine» – 1 person;
- the honorary title «Honoured lecturer of NULES of Ukraine» – 1 person;
- state award of Ukraine «The Order of Princess Olha, 3rd grade» – 1 person.

1.7.5. Characteristic of material and technical base

The educational process at the college is carried out in the educational – laboratory building, 38 studies and laboratories and two hostels.

18 studies and 20 laboratories have been certified, they have proper equipment, training and methodological support according to the requirements of the curricula.

Six computer laboratories and audio-video laboratory are equipped to study computers and to computerize the educational process; there was created information – publishing centre, too. In total there are 108 computers at the college. There are modern office appliances, computerized training accounting office. Demonstrational TV-sets, interactive whiteboard, video recorders, and multimedia devices are used in educational process. All computers labs, administration offices, accounting department and library are united into the local network with the Internet connection. Hostels are connected with the Internet with Wi-Fi technology. There is an auditorium and the reading hall equipped for carrying out on – line lectures and conferences with NULESU.

Experimental field of the college occupies 3 hectares, and provides practical training and organization of research work.

The college canteen has 200 seats and provides the necessary catering of students and the college staff.

Methodological centre of the college is the educational-methodological department with the methodological office.

Sport and health care complex is created for students and teachers, it includes a gym with the area of 450 square meters, plain sports facilities, tennis court, stadium, volley-ball and basket-ball courts, training gyms with equipment, gymnastic camp.

In the educational institution 9 representative teams in the following sports: skiing, kettlebell lifting, volley-ball (boys and girls), table tennis, track – and- field athletics, basket-ball, mini football, wrestling function.

Assembly hall of the college with the area of 600 square meters is designed for 480 seats, the variety of educational activities are carried out there; they are aimed at

organizing students' leisure parties, thematic parties, concerts, art reviews - contests, intelligence shows, contest-entertaining programs, meetings with prominent people.

Educational and material base of the college, which is constantly updated with equipment and literature, provides training of professionals in all specialties of educational level qualification "junior specialist".

1.7.6. Information and Telecommunication provision

New information and communication technologies are introduced in the college. Computer networks of the college are merged on the base of the Internet technologies into a single information system. The college site is created: www.bkeim.org.ua

A series of resource platforms operates in the college providing students with e-learning content:

- video lab enables to carry out interactive distance on-line classes for students of full-time and correspondence departments who study at the educational and consulting office of NULESU;
- a media room with the access to electronic resources FAO (AGORA) and the Internet.

The college has a library with the reading hall for 75 seats. Its funds number 56,660 copies of literature. The college library is equipped with computer appliances, in particular there is a computer in the subscription department and the reading hall has 5 computers.

1.7.7. Educational, cultural, sports and social works

The purpose of students' education in SS of NULES of Ukraine "Bobrovytsia College of Economics and Management named after O.Mainova" is gaining the social experience of succession and increasing the spiritual heritage of the Ukrainian people, developed spirituality, moral, artistic, aesthetic, legal, physical, labour and environmental culture by the growing up generation.

Organizational and educational work in the college is presented by the work of curators of academic groups and student councils of academic groups. Activity of the academic group's curator is regulated by "Regulations on the academic group's curator".

The deputy director for educational work organizes and coordinates the educational work of the college, provides consultative and methodological assistance to students in the problems of their rights protection develops and implements the incentive system for better students of the college, members of amateur groups and the best athletes of the college.

Educator works with the aim to organize goal-directed educational process, to back up the discipline on the territory adjoining to the hostel and to maintain discipline and order in the hostel. Educator of the students' hostel carries out lectures, trainings, individual work with residents of the hostel to maintain norms of coexistence in the hostel, to form healthy way of life, to prevent deviant behavior of students, and leisure parties, thematic parties, competitions for the best room of a section or a floor, too. Educator of the students' hostel carries out sittings of clubs, groups of interests, takes part in sittings of the council of the hostel, and organizes the hostel residents' leisure.

During the academic year the mass events, concerts, meetings of the club of cheerful and smart, meetings with veterans of war and labour, thematic parties, sports competitions and discos take place at the college for organization of meaningful leisure.

The following artistic groups and circles are functioning in the college and the deputy director for educational work coordinates their work: The Compere-Club; Cinema

Club "Mainivka"; Art Club; Law Club "Femida"; Girlfriend; Hospodarochka; Bibliophile; Young family; Hospitality; Club of cheerful and smart; Club of Ikebana art "Feng Shui"; Club "Service and Comfort."

The college has a sport base, which is presented by a stadium with athletic running tracks, a gym, a gym for heavy athletics, training rooms, wrestling room, outdoor ground for basket-ball.

Instructor of physical training coordinates the work of sports clubs. Students of the college may be engaged in the following sports clubs: Basket-ball (boys); Volley-ball (girls); Volley-ball (boys); Track-and-field athletics; Kettlebell lifting; Wrestling; Table Tennis; Ski Racing; Mini-football; Chess and draughts.

Highly qualified teachers of physical training carry out classes and training sessions in sports sections; one of them is a qualified coach in some sports.

In accordance with the "Regulations on the organization of mass sports work in the college" sports competitions are held annually at various levels:

- among the students of a new recruitment on the day of physical culture;
- between students of specialties, courses;
- between the inhabitants of student hostel;
- sports festival between students of academic groups;
- sports festival "Health" among the teaching staff and employees of the college.

The college teams compete at the local, district, regional and all-Ukrainian levels.

Primary trade union organization of students provides social support of students.

The students of the college can use the sport and health camp and the recreation center of the basic educational institution, and in summer period they have the opportunity to spend an active holiday on the Black Sea coast in the sports camp "Academichnyi", in the recreation center of the family type "Volna" and in the recreation center of Separate Subdivision of NULES of Ukraine "Prybrezhne agrarian college".

1.7.8. Student Government

Student organization is a voluntary association of student self-administration bodies of the college, which include: Student Council, the Primary trade union organization of students, Student Council of the hostel. This is a school of leadership, professionalism and creativity.

Student organization is not subject to political, religious and public organizations or associations. It was created by students as self-governing body which is to protect and represent the rights of students, organize students' leisure and recreation, affect the quality of education in the college, help students to self-realize and engage them in meaningful social activities.

The managing body of this organization is the student council, which collaborates with the student council of NULES of Ukraine and settles the problems of social protection of students, and organizes students' leisure.

Student organization includes interest clubs, too: The Compere-Club; Cinema Club "Mainivka"; Art Club; Law Club "Femida"; Girlfriend; Hospodarochka; Bibliophile; Young family; Hospitality; Club of cheerful and smart; Club of Ikebana art "Feng Shui"; Club "Service and Comfort."

With student organization there function: Club of the College Connoisseurs; Scientific Club; Social Center; Cinema Club "Mainivka"; Art Club; Law Club "Femida"; Club "Girlfriend"; Club "Bibliophile".

Student organization cooperates with student councils of educational institutions of the region, and that allows it to evolve, to find new prospects, undertake joint actions and implement projects.

A detachment for law support was created on the territory of the educational complex in order to prevent manifestations of the law infringement.

The work of art groups and societies was organized in the college with a view to identifying gifted students and development of their creative abilities: Choir "Yunist"; Vocal ensemble "Prolisok"; Vocal instrumental group "Nadia"; Folk dance group "Dzherelo"; Contemporary dance ensemble "Rytm"; Circle of art recitation "Deklamator"; Group of rap reciters "Rap Master"; Cossack band "Siverts".

Annually there are held contests at the college: "The college beauty", "Student of the year", "Your talents, first-year student," "Club of cheerful and smart" meetings, leisure parties, contests of newspapers, posters, chronicles of academic groups, snow sculptures, flower and Easter compositions. Students participate regularly in the international art festival "Holosiivska Vesna", in the competition "The Beauty of NULES of Ukraine", where they represent their college in a proper way.

1.7.9. International activity

SS of NULES of Ukraine "Bobrovytsia College of Economics and Management named after O.Mainova" cooperates with agricultural Lyceum of Retel (France), and that promotes adaptation to the requirements of Bologna process.

1.8. SEPARATED SUBDIVISION NULES OF UKRAINE «BOYARKA COLLEGE OF ECOLOGY AND NATURAL RESOURCES»

1.8.1. Historical reference

College as an educational institution originates from the «Practical school of beekeeping, gardening and horticulture» opened in October 1902 which located among the treasures of nature in the forest area.

Advantageous location of Boyarka in a semicircle of large green areas causes the favorable microclimate of the areas to create resort and recreational and health facilities. In Boyarka there is a museum and literary-memorial museum of M.O.Ostrovskiy.

College conducts training of specialists for the agricultural sector: ecologists, foresters, specialists of park-gardening and floriculture industry, economists, marketers, surveyors and programmers.

During its existence the educational institution several times changed its name and was reorganized.

In 1930, based on «Practical school of beekeeping, gardening, truck farming» Boyarka agricultural technical school was created.

November 30, 1957 in Kiev, Ukrainian Republican agricultural technical school of correspondence study was established. In August 21, 1959 according to the order of the Ministry of Agriculture of the USSR № 780 Ukrainian Republican agricultural technical school of correspondence study was transferred to the base of Boyarka agricultural technical school.

According to the Resolution of the Cabinet of Ministers of Ukraine № 526 dated 29 May 1997 «On improvement of the network of higher and vocational education institutions» College was transferred to the National Agricultural University with conservation of legal entity.

According to the order of the rector of the university from July 19, 2004 № 360 Boyarka agricultural technical school was reorganized and renamed into Boyarka College of Ecology and Natural Resources.

According to the decision of the Academic Council of the National Agrarian University from 30.12.2004 year and the order of rector of the National Agrarian

University from January 20, 2005 № 22 Boyarka College of Ecology and Natural Resources of NAU was reorganized into separated structural subdivision of NAU «Boyarka College of Ecology and Natural Resources».

In pursuance of the Resolution of the Cabinet of Ministers of Ukraine of 30.10.2008, № 945 «Issues of National Agricultural University» was issued an order of the Rector on renaming of separate structural subdivision of NAU «Boyarka College of Ecology and Natural Resources» in separated subdivision of the National University of Life and Environmental Sciences of Ukraine «Boyarka College of Ecology and natural resources».

1.8.2. Organizational Structure

Director – Candidate of Technical Science, Associate Professor **Sergiy Kropyvko**

Tel. / Fax: (044) 401-64-01

Email: bkeipr@ukr.net, bkeipr@mail.ru

Address: 08152, Kyiv region, Kyiv Svyatoshynskyi District, Boyarka-2

DEPARTMENT OF ECOLOGY, FORESTRY and PARK-GARDENING

Head of the department - teacher of the highest category **Roman Tasazh**

Tel.: (04598) 32-794 E-mail: tasazh2011@yandex.ru

Location educational building number 2 BR. 215

Department organizes and coordinates the training process of junior specialists in the specialties:

5.04010602 «Applied Ecology»

5.09010101 «Industrial floriculture»

5.09010301 «Forestry»

5.09010301 «Green construction and horticulture»

Cycles Commissions:

Of Ecological and Natural Sciences

Chairman of the Cycles Commission - teacher **Iryna Tereshchenko**

Tel.: (067) 726-27-48, E-mail: pasinok@i.ua

Of Agricultural sciences

Chairman of the Cycles Commission - teacher **Dmytro Burdeinyi**

Tel.: (096) 509-25-45, E-mail: dima_nb77@mail.ru

Of Forestry and Landscape Architecture disciplines

Chairman of the Cycles Commission - teacher **Lyudmila Stepanenko**

Tel.: (098) 486-77-65, E-mail: stepanenko.l @ rambler.ru

DEPARTMENT OF ECONOMICS AND MANAGEMENT

Head of the department - the teacher of the first category **Ruslan Yakymovskiy**

Tel.: (04598) 32-795, E-mail: ykimovski@ukr.net

Location: building № 1 room. 19

Department organizes and coordinates the training process of training of junior specialists in the field:

5.03050701 - «Marketing Activity»

5.03050802 - «Evaluation Activity»

5.03060101 - «Organization of production»

Cycles Commissions:

Of economic disciplines

Chairman of the Cycles Commission - Teacher **Catherine Melnyk**

Tel.: (097) 566-57-64, E-mail: ket.melnik @ mail.ru

Of Humanities and Social Sciences

Chairman of the Cycles Commission - Teacher Inna Bardenko
Tel.: (098) 935-57-79, E-mail: bardenko@ukr.net
Of Physical Education and Homeland Defense
Chairman of the Cycles Commission - Teacher **Roman Klih**
Tel.: (097) 447-25-99

DEPARTMENT LAND MANAGEMENT AND INFORMATICS

Head of the department - the teacher of the highest category **Natalia Grytsyshyn**
Tel.: (04598) 32-797, E-mail: n_grytsyshyn@mail.ru
Location: educational building № 1 room 39
Department organizes and coordinates the training process of training of junior specialists in the field:

5.05010101 «Maintenance of program systems and complexes »

5.08010102 «Land administration»

Cycles Commissions:

Of Land management disciplines
Chairman of the Cycles Commission - Teacher **Alla Pushkar**
Tel.: (067) 931-61-38, E-mail: pushkar@a.ua
Of Information Technologies
Chairman of the Cycles Commission - Teacher **Tetiana Pentsak**
Tel.: (098) 765-42-26, E-mail: t.pentsak @ gmail.com
Of Physics and mathematical disciplines
Chairman of the Cycles Commission - Teacher **Maria Puziy**
Tel.: (097) 537-00-06, E-mail:

1.8.3. Practical training of students

Practical training includes conducting of laboratory and practical training, educational and industrial practices of students.

Bases of practical training of college students are educational, scientific and industrial laboratories of the college.

The college has its own base of practical training:

- training and production workshop area of 510 m²;
- educational, scientific and industrial laboratories: of cadastral surveying and project works, of quality control and safety products, of telecommunication systems, of greenhouses, of open ground, of Dendrology, nursery of ornamental crops, of landscape design, of beekeeping.

In addition for the practice in geodetic College has a geodesic polygon.

The total area of land that is subject to college is 60.14 ha.

1.8.4. Teaching staff

Educational process in Colleges is provided by 77 teachers, including: staff teachers - 68 people, jobholders - 9.

Among staff teachers are:

- Candidate of Sciences - 6 people;
- academic rank of Associate Professor - 1 person;
- Pedagogical title «methodologists» - 11 people;
- Pedagogical title «Senior Lecturer» - 5 people;
- the higher qualifying category - 28 people;
- The honorary title of «Excellence in Education of Ukraine» - 5 people;

- The honorary title «Excellence in agricultural education and science» - 1 person;
- The honorary title «Honored Worker of NULES of Ukraine» 3 people;
- The honorary title of «Distinguished Lecturer of NULES of Ukraine» - 2 people;
- labor distinction «Badge of Honor» - 2 people.

Teaching staff can have advanced training at the faculty of advanced training of NULES of Ukraine, and at the other educational institutions. During the year 21 teachers have raised their qualification.

In addition, 4 people get pedagogical education, including 4 people at the Pedagogical Faculty of NULES of Ukraine.

5 teachers have completed training in postgraduate study and are working on the completion of dissertation researches.

Study in postgraduate study: the day time form - 4 people, for extramural - 4 people. In 2012 1 person defended dissertation for the degree of Candidate of Sciences. In 2012 the teaching staff of the college was replenished with 8 young teachers.

1.8.5. Characteristic of material and technical base

Educational process and practical training of students is conducted in 4 academic buildings, as well as educational, scientific and industrial laboratories. All of them have modern material and technical equipment which is necessary for efficient learning process.

The students are offered a library with over 45 thousand copies, of which more than 12 thousand titles of books, magazines and other printed matter. Campus – 2 hostels that are home to 30% of full-time students, dining room, canteen and more.

Sports Complex of College has an outdoor stadium, two sports grounds and indoor sports and gymnastic halls for physical training and sports.

1.8.6. Information and Telecommunication provision

The introduction of information technologies in the educational process and management is the strategic direction of activity the college. In this case:

- a local computer network is set up;
- Wi-Fi network for students for free access to Internet resources is set up;
- information resources and technologies are constantly developing;
- experience of implementing technologies of distance education is studied;
- organizational management structure of the educational process is improving.

The intensity of introduction of innovations in college confirms completion and upgrading of computer and software packages and information technology, the creation of library network, the network of electronic communication in college with access to the Internet.

Laboratories of «Computer Science and computerization» and «Telecommunication Systems» are created. Laboratory of "Telecommunication Systems" provides debugging of telecommunications technology, creating online resources, provides document storage on a server college, works on a collection of electronic documents in the form files with text, graphics or multimedia information:

- electronic copies of collections (fund of active demand, fund of Local History, fund of rare and valuable books, etc.);
- electronic copies of articles;
- electronic versions of literary and journalistic publications.

It makes good use of information technology in the study of learning material and provides access to the various students to e-learning materials.

In order to further develop and expand the list of Electronic Resources College and improve services resource use and analysis of applications users to the site are constantly monitored.

1.8.7. Library

College library is an information basis of pedagogical and scientific processes, the creative laboratory of resources and services which largely depends on the content of teaching and educational work.

Total area is 170 sq.m library, reading room area - 85 square meters, the number of seats in the reading room - 30. The students are offered book stock over 45 thousand copies, more than 12,796 titles of books, magazines and other printed matter. In recent years, the library replenished monthly.

Library combines traditional and electronic information resources, individual and corporate methods, solve the problem of cultural activities, library implements innovative technologies.

Bibliographic processing of electronic documents is carried out using ALIS IRBIS.

The unified library fund is created according to thematic plan of acquisition and card index of book provision of the learning process.

To the attention of teaching staff and students are offered online databases, encyclopedias, coming on optical disks and is owned by a library.

Innovative climate is the basic condition of the development of the library. Librarians are intermediaries between the user and information.

To meet the needs of students, providing rapid access to all library and information resources as its own production and purchased, the library develops and actively implements modern achievements in information, communication and multimedia technologies in library processes.

1.8.8. Educational, cultural, sports and social works

The purpose of educating students in college is the acquisition by the younger generation of social experience, inheritance of spiritual heritage of the Ukrainian people, to achieve high culture of international relations, developed spirituality, physical perfection, mental, moral, artistic, aesthetic, legal, political, labor and environmental culture.

To purposeful organization of the educational process, maintain of discipline and order in the student hostels of the college the position of educator is put and the schedule of alternation of teachers in the evening is compiled.

Educator spends lectures, workshops, seminars, individual work with student's dorm residents on education of healthy lifestyles and prevention of antisocial phenomena, contests for the best rooms, sporting events, organized design wall newspapers.

Organizational and educational work at the departments is represented by the work of heads of the academic groups and the student council.

The deputy director on educational work organizes and coordinates the educational work in college, provides consultative and methodological assistance to students in the protection of their rights, develop and implement an incentive system to life for the best students, community activists, members of amateur groups and top athletes.

During the school year for leisure in the college events, amateur performances, meetings with war veterans, themed parties, sporting events, discos regularly hosts.

In the college various amateur art activities are functioning, art directors coordinate their work. These are: solo singing; girl vocal group «Kalyna»; vocal ensemble «Rondo»; choreographic ensemble «Prolisok (Snowdrop)»; choreographic ensemble «Funny boyarchany»; drama group «OGO»; instrumental performance (flute, guitar); instrumental ensemble «Holtstrim»; instrumental ensemble «Watercolor»; vocal ensemble «Ukrainian».

The college has sport base, which includes: football stadium with athletic running track, sports and gyms, open areas for basketball and volleyball.

The cyclic commission of Physical Education and Homeland Defense coordinates the work of sports clubs. The college students can engage in 12 sports clubs: basketball - men; volleyball - women; volleyball - male; athletics; chess; weight sport; checkers; table tennis; ski racing; wrestling; football; mini soccer.

Classes in the sports sections are conducting by the teachers of the Cycle Commission of Physical Education and Homeland Defense who has the qualification of coach from some kinds of sports.

Under college teams participate in competitions of district, regional and national level. Top athletes are sent to participate in international competitions.

Social support of student learning ensures the fulfillment of basic social functions, such as education, employment, communication with people. The goal of this support is ensuring the integration of students into the college student environment, and then - in the society, providing them with an active social life, forming their self-esteem and respect for those around them, promoting their self actualization, self-improvement, and their complete socialization.

Social support is carried by the heads of the departments, curators of educational groups, teachers, and educators of hostel.

Social support begins at the stage of entry into college. Then it turns out the state of readiness for training, needs, financial situation and features of future student.

The financial incentives for student academic achievement, scientific work and social life (providing scholarships, awards, financial aid) may be one kind of financial assistance. This promotion is important for the education of students.

A very important component of social support is to involve students in active participation in the social life of the college. Election of students in the student government, the trade union committee and other events are a sign of trust and respect for the students' confidence in their abilities, recognizing them on equal terms.

Participation of students in civil society an organization increases their independence, strengthens an active life position, and promotes unity in solving common problems. College students take part in various amateur clubs, cultural events, including competitions, festivals, exhibitions, concerts.

Sports and recreation accompaniment begins with the first day of college. The main purpose of sports is to form a support for physical education of youth, improvement of their physical and mental health, physical fitness, increased motivation for self-improvement, maintaining a healthy lifestyle. Educative aspect of this support is to develop students' awareness about their health and the pursuit of systematic self-study exercise and sports.

Each lesson in physical education or sports section begins with a rapid assessment of the health and physical capacity of students to elect one of the varied programs of physical education or sports training.

Periodic inspection of the physical fitness of students is conducted one time per semester. This survey helps to adjust the program of physical education classes or sports depending on the dynamics of physical development and physical fitness level of students.

Medical and rehabilitation accompaniment is a necessary component of support of student learning in college. Modern students often have lowered immunity, increased susceptibility to infectious diseases, chronic diseases. Therefore, continuous monitoring of their health status, the introduction of preventive health measures, rehabilitation and restorative care are essential components of this type of support.

The place of medical care operates in the college. Its work includes:

- emergency aid;
- interviews, analysis of medical information and determine the health of students;
- continuous monitoring of the health of students, passes their classes due to illness, maintaining medical records of students;
- control the passage of students the fluorography examination and implementation of vaccination;
- promoting healthy lifestyles;
- involving in the formation of groups of physical education;
- medical support of sports events and competitions.

1.8.9. Student Government

Student government in college is a guaranteed right of students individually or through representative bodies to solve issues within their authority. In student government students are involved who are studying in an educational institution in all forms of education. Every student has the right to elect and be elected to the student government.

College Student Council is made up of the most active students on selective basis and performs functions such as approving the plan of development the student government for a year, represented by Student Council, approval of reports on the activities carried out by Student Council, approval of regulations and consideration of issues arising in the course of College life.

Meetings are held by the head of the student council at least once a month and communicated to the administration of the institution.

1.8.10. International activity

College has started its international activities since 2006.

In order to become a good future specialist, every student must learn and explore both domestic achievements of science and technology, and other countries of the world. Continuing the exchange of experiences between students and professors from leading universities in Europe is conducted.

Each year, teachers participate in international conferences, seminars, symposia, etc.

1.9. SEPARATED SUBDIVISION NULES OF UKRAINE «MUKACHEVE AGRICULTURAL COLLEGE»

1.9.1. Historical reference

In 1929 a three-storeyed brick agricultural school was built by V.Voyachyk's firm, to which in 1930 the state foundation admeasured 35 ha of tillage, and the construction of farm and barn housing for cattle was completed.

On the basis of this school, on the proposal of Zakarpattia Ukraine People's Council, the Council of Ministers of the USSR established Mukacheve Agricultural Technical School on the state form of property by their Order No.8499 as of July 9, 1946.

In 1950 on the basis of the technical school a zootechnical department was set up. At that time the education and research farm already had 116 ha of holdings.

By Order No.442 as of April 25, 1952, of the Ministry of Agriculture of the Ukrainian SSR an extramural department was established at the technical school with such specialties: agriculture mechanization, zootechny and agronomy.

In 1958 an accounting department was launched at the technical school, and in 1965 a department of veterinary medical assistants was opened.

In 1968-1970 the existent facilities were completed with a new building having an assembly hall and a gym.

By Order No.5-k as of January 31, 1969, of the Ministry of Agriculture of the Ukrainian SSR the technical school was renamed Mukacheve State Farm - Technical School, and according to Order No.99 as of March 30, 1998, of the Ministry of Agro-Industrial Complex of Ukraine it was renamed Mukacheve State Agrarian Technical School.

In 2003 a law department started its functioning at the school.

By Order No.93 as of March 2, 2006, of the Ministry of Agrarian Policy of Ukraine, Mukachevo State Agrarian Technical School was renamed Mukacheve State Agrarian College.

The same year the college launched a new department – the tourism department.

By Orders No.199/136 as of March 21, 2007, of the Ministry of Agrarian Policy of Ukraine and National Agrarian University, and by Order No.207 as of April 20, 2007, of National Agrarian University, Mukachevo State Agrarian College was reorganized into a separated subdivision of National Agrarian University “Mukachevo Agricultural College”.

In 2008 the enrollment of students started for the specialty “Finance and Credit”.

According to Order No.827 as of December 15, 2008, of National University of Life and Environmental Sciences of Ukraine, separated structural subdivision of National Agrarian University “Mukacheve Agricultural College” was renamed Separated Subdivision of National University of Life and Environmental Sciences of Ukraine “Mukacheve Agricultural College”.

1.9.2. Organizational Structure

Director – candidate of economic sciences, high achiever in education of Ukraine
Nadia Balazh.

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

Address: 32, Matrosova Str., Mukachevo, 89600

DEPARTMENT OF AGRONOMIC AND LAW DISCIPLINES

Head of Department – Olha Hudzovata

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

Location: educational building № 1

The Department organizes and coordinates the educational process of junior specialists train by the following specialties:

5.09010102 “Organization and Technology of Farming”

5.09010103 “Production and Processing of Plant Products”

5.09010102 “Land administration”

5.03040101 “Jurisprudence”

Cycle Commissions:

Agronomic Disciplines

Head of Cycle Commission – Natalia Doctor

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

Law Disciplines

Head of Cycle Commission – **Mykhailo Rusyn**

Tel./fax: (03131) 2-20-20 Email: misharusin@yandex.ru

ACCOUNTING DEPARTMENT

Head of Department – Natalia Harapko

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

Location: educational building № 1

The Department organizes and coordinates the educational process of junior specialists train by the following specialties:

5.03050801 “Finance and Credit”

5.03050901 “Accounting”

Cycle Commission:

Head of Cycle Commission – **Natalia Chovriy**

Accounting Disciplines

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

TOURISM DEPARTMENT

Head of Department – Stefania Poluha

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

Location: educational building № 1

The Department organizes and coordinates the educational process of junior specialists train by the following specialties:

5.14010301 “Tourist Service

Cycle Commission:

Touristic Disciplines

Head of Cycle Commission – **Yevheniy Rusyn**

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

VETERINARY MEDICINE DEPARTMENT

Head of Department – Attilo Leheza

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

Location: educational building № 1

The Department organizes and coordinates the educational process of junior specialists train by the following specialties:

5.11010101 “Veterinary Medicine”

Cycle Commission:

Veterinary Disciplines

Head of Cycle Commission – **Lesia Kyrylenko**

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

CYCLE COMMISSIONS OF COMPREHENSIVE DISCIPLINES

Location: educational building № 1

Cycle Commission:

Natural-Mathematical Disciplines

Head of Cycle Commission – **Zoreslava Marhitych**

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

Cycle Commission:

Socio-Humanitarian Disciplines

Head of Cycle Commission – **Ivan Schur**

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

Cycle Commission:

Philological Disciplines

Head of Cycle Commission – **Natalia Fedelezh**

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

Cycle Commission:

Foreign Languages

Head of Cycle Commission – **Natalia Sofilkanych**

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

Cycle Commission:

Physical Education and Sport

Head of Cycle Commission – **Volodymyr Medvid**

Tel./fax: (03131) 2-20-20 Email: mdat1@yandex.ru

1.9.3. Practical training of students

Practical training involves laboratory and practical classes, students' educational and work practices.

For educational and work practices the educational-production base is functioning, which consists of the research fields, training and production workshop area 1170 sq. m and 14 engineering units.

The main bases of practical students training are: ZSAT "Shenkor", STOV "Kliachanivske", STOV "Khliborob-Rakoshyno", Mukachevo regional State Administration, Mukachevo State Executive Service and others, also the research fields of the college.

1.9.4. Teaching staff

In the College 97 people are involved to the teaching work.

Of them: staff workers – 87 people; by-workers – 10 people.

Among the staff workers have: scientific degree of candidate of sciences – 3 people; pedagogical titles of "Teacher-methodologist" – 9 people; pedagogical title "Senior teacher" – 6 people; the higher qualifying category – 29 people; high achiever in education of Ukraine – 3 people; high achiever in agricultural education and science of Ukraine – 4 people; honorary title "Honored Worker of NULES of Ukraine" – 1 person.

1.9.5. Characteristic of material and technical base

The total area of the college is 119,1ha; the total area of the buildings is 16440m², including the educational area 14194, 71m². The institution has two hostels, which have 300 places, Assembly Hall on 280 seats, library with the reading hall on 155 seats, and a canteen on 220 seats.

There are 8 computer classes in the college, the computers have internet connection, teachers and students are provided by unlimited Internet

The hostel has a room for relax, study room, sport room, and one medical cabinet. The hostel also has a Teenagers' Club and Assembly Hall on 120 seats, also foreign languages rooms.

The institution has a stadium, sport gym, 1 sport club, and a sport ground.

The educational work is conducted in 35 specialized classrooms and 30 laboratories, their total area is 16440m², including study area 14194,71 m².

The licensed computer programs are installed, such as Microsoft Office XP, 1C: Enterprise 7.7, archiver WinRar, WinZip, text recognition program ABBY Fine Reader 7.0, typing tutor, interactive add-in Total Commander, test program Assistant, information-search system Liha-Zakon, World's Cuisines, «BEST-ZVIT».

Current repairs of all classrooms and laboratories were done.

Educational-training base is functioned, it includes research fields, educational-training workshop, its area is 1170 m², it has 11 engineering units.

1.9.6. Information and Telecommunication provision

The main task of the College is the preparation of highly qualified specialists for the agrarian sector of economy, that are able to use computer technologies at the level of modern demands.

The infrastructure of the college provides students with information and educational resources. In the whole of the college, taking into account the entire computer park, the providing is 5,7 students per 1 computer. At the end of 2012 as part of the information system of National University of Life and Environmental Sciences of Ukraine, operates 135 computers. All academic buildings has trunk cables of local network with high bandwidth in each direction, the network equipment was established, that works with Wi-Fi, and on its base a separated local network with free Internet access was created.

The College Library also has computers that contain electronic versions of educational-methodological support and free access to going online.

The College also conducts remote sessions with teachers of the basic university for the students of the educational and informational consulting department.

1.9.7. Library

The Library of the Mukacheve Agrarian College is an educational, informational and cultural subdivision, which provides by printing and information materials, the educational process.

The area of the library is 295,1 square meters. The library is diversified, and contains 53387 books and periodicals. Library readers service is checked on one subscription, in one reading room to 155 seats. The extensive library system has possibility to serve 1650 readers a year, including 1290 students. The library hands out about 140000 books per year.

Today the library is a scientific-information center of the College, it is very important in the information space. Performing the functions of informational, scientific, educational and cultural center of the College, the library provides the necessary information to all levels of education. The library is actively working towards creating, renovating, and actualization of the books fund.

Together with the college the library is developing and renovating. According to the needs of the educational process, the subjects of books complication is changing, expanding the information base, increasing the books fund

Today, the library, having the chance to show all the wealth of his own funds, promotes the new services, it has the possibility to satisfy the requests of users, and readers have the opportunity to use the possibilities of the Internet, e-mail.

The main task of the library is to satisfy the interests of readers of the books, the periodicals, formation the students' information and culture, the comprehensive provision of information materials for the learning process.

Library staff work is focused on effective information support of the scientific, educational process and research work of the College. The library actively cooperates with cycle commissions; this contributes to strengthening the educational and training work among the students.

1.9.8. Educational, cultural, sports and social works

The purpose of educating students in Mukacheve agrarian college is gaining younger generation of social experience, inheritance spiritual heritage of the Ukrainian people, to achieve high culture of international relations, the formation of young people,

regardless of nationality, identity as citizens of Ukraine, developed spirituality, physical perfection, mental, moral, artistic and aesthetic, legal, political, labor and environmental culture. To achieve this goal inter- college plan of educational work.

Deputy Director on educational work organizes and coordinates the educational work college together with the circle of Physical Education, humanities, student government institutions and hostels organization.

During the school year different holidays performances, meeting with war veterans, amateur performances, theme parties, sport competitions and disco parties are held. In college organized work of art groups and societies, sports clubs and recreational groups are organized. They are aimed to identify gifted students, to develop their creativity.

In Mukacheve agricultural colleges there are a number of studies, groups and special interest groups which have engaged over 80 students from different departments. Along with teaching college students raise their cultural level.

At the college there are: Vocal Studio "Yunist", Vocal Group "Dzherelo", Folk dance group "Fountain" Circle of solo singing, Circle of Creative Arts "Charivnytsa", Circle of artistic expression.

In college sports facilities include an outdoor sports complex (with two handball pitches, two volleyball courts, football pitch and gymnastic complex) and a sports hall with two rooms adapted for table tennis and athletic gymnastics classes.

Circle has 6 sections: Basketball (boys), Volleyball (mixed), Greek-Roman wrestling, Athletics, Football (boys), Health Group.

1.9.9. Student Government

College Students Council is the students' self-government body. It carries out an independent public activity of University management functions that are defined by the provisions of the Student Council Government and carried out by students in accordance with the purposes and objectives of the student groups.

Student Government in College provides the protection of the rights and interests of persons who study in College, their participation in the management of the institution. Students who study at the college can take part in Students Self-Government. All of these students have equal right to participate in the Student Government.

College Students Council has extensive support and help of College Administration in matters of providing facilities, equipment, documentation, costs.

The activity of the Students Council is determined by the priority directions, for this purpose such committees were created: protection of students rights, sports, educational work, informational and cultural.

Students life is fixed on the pages of the independent students newspaper "Studlife", the publication of which is released by the committee of Students Council

During the year, permanent performances are held, such as: "Miss College" and "Mister College", charity event "Kindness will save the world", fair-contest "Gold Autumn" and "Easter Pysanka", sport events, intellectual games, cultural events, rest evenings, etc.

Students Council co-operate actively with different organizations throughout Ukraine: Students Council of Zakarpatska oblast, Students Organization of National University of Life and Environmental Sciences of Ukraine, Ukrainian Students Council at the Ministry of Education in Ukraine and others.

1.10. SEPARATED SUBDIVISION NULESU «BAKHCHISARAY COLLEGE OF CONSTRUCTION, ARCHITECTURE AND DESIGN»

1.10.1. Historical reference

Bakhchisaray College of construction, architecture and design was created in 1950 on the basis of the Order of the Directorate-General for agriculture and rural construction under the Council of Ministers of RSFSR of 07.09.1950, № 012-2460.

The College is located in Bakhchisaray, the Crimea, in the foothills, on the slopes of the inner ridge of the Crimean Mountains, 30 km South-West of the Crimean capital - Simferopol. The town of Bakhchisaray has been known for its architectural monuments.

History of Bakhchisaray is closely connected with the history of the Palace of Khan (Khan-Sarai, XVI century), the Uspenski monastery (XV century), one of the most well-known is "cave city" Chufut-Kale (VI century).

During the existence the institution reorganized several times.

Since 1986, the College is subordinate to the state agricultural Committee of Ukraine.

16 July 2002, in accordance with the order of Ministry of agrarian policy № 198 branch attached to the Crimean state agrarian University.

In 2003 in connection with the creation of the Crimean state agrotechnological University branch was included in its composition.

By the Cabinet of Ministers on July 28, 2004 № 517 was created, southern branch «Crimean Agrotechnological University» of National agricultural University, which included Bakhchisaray branch. In 2004 the branch entered the NAU.

By the order of the Rector of NAU № 3 from 5.01.2005, Bakhchisarai branch was reorganized into a separate structural subdivision of NAU «Bakhchisaray building technical school».

By the order of the rector of the National University of Life and Environmental Sciences of Ukraine № 1052 from 06.12.2011, «About renaming of the EAP NULESU «Bakhchisaray building technical school was renamed into a separate subdivision of the National University of Life and Environmental Sciences of Ukraine "Bakhchisaray College of Construction, Architecture and Design"».

1.10.2. Organizational Structure

Director of the College – teacher of the highest category, teacher-trainer of agricultural education of the 3rd degree (2001), Honoured worker of education in the Autonomous Republic of the Crimea 2010), Honored teachers of NULESU (2011) - **Victor Verbitskiy**.

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CONSTRUCTION DEPARTMENT

Department head – Nina Nasinuk

Phone (06554) 4-04-27

Location: Academic building № 1.

Department organizes and coordinates the training process of junior specialists by

5.06010101 "Building and exploitation of buildings and constructions"

Cycle Commission:

The Commission disciplines of natural scientific, practical and professional training in a specialty «Construction and operation of buildings and structures»

The Chairman of the Commission - **Lenura Mukhamedova**

Phone (06554) 4-04-27

E-mail bstnauu@mail.ru

Commission subjects cycle professional and practical training in the specialty «Finishing works and building design» and "Architectural design and the interior"

The Chairman of the Commission – **Volodymyr Marchenko**

TECHNOLOGY DIVISION

Head of Department – Natalia Prybora

Tel. Fax: (06554) 08/04/18

Email bstnauu@mail.ru

Location building № 1

Department organizes learning process of training young specialists in the field:

5. 06010113 "Mounting, maintenance of equipment and systems of gas-supply"

5.06010201 "Architectural design and internal interior"

5.09010303 "Green construction and horticulture"

Cycles Commission:

Commission of professional practical training in the specialty

5.06010113 "Mounting, maintenance of equipment and systems of gas-supply"

The Chairman of the Commission - **Elena Kulikova**

Phone (06554) 4-08-18

Email bstnauu@mail.ru

Commission Cycle professional and practical training in the specialty

5. 06010115 "Equipment of buildings and constructions and Building design" and 5.06010201 "Architectural design and internal interior"

The Chairman of the Commission – **Volodymyr Marchenko**.

1.10.3. Practical training of students

Practical training includes laboratory and practical training, education and practical training of students.

Bases of practical training of students of the College have training workshops, laboratories, construction sites of the Crimea.

The College has the following workshops:

№	The name of the division of educational-production workshop	area m²	Number of machines, equipment/jobs
1	Workshop carpentry , joinery	67,3	8
2	Workshop of painting works	30,3	2
3	Workshop of plastering and painting works	75,3	3
4	Workshop tiling	29,3	1
5	Locksmith workshop	40	10
6	Welding workshop	36	6
7	Plumbing workshop	35	5
8	Coloured and Spatial Design	36,3	15

1.10.4. Teaching staff

The educational process in the College provides 45 teachers, including 1 candidate of pedagogical Sciences.

Among the PE in college: Teachers Honored Worker of Ukraine NUBiP - 2; Excellence in Agricultural Education and Science - 1; Excellence in Education of Ukraine - 1; Honored Worker of Education ARC - 3.

1.10.5. Characteristic of material and technical base

Training complex in the SS of NULESU «Bakhchisaray College of construction, architecture and design» is located on the territory with total area of 4.0 ha, which is at the disposal of the College and includes 2 educational buildings with a total area 6229,9 m².

The complex, in addition to academic buildings has sport shooting, space facility for training of defending the homeland; in a specific area are workshops, dormitories for students with an integrated boiler for solid fuels, material warehouse, and garage.

In the academic buildings are 34 classrooms and laboratories, assembly and sports halls, a library with a reading hall for 48 persons, a dining room for 170 seats, a museum of history and college classrooms and other facilities.

The college has a sanitary certificate. Conclusion of the local public health surveillance of compliance with the requirements of existing premises sanitary standards, building codes and regulations that regulate the procedure carrying out educational activities.

All classrooms and audience certified. Laboratories and classrooms are mainly provided by a typical list of equipment technical facilities and computers.

Total area of the premises is 6229,9 m², per 1 student is 12.5 m².

Total area of hostel is 2432 m², which fully meets the requirements of the housing.

The total area of the stacks is 47,85 m², pass - is 14.85 m², reading room to 63.8 m², the number of seats in the reading room - 48.

Computer Park of the College consists of 40 PC within the local network and connected to the Internet. In the College there are 2 computer classes, containing 30 PCs. 100 students on average by more than 6 computers.

In College are three stationary multimedia audience, and there's a portable multimedia projector. To print the drawings, the College has two plotters format A-1 and A-2

Provision of educational literature for students and teachers carries out the college library. Today the fund of the library is 38706 instances, including educational literature 7199 instances. Annually in literary funds are flowing 18 sources.

Cycle Committee providing educational process methodical and information materials in sufficient quantities from the normative requirements.

To ensure the College created the modern laboratory. All audiences are equipped with the necessary training equipment.

Accounting of equipment are performed in accordance with the requirements of standards, annually conducts an inventory of the equipment. Security of educational process in educational areas is 100 % (12,5 m²/1 student). Cycle commissions have laboratories that are equipped with devices, tools and supplies.

College at their disposal has one hostel for the accommodation of non-resident students and providing them with normal living and learning. At present, the number of nonresident students account for 70 people.

In the college there is a central dining room for 170 seats simultaneous power, one gym equipped with modern training and sports equipment.

1.10.6. Information and Telecommunication provision

The college has two specialized computer labs and computers installed in various classrooms. Computers Park with almost 40 units. All computers connected to a local network and access high-speed Internet. The college is equipped with three fixed media audience and is a portable multimedia projector. Using specialized software, students complete most of the course and diploma projects. To print drawings in college, there are two format plotter A-1 and A-2.U. The official website is (<http://www.bksaid.org.ua>) that hosts all the necessary information about the college, information for applicants, students and teachers.

The site also posted the necessary guidelines for performance tests for student's external students, guidelines for the implementation of term projects, etc. The college has electronic library, including books, manuals, legal and reference books, periodicals, methodological literature, and more.

1.10.7. Library

One of the main tasks of the library of the college is the formation of the library stock.

The General Fund of the library is 39042 instances. Mainly technical literature – 1777 instances; secondary literature - 11903 instances; fiction - 4636 instances.

Electronic resources of the library are its own database (access via the local network).

The library has a few computers and a scanner. The library includes: subscription; library - 37,5 m2; reading room - 48 seats.

The staff of the library - 2 people. The number of registered users 638: full-time tuition - 403 user; correspondence department - 150 users; teachers - 45; other – 40.

The library has a modern interior, comfort and convenience for readers.

1.10.8. Educational, cultural, sports and social works

The educational system in the SS of NULESU «Bakhchisaray College of construction, architecture and design» contributes to the development of the personality, its individual self-determination in social life, the moral formation of a person, citizen, employee of a professional.

Organizational and educational work presented by college supervisors of student groups and student organization. Curator's activity regulated by "Regulations of the students group."

Department of educational work is the basic structural unit of the college, through which the organization, accounting and control of educational work.

The main purpose of the educational department - fostering a competitive specialist who seeks self-development and self-improvement.

The main objectives are:

- raising the social status of education in the SS of NULESU «Bakhchisaray College of construction, architecture and design»;
- coordination and strengthening of interaction of all participants in the educational process: students, teachers, parents;
- assisting the family in solving of problems of education, organization of psychological-pedagogical education of parents, strengthening the role of the family in the upbringing of the child;
- increase of a professional level of control the process of education;
- improvement of the content and mechanisms of moral, Patriotic and civil, artistic, aesthetic, labour and physical education of students;
- use of national traditions and modern experience and innovation in the field of upbringing;

- review of key socio-psychological needs and problems of students and teachers;
- organization of work on the implementation of educational programs.

The college successfully used various forms of educational activities: thematic educational hours, debates, discussions, educational and entertaining evenings, a decade of special and general educational disciplines, competitions of professional skill, a dramatization of folk holidays and ceremonies, concerts, parties - meetings, classes and «Health», sporting events, club activities and clubs on interests, etc.

To identify talented students, development of its creative abilities of the college organized work of art groups and clubs, sports clubs and recreation groups.

In College acting : Theatre of variety miniatures «Footlights», Amateur Crimean Tatar dance ensemble «Avdet», Circle of ballroom and modern dance «Yunost», Vocal group «The Melody», Instrumental circle «Akkord», Art reading «Poetic word» .

The College has a sports base, which includes:

- gym, where the training and competitions in basketball, volleyball, indoor soccer, karate, freestyle wrestling, Thai boxing , kick - boxing, table tennis, weightlifting;
- gym, room for a game of tennis, a study cross running, easy - athletic track, military - sports bar.

There are 6 sections in the following sports: volleyball, foot room, table tennis, Thai boxing, general - physical training, chess.

Issues of social support and protection of students constantly under the control of the directorate of the college. From the first days of training curators of student's groups is studied the social situation of students, determine the categories of children-orphans, children from large families, poor families and other

All nonresident students the opportunity to stay in a hostel, where we constantly organize evenings of rest, there are educational clock, contests for the best rooms and floors hostels. For interesting leisure time in the hostel are chess club, sports room, sports courts, a hall for carrying out educational and cultural activities.

The College has a canteen for 180 persons, who are in the premises of the main building of the College.

Qualified medical aid to employees and students receive in the city polyclinic. By the beginning of the academic year are purchased medicines, refilled kits on the branches. Annual meetings with specialists to educational work and profound medical examination of minors.

On campus uploaded: gymnastic camp, sports and gym.

In the College there is a conference hall for 300 seats. Connected cable line to the Internet, which provided high-speed access to it.

With the purpose of social protection of students, the College cooperates with various institutions and NGOs. College qualitatively organized the work of the city Executive Committee, city information and analytical center of medical statistics and health, structural unit of the organization of rehabilitation of children of the city at the department of education and science, the municipal centre for family and youth affairs, department of education and science of the Bakhchisarai city Council, regional state administration.

1.10.9. Student Government

Student government is the right of young people to take part in the solution of important issues of vital institution. Representatives of the student body are part of the pedagogical Council; actively cooperate with the administration of the College, with students from other UNIVERSITIES and youth organizations of the region. Student self-government bodies provide protection of the rights of students, supervise the

performance of their duties, and create necessary conditions for rest and leisure, volunteer and charity work.

Student's self-government includes starostat, student Council of the College and hostels. In its structure there are the following sectors: cultural and educational, news, sports and wellness, educational. In the asset of the student Council of the College's interesting activities: intellectual games, themed evenings, concerts, discos, production of programs of student radio, informational bulletin.

Students regularly participating in charity events, "Do not be indifferent", "Bring joy to a child", "Factory St. Nicholas", "Heart to Heart".

It became a tradition to hold the meeting of the student Council with the administration, round tables, "open microphones", the aim of which is to discuss the problems of organization of educational process and household activities.

With the aim of forming of active vital position of student Council initiates conducting various trainings, seminars, workshops.

The designs of the student Council always find support from the administration of the College. For their implementation the proper conditions are in place: study of the asset acquired the necessary equipment, developed the criteria of moral and material incentives. Interesting, the college has experience in organization of leisure of students:

- vocal-instrumental group «Melody»
- student theatre of miniatures «Footlights»;
- choreographic group «Avdet»;
- art reading «Poetic word»;
- women's club of fans of the beautiful «Inspiration»

Already more than five years the college becomes a laureate of the Republican competition of artistic creativity among students of higher educational establishments of I-II levels of accreditation of the Crimea. Students and teachers are winners of the International student festival «Holosivska vesna». Ukrainian festival of student work «Sofiivski zori».

Sport and health work in the school is in accordance with the annual plan, which includes sports events, entertainment and competitions.

There are 6 teams from such kinds of sports: basketball, mini-football, volleyball, table tennis, athletics, Thai Boxing.

Sports clubs are more than 175 students. In gyms are more than 35 students.

1.11. SEPARATED SUBDIVISION NULESU «PRYBREZHNE AGRICULTURAL COLLEGE»

1.11.1. Historical reference

Prybrezhne Agricultural College was founded in 1912 as an agricultural school. The school is situated in the village Prybrezhne - a sunny corner of the Black Sea between the Sakas and Evpatoria, near Salt Lake Sasyk. A number of coastal promontory is Megan and ridge Echki-Dag, which are monuments of Landscape of Crimea.

In 1921, based on two-year College was established agricultural vocational school, composed in 1932, was introduced Dzhanjovskiy zootehnikum. The new institution into a college for training for livestock. In 1956, the college was moved to agronomic department Chebotarskaya Agricultural College and the school was renamed Prybrezhnensky agricultural college.

In August 1964 at the farm "Volodymyrivsk" and Prybrezhne Agricultural College was organized Prybrezhne farm - college.

Based on the Decree of the Cabinet of Ministers of Ukraine of 20.05.1997, № 526 "On improving the network of higher and vocational" college became a subdivision of the Crimean State Agrarian University, and by the Cabinet of Ministers of Ukraine of 31.03.2003 № 179 p – Agrotechnological Crimean State University.

According to the Cabinet of Ministers of Ukraine of 28.07.2004 № 517- r "On the formation of the Southern Branch "Crimean Agricultural University" National Agricultural University" and rector of NAU from 12.01.2005, № 9 school became part of the National Agrarian University and was reorganized into a separate subdivision " Prybrezhne agricultural College" NAU.

College trains young professionals - agronomists, livestock, veterinarians and mechanics, electricians, service engineers of computer networks and systems.

According to the rector of 15.12.2008, № 827 on the implementation of the Cabinet of Ministers of Ukraine of 30.10.2008 № 945 "Issues of National agrarian university» College was renamed the separate subdivision of the National University of Life and Environmental Sciences of Ukraine "Prybrezhnensky Agricultural College".

1.11.2 Organizational Structure

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1.11.3. Practical training of students

There are practical and laboratory courses of academic disciplines and practice (educational and industrial) at the college.

Production facilities for practical training

Saky district: private enterprise «Mriia», Chervone; Ltd «Ukrzernoprom-Uiutne», Uiutne; private enterprise «Legenda Krymu», Geroiske; private enterprise «Tekhnoproekt», Stovpove; closed corporation «The Crimean Fruit Company»; private enterprise «Sakhalin», Koloski.

Simferopol district: Southern Affiliate of NULES of Ukraine «CATU»,

Krasnohvardiiske district: closed corporation «Myronivskyi Hliboproduct», Ltd «Agrokombinat Urozhainyi», Voskhod; Ltd «Torgovyi Dim Urozhainyi».

1.11.4. Teaching staff

Teaching and educational process is provided by 56 pedagogical workers at Prybrezhnensky Agricultural College: Full-time – 51 workers; Part-time – 5 workers.

Among full-time workers there are: Candidate of science – 5 workers; Academic title associate professor - 1 worker; Pedagogical title “Teaching methods specialist” – 6 workers; Higher qualified category – 14 workers; Honorary degree “Honoured worker of education of Ukraine” – 1 worker; Honorary degree “Higher achiever of agrarian policy and science” – 1 worker; Honorary degree “Honoured worker of Education of NULES of Ukraine” – 4 workers; Honorary degree «Honoured worker of Education of the Autonomous Republic of Crimea» - 2 workers.

1.11.5. Characteristic of material and technich base

There are the following facilities of SS of NULESU «Prybrezhnensky Agricultural College»: an educational building of 960 seating capacity, industrial-training laboratory

«Modul» of area 900 m² (turnery workshop, metalworker's shop, welding shop, educational and technological department), land domain of area 401 ha and park.

Training workshop consists of turnery workshop of 180 m², workshop of repairing electrical equipment of 18 m², engineering shop of 96 m², workshop of maintaining machinery of 48 m², workshop of repairing fuel instruments and hydraulics of 24 m², maintenance center of 36 m², stock of mechanical & tractor vehicles of 23730 m², autopark of 90 m², center of artificial insemination of animals and birds of 66 m².

All students of day time study and extramural study can have an access to the library resources of 60.000 items.

More than 70 % of all students live in dormitories №1-№5. There are also canteen, cafeteria etc.

Sports center of the College consists of modern outdoor stadium, sports hall fitted for physical training.

Instructional work is provided by 43 specialized laboratories and 9 auditoria of 25869 m², as well as educational – 14283 m².

1.11.6. Information and Telecommunication provision

The local network with a separate server and installed FTP server in it was created on the basis of college and nowadays each user of the local network can have access to it. FTR-server includes databases of e-catalogue, e-versions of textbooks on general and specialized disciplines, educational and science films and a large base of presentations. There is access to a calendar of holidays, references, archive of educational materials for solving practical tasks, final projects, diploma projects and individual work of students.

1.11.7. Library

Nowadays library is equal to modern information requirements of users in getting education, professional skills and cultural development and creates structural subdivisions.

Comfortable conditions for reading, watching and listening press, video, CD and DVD discs, videotapes, films on Media are provided by Library staff.

Information technologies give ability for users to enlarge their opportunities for using library resources for improving their level of knowledge.

Innovative activity of Library staff aimed at stimulating development by means of factual and structurally organized renewal and technical modernization of all processes.

The basis of innovative work of the Library is information supporting of educational process by means of:

- automation of basic technological processes of the Library;
- creating Library website;
- enlarging e-catalogue;
- creating own e-resources;
- taking part in corporative projects;
- supplying information resources, etc.

Using e-resources

The most important achievements in the process of supplying library with information resources in recent years were computers connecting to the Internet and local network. The base date "Educational video as assistance for students in order to get knowledge" is in a great demand among the students of the college and it includes 185 documentary films. For supplying users of all categories with demonstrative materials and access to computer Library resources such base dates were composed:

"Informative supplying educational process" – 2287 records;

"Periodicals on Specialty" – 154 records";

“Information supplying of Specialty” – 1234 records;

“E-textbooks on Specialty” – 69;

“Recommended lists of literature” – 57 (114 pages).

Activity of the library staff in creating of base date “Users” is continued to introduce modern technologies in the library. E-catalogue (1500 records) contained facts about the connection of each resource with other specialties and disciplines is enlarged. All above mentioned gives an ability of getting information required for supplying training and educational process. For improving service quality, the users of the library have free access to periodicals.

Data support

All students of day time study and extramural study can have an access to the library of the college. They can use library resources located on the local FTP server without previous registration. Users of the library in order to get any documents from the library funds and with the aim of using reading and e-halls should registry themselves in the library on the basis of showing a student card or a record book.

The main computer resource of the library of SS of NULESU «Prybrezhnensky Agricultural College» is e-catalog created on basis of the licensed Library-informative CAS “IRBIS-64” (Russia). The users of the library have an ability to search necessary educational, pedagogical, methodological literature and periodicals according to all elements of bibliography description of a document, its key words and its titles; in the base date of e-catalogue. The base date “Bibliographic Lists” includes full texts of bibliographic lists composed by the library staff.

The users of the college have an access to e-resources supplied by Scientific Library of NULESU:

- portal of NULESU and lots of subportals and websites ([//nubip.edu.ua](http://nubip.edu.ua), [//moodle.nubip.edu.ua/](http://moodle.nubip.edu.ua/));
- institutional repository of full-text e-documents ([//elibrary.nubip.edu.ua/](http://elibrary.nubip.edu.ua/));
- on-line encyclopedia of agrowiki ([//agrowiki.nubip.edu.ua/](http://agrowiki.nubip.edu.ua/));
- portal AGORA (Access to Global Online Research in Agriculture) gives a free access to electronic copies of scientific publications of leading publishing houses of the world in sphere of National Sciences and Life Science ([//www.aginternetwork.org/](http://www.aginternetwork.org/)).

The students of extramural study of education have an access to all information technologies and electronic resources.

1.11.8. Educational, cultural, sports and social works

There are five modern dormitories (930 beds) which include rooms for relaxation and playing rooms, TV halls, rooms for training and fitness halls. Supplying students with dormitories is 100% for day time and extramural study.

There is a canteen (200 seats) where students can have their meal and cafeteria (80 seats).

The cost of meal per a person is: breakfast – four hrn, lunch – five or ten hrn.

The students of moderate means and students-orphan have meal free of charge.

Medical support

The first aid station is equipped with all required equipment and medicines for providing social necessities of students and lecturers. This first aid station is equal to current existing requirements. The experienced doctor's assistant renders medical service.

Recreation support

The College has facilities for sport activity, which includes: gymnasium; mat for competitions and training on wrestling; volleyball, basketball, mini-football play-ground;

play-ground for playing badminton; hall for table tennis; sports ground; pit for jumping and fitness club.

Students go in for seven sports clubs: football, volleyball (boys and girls), table tennis, basketball, weight lifting, track and field athletics, wrestling.

According to extra curriculum activity the lectures of physical training held lectures on physical culture and different kinds of sports, physical and fitness lessons, sports competitions, individual activity of students in physical training, sports, tourism, etc.

Cultural mass work

Cultural education is based on differentiated principle in accordance with students' psychological make-up, skills and abilities for their creativity development, aesthetic taste, and propaganda of healthy life style.

There are four amateur talent groups at the college: dance group, vocal group, group of instrumental music, dramatic circle.

Cultural education is constantly directed at upbringing of patriotic, moral and legal development of personality, upbringing of spiritual culture, cultural and esthetic views of students; to propaganda active way of students' life.

The participants of groups and circles always take part in different parties, festal concerts and competitions.

1.11.9. Student Government

Student self-governance is an important part of teaching and educational process of the college which is directed at qualified education, upbringing spiritual culture of students, propaganda of social activity among students' youth, initiation, responsibility and harmonious person's development, formation the skills of future managers.

The student self-governance is a voluntary students' association of student trade-union committee and student councils of dormitories. Student self-governance is formed by the following circuit: group – department – dormitory – all students of the college.

Leaders of student self-governance may influence upon important decisions: to accept somebody as a student; to change under the contract form of education into budget form and vice versa, to settle down students and vice versa; to accept rules of the college and living rules in dormitories. In fact student self-governance organizes leisure time and takes part in social life of the college, healthy and sports competitions, propagandizes healthy life style.

Due to student self-governance creative students' abilities, forming moral qualities and sense of responsibility are realized.

1.11.10. International activity

Prybrehzne Agricultural College has started his international partnership since 2008.

College's cooperation with LLC «Olimp-Yuh» (St. Petersburg, Russian Federation) and organization under the educational programs of summer & training camp «Kosmos» for Russian students of higher establishments on the basis of the Prybrehznensky Agricultural College during summer season is concurred with NULES of Ukraine.

More than 9000 students from 45 Russian Higher Establishments have been making healthier and passing educational, ecological, ethnographical, sports and art programs for the last five years.

1.12. SEPARATED SUBDIVISION NULESU «CRIMEAN TECHNICAL COLLEGE OF HYDROMELIORATION AND MECHANIZATION OF AGRICULTURE»

1.12.1. Historical reference

The People's Commissariat of field crop established the Technical College in 1929 in the village Okrech Feodosia district for training mechanics and agronomists for the farms and state farms that were established in the eastern part of steppe Crimea. In 1948, the village Okrech was renamed into the village Suvorov, which later was incorporated into the settlement. Sovetskyj (the historical name - Ichki, was changed in 1944 after the deportation of the Crimean Tatars).

Crimea is a district of shortage of water where at the expense of their own water resources satisfy less than 20% of their need. Planned building of the North-Crimean Canal for submission to the Crimea of Dnieper water has caused the need for specialists - Hydraulic Engineering. In 1958, the department for training technicians' hydromeliorator was opened at the Technical College.

In 1993 (Minutes № 4 of the Ministry of Education of Ukraine from June 23, 1993 Crimean Technical School of hydromelioration and mechanization of agriculture had been classified to the first level of accreditation and received the right to prepare junior specialists.

By the resolution of the Cabinet of Ministers of Ukraine № 517-r from July 28, 2004 "On the formation of the Southern Branch «Crimean Agricultural University "National Agricultural University" and the rector's order of NAU № 5 from January 5, 2005 Crimean Technical College of hydromelioration and mechanization of agriculture became separated subdivision of National agricultural University.

Today the Technical College train junior specialists – mechanics, technician-hydrumechanics, land surveyors and specialties in commercial activity.

According to the rector's order № 827 from December 15, 2008 on the execution of the resolution of the Cabinet of Ministers of Ukraine № 945 from October 30, 2008 "Issues of National Agricultural University" the Technical School was renamed into Separated Subdivision of National University of Life and Environmental Sciences of Ukraine «Crimean Technical College of Hydromelioration and mechanization of agriculture».

1.12.2. Organizational Structure

Director of SS of NULESU «Crimean Technical College of hydromelioration and mechanization of agriculture» – **Volodymyr Rogozenko**

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1.12.3. Practical training of students

Own base for educational practice:

- training and production workshop area of 800 sq.m. with departments: bench, turning, forging, welding, repairing railroads, grinding, boring, station maintenance vehicles and tractors;
- industrial and training laboratories of repairing: electrics agricultural machinery and power systems of internal combustion engines, hydraulic equipment, instrumentation and automation equipment, electric motors.

The main basis of production practices: According to the agreements training practices are also held on the leading enterprises of the district, such as OOO "A-Z" rural district councils, FLG "Murahas" KFH "Modesto Tulchyyan" SOOO "Prysyvashyya Agricultural company", ZAT, KCP "Raduga" KFT "Agricultural chemistry", laboratory of Industrial practice.

In 2012 plowing, cultivation, harrowing, arable land, and an area of 38 hectares, lies fallow were performed on the training and industrial base VP works.

Professional Training

Two working professions provide students' professional training.

Total number of students - 110 students and there are no people in the region.

Training and methodological support of practical training

All students' academic and industrial practices are provided with corresponding training methodical materials: Corricula; Tests; Diary; Student's report about practice; Comments of the enterprise; Manager's comments of the practice.

Transverse programs of practical training are developed for students of all disciplines.

A student gets an individual task for each practice so that the materials were used for the practice course and diploma projects.

During practice, students are instructed in safety and personal hygiene in conditions of production.

As the results of practices, students make out diary reports in prescribed form. The commission composed of the head of the practice, teacher of profile discipline, and head of the cyclic commission accepts credit of the academic and industrial practices.

1.12.4. Teaching staff

At SS of NULESU «Crimean Technical College of hydromelioration and mechanization of agriculture» there are 56 full-time PE, 11 administrative staff, 51 other workers, 13 heads of laboratories, laboratory technicians and masters of industrial training, Candidates of Sciences –1.

Teachers - 57 including: teachers - methodologist – 1, senior teachers – 6, Teachers of the highest category – 17, the first category – 23, the second category - 8, others – 9.

In 2012 three-got pedagogical education, eight improved their skills, eight of them qualified.

1.12.5. Characteristic of material and technical base

Students' academic process and practical training is provided in two academic buildings, and educational laboratories. Students' campus - 1 dormitory, about 15% of full-time students live there, dining room, buffet. There is a library with 44,327 copies, more than 4320 titles of books, magazines and other printed matter, a reading room with 60 seats in the academic building and one reading room in a dormitory for 10 persons.

Sport Complex of the establishment contains modern outdoor stadium and an indoor enclosure for complete physical training and sports.

1.12.6. Library

The library of Separated Subdivision of NULESU «Crimean Technical College of hydromelioration and mechanization of agriculture» is an informational and cultural center of the educational establishment. It locates in the light comfort room, which occupies half of the third floor of building number 1.

Total area of the library is 240 sq.m. for 60 seats with the computer sector, connected to the local network and Internet access.

Library fund is diversified, has more than 45,536 copies of documents over 4320 items. The formation of the fund is carried with the profile of the Technical School, educational and professional curricula and information needs of readers. The fund is completed with the materials from agriculture, economy, environment, health and safety, engineering and related sciences. The library writes for 32 periodicals names.

There are 28,421 copies of books for a year. The number of served users - 800 readers per year.

Optimal conditions for the students' preparation for classes, homework, developing creative abilities are made in the library.

1.12.7. Educational, cultural, sports and social works

In Technical School educational activity is carried out according to the Constitution of Ukraine, the Law of Ukraine "On Education", "On Physical Culture and Sports", the State National Program "Education" National Program "Children of Ukraine".

Each year the main directions of educational activity are identified and the programme is made for the academic year. Primarily the plan involves the coordination and consolidation of the curators' educational work of the groups, educator of the Technical School, director of physical education, departments, library, and hostel.

Educational activity is provided to quality comprehensive training of future professionals of the agricultural sector and brings them in respect of farmers, national traditions of the people, the priority of general human values, attention to the historical past of the country, people of high moral character. The pedagogical worker is designed of every department for purposeful organization of the educational process, maintain of the discipline and order in the dormitories who performs in a certain campus dormitory educator's duties.

Educators carry out lectures, seminars, trainings, individual work as for education of healthy lifestyle and prevention of antisocial phenomena, contests for the best rooms, and sporting events with the students-residents of the hostels, organize the design of the wall newspapers.

During the academic year for a meaningful leisure regularly occurring events, amateur performances, meetings with war veterans, themed parties, sporting events, discos take place in Separated Subdivision of NULESU «Crimean Technical College of hydromelioration and mechanization of agriculture». In general, cultural-educational activity is carried out through the implementation of the measures.

At the Technical College there are a lot of various art collectives and groups: vocal ensemble «Smereca»; folk ensemble «Cvitucha calyna»; vocal and instrumental ensemble «Adrenalin»; choreographic ensemble «Erydan»; Student Theatre of show miniatures «Calambyr»;

The Technical College has sports facilities, which includes; football stadium with athletic running track, gym, weightlifting and gym.

The department of physical education coordinates the activity of sport clubs. At the Technical School students can engage in sports clubs: basketball - women; basketball - men; volleyball - women; volleyball - men; track and field athletics; weight lifting; weight sport; table tennis; sport orienteering; football; mini football.

In the sport, training departments the classes are delivered by the teachers of the Department (cyclic commission) of the physical education that have the trainer's qualification of individual sports.

According to the "Regulations about physical culture mass sports activities at the Technical School» sports competitions are held of various levels annually:

- sports day of the Technical School among students' teams;
- sports day "Health" among scientific and educational, researchers and staff of the Technical School;
- combined teams of the Technical School participate in the competitions both urban and national.

In just a long history of the Technical School Physical Education Department as of December 30, 2012 prepared: 4 - Honored Master of Sports, 21 - master of sports of international class, 110 - masters of sports, 240 - Candidate Master of Sports, 1162 – the 1st level athletes.

1.12.8. Student Government

Student government in our educational establishment is an integral part of the public authorities, to ensure protection of rights and interests of persons who study in the Technical School, and their participation in the management of the educational establishment. In student government, participate persons who study in the educational establishment. All such persons are equally entitled to participate in student government.

Student Council is headed by the student Grab Igor, is engaged in the organization of the duty in groups, in the Technical School, helps in the asset of the groups, examines the students' creative inclinations, by means of questionnaires, and on the basis of this he plans his work. Together, we held a meeting of the Board of prevention and the Student Council, where the questions of discipline, attendance and the students' academic performance of all courses are discussed. In addition, it organizes leisure activities, thematic evenings, intellectual games, contests, competitions, chess tournaments, sports days with variety of sports and other forms of educational activity.

2. TRAINING PROGRAMMES FOR JUNIOR SPECIALISTS

2.1 General Provisions

In the curriculum of training junior specialists in accordance to the standards of higher education in Ukraine, disciplines are structured in the following components:

- *regulatory*– according to cycles training:
 - humanitarian and socio- economic (humanitarian - for economic specialties);
 - mathematical and natural-scientific (natural- scientific and general economic for economic specialties);
 - professional and practical (professional - for economic specialties);
- *Elective* - according to the choice of the university and students.

For each discipline in the curriculum the total amount of time for its studying in hours and credits is states (national: one credit - 54 hours, European Credit Transfer and accumulating system (ECTS): one ECTS credit - 36 hours).

Structure and volume of regulatory disciplines of humanitarian and socio-economic cycle is set by branch standards of higher education in Ukraine. As a rule, this cycle includes the following disciplines: Ukrainian language (or professional purposes), History of Ukraine, Culturology, foreign language (for professional purposes), Fundamentals of philosophy, Fundamentals of law, Sociology. In addition, Physical training is included in weekly teaching load (30 hours) in amount of 2 hours.

2.2 Annotations subjects of the curriculum

Regulatory subjects

(Humanitarian, social and economic training)

Ukrainian (professionally trained). The purpose of the discipline is to increase general language preparation, students' communicative competence, mastering the basics of fundamentals of stylistics of Ukrainian language in practice, which will provide professional communication at the appropriate language level. Discipline is intended to summarize and systematize knowledge of Ukrainian language, form abilities and skills for optimal verbal behavior in the professional sphere.

History of Ukraine. Learning the discipline provides knowledge about the nature of social and political processes that occurred in the past and take place in modern Ukraine, their objective predetermination, interconnections and interdependence. The objective of the discipline is to develop skills to analyze and evaluate political phenomena of Ukrainian society in the context of the world history, to compare historical processes with epochs, form consciousness of the citizen and patriot of Ukraine.

Culturology. The purpose of teaching is to form the system of knowledge in culturology, ethics and aesthetics, perceptions of forms, types of culture, and socio-cultural mechanisms of society regulation.

Foreign language (English, German, French). Learning the discipline develops students' communicative competence, namely the use of skills, abilities and knowledge of a foreign language in the process of business communication with representatives from other countries on various issues related to business and labor market in agriculture, preparation for participation in international conferences, projects and discussions as well as presentations, written exchange of business information (formal and informal letters, resumes, various research papers and reports), thus contributing comprehensive development of the student's personality and his socialization in the foreign language society.

Fundamentals of philosophy. Learning the discipline provides knowledge in philosophy as the highest level of theoretical world outlook, which reflects essential characteristics of human being, society and nature on the base of forms of their interaction. The objective of the discipline is to introduce the best examples of philosophical knowledge, form critical thinking skills in analyzing conflicting phenomena of social life.

Fundamentals of Law. The purpose of teaching the discipline is to form a system of knowledge in the theory of law and state, learn methods of legal regulation of the economy; clarify the legal principles of business and economic activities.

Sociology. The purpose of teaching the discipline is to form a system of knowledge about the basic concepts of sociology, essence of social life and social structure of the society, get skills of analysis of social phenomena and processes. The aim of the discipline is to master the essence and meaning of social science, get skills of social activity and behavior.

Physical training. The purpose of teaching the discipline is to create physical culture of a young specialist and ability to realize it in socio- professional training, and in the family. The aim of the discipline is to strengthen students' health and develop physical abilities that meet the future professional careers.

2.3. General education training

Training specialists of EQL «Junior specialist» on the basis of basic secondary education includes general educational training, minimum amount of which according to the Order of Ministry of Education and Science of Ukraine from 17.06.2010, № 587 «On approval the list of subjects of general educational training in higher educational establishments of I- II levels of accreditation, conducting training on the basis of basic secondary education» is 1840 hours (standard level).

Curriculum of general educational training in higher educational establishments of I-II levels of accreditation, conducting training based on the basic secondary education

№ 3/n	The name of the discipline	Term	Amount
REGULATORY DISCIPLINES			
1	Ukrainian language	1-4	140
2	Ukrainian literature	1-4	210
3	World literature	1-2	104
4	Mathematics	1-3	280
5	Informatics**	1-2	80
6	History of Ukraine**	1-2	80
7	World history	1-2	104
8	Civic education		
	Law (Fundamentals of law	3	54
	Economics(Fundamentals of economic theory)*	4	54
	Man and his environment	3	34
9	Culturology*	4	54
10	Foreign language**	1-4	160
11	Geography	1-2	52
12	Biology	1-2	122
13	Chemistry	1-2	102
14	Physics	1-3	140
15	Astronomy	3	34
16	Ecology(Fundamentals of ecology)*	3	54
17	Technology (Introduction to specialty)*	2	54
18	Protection of the Motherland	1-2	70
19	Physical training	1-4	160
Total for the cycle			1872

* subjects that are integrated with relevant academic disciplines of educational professional programs of junior specialist;

** subjects, some sections of which continue to be studied in the relevant academic disciplines educational professional programs of junior specialist.

Annotations of disciplines of curriculum of general educational training

Ukrainian language. Practical style and culture of speech, stylistic means of phonetics, stylistic means of lexicology and phraseology, derivation means of stylistics, perception of stranger's speech, feedback of a finished text, practical stylistics and culture of speech, morphological means of stylistics, stylistics of simple sentences, stylistics complex sentence, stylistics of sentences with different ways of expressing stranger's speech, functional stylistics and culture of speech, student project of improving their own speech, rhetoric.

Ukrainian literature. It is studied: Literature of the 70-90s years of the 19 century, Ukrainian literature of the 10s years of the 20th century, Ukrainian literature of the 20-30s years of the 20th century, Ukrainian literature outside Ukraine, emigration literature, Ukrainian literature of the 40-50 years of the 19th century, Ukrainian literature of the second half of the 20th century - beginning of 21st century, Ukrainian prose, modern «young» Ukrainian literature.

World Literature. Social-psychosocial prose of the 19th century, literature of the second half of the 19th and the turn of the 19-20th centuries, literature of the first half of the 20th century, literature of the second half of the 20th century, postmodern prose of the last decades of the 20th century, literature at the turn of the 20th-21st centuries.

Mathematics. Functions, their properties and graphics, power, exponential and logarithmic functions, trigonometric functions, equations, inequalities and their systems, derivative and its applications, integral and its applications, elements of probability theory and mathematical statistics, systematization and generalization of facts and methods of plane geometry, vectors and coordinates in space, parallel lines and planes in space, perpendicular lines and planes in space, polyhedron, surface area and volume of polyhedrons, bodies and surfaces of rotation, volumes of solids of rotation and areas of their surfaces.

Informatics. Basic concepts of informatics, software, personal computers, word processing, computer presentations and publications, Internet services, information technology in learning system for processing tabular data, databases, fundamentals of information security, information technology in project activities.

History of Ukraine. Ukraine at the beginning of the 20th century, Ukraine during the First World War, Ukrainian statehood in 1917-1921, culture and spiritual life in Ukraine in 1917-1921, Ukrainian SSR in the conditions of new economic policy (1921-1928), consolidation of Soviet power in Ukraine (1929-1938), West Ukrainian lands in 1921-1939, Ukraine during the Second World War (1939-1945), Great Patriotic War (1941-1945), Ukraine in the early post-war years (1945 - early 50s), Ukraine in conditions of political and economic liberalization of society (1953-1964), Ukraine in exacerbation of the crisis of the Soviet system (mid 60s - early 80s of the 20th century), renewal of Ukraine's independence and collapse of the Soviet Union (1985 -1991), Ukraine in the conditions of independence, ethno-social and cultural processes in Ukraine in late 20th - early 21st centuries, Ukraine in the modern world, our region in the second half of the 20th - beginning of the 21st centuries.

World History. World at the beginning of the 20th century. The First World War of 1914-1918. Post-war construction of the world. The period of post-war crisis and revolutions (1917-1923). Period of stabilization in Europe and North America (1924-1929). World in economic crisis (1929-1933) and overcoming its consequences. The Second World War (1939-1945). International Relations (1945 - beginning of the 20th century). American continent: the USA, Canada and Latin America (1945 - beginning of the 21st century). Countries of Western Europe (1945 - beginning of the 21st century). Countries of Central and Eastern Europe (1945 - beginning of the 21st century). Asia and Africa in the second half of the 20th - beginning of the 21st centuries. Development of culture (1945 - beginning of the 21st century). Global problems of humanity.

Law (Fundamentals of law)*. Constitutional basis of legal system. Basic principles of administrative law. General principles of civil law. General principles of labor law. Fundamentals of labor law.

Economics (Fundamentals of economic theory)*. Social production and its results. Distribution of population's income. Forms of wages.

Man and his environment. In the structure of the course, knowledge in the social sciences is integrated. They are sociology, law, political science, ethics, economics, social psychology, culturology, social ecology, and philosophy. System of knowledge of the following sections is laid out: general characteristic of human biosocial phenomenon, society and personality.

Culturology*. Purpose - to provide students with the fundamental achievements of world and national culture, reveal unity and diversity of world cultures. Culture of the Renaissance. Modern culture. Culture and global issues of our time.

Foreign Language. System of knowledge of the following sections is laid out in the course: modern foreign language, phonetic, grammatical, lexical and stylistic features of language, language cliches, communication, everyday topics, special vocabulary, reading professional literature, study of history of the country's culture.

Geography. Economic-geographical characteristic of the world. Global problems of mankind. Geopolitical, natural resource and environmental problems. Geography of the world economy. Characteristics of individual regions and countries.

Biology. Structure and function of living organisms, their interrelation. Ecological thinking, healthy lifestyle. Molecular level of life. Cellular level of organization of life. Organismal levels of organization of life. Upper-organism level of life. The historical development of the organic world.

Chemistry. Non-metallic elements and their compounds, metallic elements and their compounds, organic compounds theory of chemical structure of organic compounds. Saturated, unsaturated, aromatic hydrocarbons. Alcohols. Phenols. Aldehyde, carboxylic acid. Carboxethyl esters, fats. Carbohydrates. Amino acids and proteins. Synthetic macromolecular compounds. Chemistry and life.

Physics. The program is oriented on the general understanding of the physical world, its basic theoretical principles and methods of learning. System of knowledge of the following sections is laid out in the course: Mechanics. Molecular physics and thermodynamics. Electrodynamics. Oscillations and waves. Optics and foundations of the theory of relativity. Atomic and nuclear physics.

Astronomy. As basic science reveals the principles of the universe and has a practical value. System of knowledge of the following sections is laid out in the course: general information about astronomy, general picture of the world, structure of the solar system, celestial bodies, stars and galaxies.

Ecology (Fundamentals of ecology)*. It is studied: biosphere and transforming human activity, organization of agricultural production in contaminated areas, modern problems of nature protection in agricultural production, rational use and protection of land resources, water resources and their protection, economic factors and organism, air protection.

Technology (Introduction to Specialty)* Learning the discipline is carried out at the beginning of studying of professional disciplines, imagination about the future profession is formed. Students receive information about relevance of the chosen profession in modern conditions, requirements for professional training, fundamentals of professional ethics, organization of the educational process of training in the specialty.

Protection of the Motherland. The course provides socio-pedagogical process of purposeful influence on a person in order to ensure readiness to participate actively in the protection of his country. System of knowledge of the following sections is laid out

in the course: readiness of the youth to serve in the armed forces of Ukraine, concept of military service, getting knowledge of initial military training.

Physical Training. The goal of Physical training is progressive development of personality's physical culture, upbringing moral and volitional qualities and need for a healthy lifestyle. System of knowledge of the following sections is laid out in the course: standard of physical education, minimum level of obligatory physical education, personality's harmonious development, high level of health, physical education and physical preparation.

Junior Specialists training
Specialty «Jurisprudence»
Training direction «Jurisprudence»
Field of knowledge «Law»

Amount, credits ECTS – 176,9

Learning / teaching period, years:

Full time – 4 years (based on the basic general secondary education).

Part-time – 3 years (based on the full secondary education)

Graduate's qualification – junior specialist in Jurisprudence

Training of Junior Specialists is carried out in Separated Subdivision NULESU (licensed amount, persons: full-time/part-time):

- Mukacheve Agricultural College (50/25)

Annotation of Specialty

Training of junior specialists focused on the study of relevant jurisprudence, especially specialized branches of the law to the needs of the agricultural sector in the State, including the sphere of land relations, agricultural enterprises, institutions, public and commercial structures, public organizations, and the population.

Practical Training

The curriculum provided the passage of the practical training of students on a Specialty 5.03040101 «Jurisprudence» according to the standards of education. The basis institutions for practical training are: Mukachevo city employment Center; Mukacheve District Council; Mukacheve district State administration; Jsc «Tochprilad»; «Mukachivvodokanal»; Mukachevo MV UMVS of Ukraine in Zakarpattia Oblast; Mukachevo Court; Mukachevo administration of Justice; private lawyers and notaries.

Approximate topics of the graduation works

State Attestation involves the passing of complex State examination.

Graduate's Academic Rights

Students can continue their studies by the study program of bachelors in the direction of training: 6.030401 - «Jurisprudence»

Graduates' Spheres of employment

After graduating with a degree in «Jurisprudence», graduates can work in the following areas:

- the concession of legal services to individuals and legal entities, activities in the field of law;
- notarial activity (activity of the notaries assistants);
- state administration;
- justice;
- activities in penitentiary system;
- management and supervision in the field of taxation;
- compulsory social insurance;
- the activity of the Prosecutor's Office;
- judicial activities (Secretary of judicial session, assistant judges, judicial manager).

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Jurisprudence»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1.	Ukrainian (professionally trained)	3	54	1	1,5
2.	Economic theory* (economics)	3	54	1	1,5
3.	Fundamentals of Philosophy	3	54	1	1,5
4.	Sociology	6	54	1	1,5
5.	Culturology* (art culture)	4	54	1	1,5
6.	Foreign language*	5-6	216	4	6,0
7.	Physical education*	5-6-7	285	5,3	7,9
Total for the cycle			771	14,3	21,4
1.2. Cycle of mathematics and natural science (fundamental) training					
1.	Theory of State and Law*(Jurisprudence)	3-4	216	4	6,0
2.	History of State and Law of Ukraine	4-5	162	3	4,5
3.	Personal and Social safety	4	54	1	1,5
4.	Fundamentals of Informatics and EOM	3	81	1,5	2,3
5.	Computer Technologies in Juridical Practice	5-6	135	2,5	3,8
Total for the cycle			648	12	18
1.3. Cycle of professional and practical training*					
1.	Legal Deontology*(technologies)	4	54	1	1,5
2.	Constitutional Law of Ukraine	3-4	189	3,5	5,3
3.	Administrative Law	5-6	216	4	6,0
4.	3.1. Administrative law				
5.	3.2. Administrative Litigation				
6.	State Formation and Local Self-Government	3	81	1,5	2,3
7.	Organization of Judicial and Law-Enforcement Bodies	3	135	2,5	3,8
8.	Civil and family Law	5-6-7	324	6	9,0
9.	Civil Process	7-8	162	3	4,5
10.	Business Law	5-6	270	5	7,5
11.	Constitutional Law of Foreign Countries	4	81	1,5	2,3
12.	Legal Procedure in Commercial Courts	7-8	108	2	3,0
13.	Commercial Law	7-8	162	3	4,5
14.	Financial Law	8	108	2	3,0
15.	Criminal Law	5-6-7	216	4	6,0
16.	Criminal Process	7-8	162	3	4,5
17.	Records management in Legal Practice	3-4-5	216	4	6,0
18.	Ecological Law	5-6	108	2	3,0
19.	Agrarian Law	7-8	135	2,5	3,8

Total for the cycle		2727	47,5	75,75
Regulatory part, total		4146	73,8	115,15
2. ELECTIVE ACADEMIC DISCIPLINES				
2.1. Disciplines chosen by University*				
2.1.1. Cycle of humanitarian, social and economic training				
1	History of Ukraine**	1	54	1,5
Total for the cycle			54	1,5
2.1.2 Cycle of mathematics and natural science (fundamental) training				
1.	Logics	5	54	1,5
2.	Fundamentals of Psychology	4	54	1,5
3.	History of State and Law of Foreign Countries	5	54	1,5
4.	Latin Language	4	54	1,5
5.	Fundamentals of Management	6	54	1,5
Total for the cycle			270	7,5
2.1.3. Cycle of professional and practical training*				
1.	Fundamentals of Roman Civil law	3	54	1,5
2.	Elocution	3	54	1,5
3.	Principles of labor safety	5	54	1,5
4.	Labor Safety in Industry	7	36	0,7
5.	Advocateship of Ukraine	6	81	1,5
6.	Customs Law	8	81	1,5
7.	Social Welfare Law	6	81	1,5
8.	Organization of Human Resource Management	6	81	1,5
9.	Organization of Legal Counseling in Social Production	7-8	135	2,5
10.	Legal Basis of Investment Activity	8	54	1,5
11.	Banking Law	8	54	1,5
12.	Final Process	8	54	1,5
13.	Notariat	7	54	1,5
Total for the cycle			873	16,2
Elective part, total			1197	22,2
Practical training			540	10
Degree examination*			486	9
Total, according to the field of study			6369	117,9

* The number of training hours/credits defined for preparation of specialists based on the basic secondary education

** The names of cycles of disciplines and forms of State attestation – according the requirements of industry standards for higher education approved 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Culturology», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

Economic theory. Economic relations, productive force. Production and its factors. The economic needs of society. Relationship property. Commodity production and market. Money, inflation, financial-credit system. Entrepreneurship, its form. The capitalist economy as a higher form of market economy. Transition economy. Role of the State in a market economy. Public product and its forms. National income. Economic growth. Distribution of the national income. Consumption savings International economy.

1.2. Cycle of mathematics and natural science (fundamental) training*

Theory of State and Law. Basic concepts and categories of the theory of State and law. The mechanism of the State. The functions of the State. Political power and the State. Implementation of the norms of law.

History of state and law of Ukraine. The essence, function and purpose of the social State, its legal system, prospects and opportunities for their development. The State and the right of the ancient world, middle ages, modern times, the latest time.

Personal and Social Safety. Disasters and natural hazards, and emergencies. Preventing adverse effects on objects of management in the face of danger.

Fundamentals of Informatics and OEM. Software for computers. Computer networks. Methods of creating, storing, reproducing, processing and transmission of data by means of computer technology.

Computer Technologies in Juridical Practice. Information technology in the legal sphere of activity. Systems of automation of business processes and management processes.

1.3. Cycle of professional and practical training*

Legal Deontology. The psychological culture of the lawyer. Political culture. Legal culture of the lawyer. Law and practice. The main legal specialty. Ethical and aesthetic culture of the lawyer.

Constitutional Law of Ukraine. System area of constitutional law. Constitutional-legal relations. Properties and the protection of the Constitution of Ukraine. The basics of the legal status of a citizen of Ukraine. Territorial structure of Ukraine. Local government.

Administrative Law. Main categories of public law. Public administration. Executive power. Mechanisms of administrative-legal rights and freedoms. Management in the core areas.

State Formation and Local Self-Government in Ukraine. The concept of State-building. Local government. The history of the subject and the system of State-building. Fundamentals of organization and activity of the head of State, Parliament, Executive authority.

Organization of Judicial and Law-Enforcement Bodies. The judicial system of Ukraine. Law enforcement agencies of Ukraine. Human rights agencies. International judicial institutions and the organs of international organizations. Judicial and law enforcement authorities of foreign countries.

Civil and Family Law. Civil law and relationships. Contract attorney, insurance, credit, payment relations. Family legislation. Moral rights and duties of spouses. Relations between parents and children.

Civil Process. Civil procedural law. Implementation of the Court of first instance. Implementation review of judicial decisions. Administrative litigation. International civil process

Business Law. Labor legal relations. Employment contract. The order of dismissal. Labour disputes.

Constitutional Law of Foreign Countries. The Constitution of foreign countries. Form of State in foreign countries. Constitutional foundations of judicial authorities of foreign countries.

Legal Procedure in Commercial Courts. Economic process and procedural law. The participants of the economic process. Action and decisions in the economic process. Execution of judgments of the courts.

Commercial Law. Commercial law in the right system. Business entities. Basis of property management and household obligations. Peculiarities of legal regulation of economic relations.

Financial Law. Budget law of Ukraine. Tax law. Monetary and credit relations. Currency regulation and currency control.

Criminal Law. Crime. Conviction. Crimes against traffic safety and operation of transport. Crime against justice.

Criminal Process. The criminal procedural legislation. Participants in the criminal process. Violation of the criminal case. Investigative action. Execution of sentence Ordinance and Decree of the Court.

Records Management in Legal Practice. Organization of work with documents in the process of management activity. Organization a clear organizational-technical order workflow. Compliance with the standards of bookkeeping in practical legal work.

Ecological Law. Management in the field of environmental protection and liability for violations of environmental legislation. Natural resources' right. The environmental law. The right to environmental safety.

Agrarian Law. The subjects of agrarian relations. Legal regulation of social development. Agrarian law of foreign countries.

2. Selective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

History of Ukraine. The story of the emergence and formation of the Ukrainian people and the Ukrainian statehood. The establishment of the national identity. Coverage of political activities, classes and social groups in Ukraine on certain stages of historical development.

2.1.2 Cycle of mathematics and natural science (fundamental) training

Logics. The logical development of culture. Logical law of thinking. Judgment. Proofs and refutations.

Fundamentals of Psychology. Psychological features of personality. The psychology of social groups and collectives. The psychology of minors. The psychology of judicial process.

History of State and law of Foreign Countries. The State and the right of the ancient world. The State and the right of the middle ages. The State and the right of the new time.

Latin Language. Basic-phonetic course. General lexical-grammatical cycle. The procedural terms and expressions. Order of the work with the translation.

Fundamentals of Management. Manager in the management system. Fundamentals of managerial decisions. Management methods. Personnel management.

2.1.3. Cycle of professional and practical training

Fundamentals of Roman Civil Law. Sources of Roman private law. Faces of civil legal relations. Family law. Inheritance law.

Elocution. Lawyer speech technology. The principles and means of conducting the debate. Judicial eloquence. The culture of the language lawyer.

Principles of Labor safety. The legal and organizational bases for labour. The legislative and normative base of Ukraine on protection of labour. Safety work. The immense work. Types of injuries. First aid for injuries.

Labor Safety in Industry. OHS management system in the organization. Injuries and occupational diseases in the field. Investigation of accidents. Social accident insurance. **Advocateship of Ukraine.** The legal status of the lawyer and his assistant. Advocate ethics. Lawyer in the administrative process. Solicitor in commercial law.

Customs Law. Customs law of Ukraine. The Customs authorities of Ukraine. Customs control. Customs clearance and customs declaration. Customs-tariff regulation.

Social Welfare Law. Subjects of the right to social security. The pension system. Social benefits. Social service.

Organization of Human Resources Management. The selection and placement of personnel. Basics of work with the personnel reserve. Of personnel management. Basics of documenting personnel work. Design of personnel services and its work.

Organization of Legal Counseling in Social Production. Legal situation of legal services. Planning the work of the legal service. Part of the legal service in the protection of the natural environment.

Legal basis of Investment Activity. Investment activities. State regulation of investment. Foreign investments. Leasing investment.

Banking Law. The legal position of the banks. Legal regulation of Bank lending. Currency transactions of commercial banks. Banks ' operations with securities.

Final Process. Bodies and officials that enforce solutions. Individual measures the enforcement of judicial decisions, the decisions of other bodies. Peculiarities of execution of individual decisions.

Notariat. The profession of a notary public and professional ethics. Competence of the notarial bodies of notarial acts. ID transactions. Guarding notarial acts. ID undisputed rights.

Junior Specialists training
Specialty «Economics of enterprise»
Training direction «Economics of enterprise»
Field of knowledge «Economics and Entrepreneurship»

Amount, ECTS credits – 120

Learning / teaching period, years:

Full-time education - 2 years 10 months (based on the basic secondary education)

Full-time education – 1 year 10 months (based on the secondary education)

Graduate Qualification technician economist

Training of Junior Specialists is carried out in Separated Subdivision NULESU (licensed amount, persons: full-time/part-time):

- Bereshany Agrotechnical Institute (50/-)
- Zalishchyky Agricultural College named after Y. Khraplyvy (25/-)
- Nemishaevo Agrotechnical College (50/-)
- Bobrovytsia College of Economics and Management named O. Mainova (35/35)

Annotation of Specialty

According to specialty, «Economics of enterprise» preparation of specialists is carried out who can provide economic and organizational activity of enterprise at a high level. Be able to perform independently economic calculations, collect, systematize, accumulate initial information, develop measures on the increase of the productivity, efficiency and profitability reduce production, costs increase of productivity, effective results and organize their implementation.

Practical Training

The bases of practices are such district institutions as the Office of the Pension Fund, Department of the Treasury, the Department of Social Protection, Finance Department of the Regional State Administration, Department of Statistics, as well as leading banks - Sberbank, Privat, Raiffeisen Bank «Aval» UkrSibBank, Nadra Bank, which whom the agreement for creative collaboration is concluded, accounts department of college, agricultural limited liability companies, farms.

Approximate topics of the graduation works

State certification involves passing the comprehensive state examination.

Graduate's Academic Rights

Students can continue their studies at the level «Bachelor» in the direction of 6.030504 «Economics of enterprise».

Graduates' Spheres of employment

After graduation due to Specialty «Economics of enterprise» graduates can take the following primary positions: manager of production, planning technician, labor technician, regulation of labor technician, auditor of production and technical and economic issues, the assistant of the head of the company, controller for prices.

**Curriculum of training the specialists of EQL «Junior Specialist»
in Specialty «Economics of enterprise»**

in Specialty «Economics of enterprise»					
№	The name of the course, practice	Semest er	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	Ukrainian (professionally trained)	1	54	1,0	1,5
2	Fundamentals of Philosophy	1	54	1,0	1,5
3	Foreign language	3-4	216	4,0	6,0
4	History of Ukraine	1	54	1,0	1,5
5	Sociology	2	54	1,0	1,5
6	Culturology	1	54	1,0	1,5
7	Jurisprudence	1	54	1,0	1,5
8	Physical training	1-3	216	4,0	6,0
Total for the cycle			756	14,0	21,0
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Political economy	1	108	2,0	3,0
2	Higher mathematics	2	108	2,0	3,0
3	Computer Sciences and Computer Engineering	2	108	2,0	3,0
4	Economics of Enterprise	2	108	2,0	3,0
5	Funds of Enterprise	3	54	1,0	1,5
6	Accounting	1	108	2,0	3,0
7	Statistics	1	54	1,0	1,5
8	Ecology	1	54	1,0	1,5
9	Safety of vital activity	1	54	1,0	1,5
Total for the cycle			756	14,0	21,0
1.3. Cycle of professional and practical training*					
1	Planning and organization of the enterprise activity	3-4	216	4,0	6,0
2	Financial accounting	3-4	162	3,0	4,5
3	Information systems and technologies in enterprise	3-4	162	3,0	4,5
4	Economics and labour regulation	4	162	3,0	4,5
5	Administrative costs	3	108	2,0	3,0
6	Tax system	4	108	2,0	3,0
7	Economic analysis	4	108	2,0	3,0
8	Management	2	108	2,0	3,0
9	Fundamentals of Marketing	4	108	2,0	3,0
10	Labour Protection	3	54	1,0	1,5
11	Training practice in Computer sciences and Computer Engineering	2	54	1,0	1,5
12	Training practise in Economics and Labour regulation	4	54	1,0	1,5
13	Traning practice in Information systems and technologies in the Enterprise	4	54	1,0	1,5
14	Traning practice in Economic analysis	4	108	2,0	3,0

15	Training practice in Planning and organization of the enterprise	3-4	162	3,0	4,5
16	Training practice in Financial accounting	4	108	2	3,0
17	Pre-diploma practice	4	162	3,0	4,5
Total for the cycle			1998	37,0	55,5
Regulatory part, total			3510	65	97,5
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University*					
2.1.1. Cycle of humanitarian, social and economic training					
1	Psychology	2	54	1,0	1,5
2	Political Science	2	54	1,0	1,5
Total for the cycle			108	2,0	3,0
2.1.2 Cycle of mathematics and natural science (fundamental) training*					
1	Fundamentals of Agribusiness and Enterprise	2	54	1,0	1,5
2	National economy	2	54	1,0	1,5
Total for the cycle			108	2,0	3,0
2.1.3. Cycle of professional and practical training*					
1	Pricing	2	108	2,0	3,0
2	Investment	4	108	2,0	3,0
3	Foreign-economic activity	3	108	2,0	3,0
4	Field of Technology	2	162	3,0	4,5
5	Introduction to the Specialty	1	54	1,0	1,5
Total for the cycle			540	10,0	15,0
Chosen by University, total			756	14,0	21,0
2.2. Disciplines chosen by students					
Chosen by students, total			0	0	0
Elective part, total			756	14,0	21,0
Practical training			702	14,0	21,0
Degree examination			54	1,0	1,5
Total, according to the field of study			4320	80,0	120,0

* * Amount of educational hours/ credits is determined for the training of specialists based on the secondary education.

****Names of disciplines cycles and form of state certification – accordingly requirements of industry standards of higher education, ratified 2009, EQC and EPP of Specialty.

Subjects annotations of the curriculum**1. Regulatory academic disciplines****1.1 Cycle of humanitarian, social and economic training**

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Culturology», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Political economy. Economic relations productive forces. Production and its factors. The economic needs of society. Property relations. Commodity production and market. Money, inflation, financial and credit system. Entrepreneurship and its forms. Capitalist economy as the highest form of market economy. Transition economy. The role of state in a market economy. Social product and its shapes. National income. Economic growth. Distribution of national income. Consumption, savings. International Economics.

Higher mathematics (professional aspiration). Elements of the theory of matrices and determinants. The general theory of systems of linear equations. Lines in the plane. The curves of the second order. Boundary function. Continuity of functions. The derivative function. Differential functions of one variable. Basic theorems of differential calculus. Differentiation function of many variables. Investigation of functions of several variables on the extremum, - conditional extremum. Indefinite integral. Definite integral. Differential equations of the first order.

Computer sciences and computer engineering. Theoretical bases of information. Structure of the informative system. Architecture of the personal computer. Computer network the Internet. Organization of software of the computer. Operating systems. Service software. Applied software. The text and graphics editors. Table processors. Control system of the database. Consulting and educational models.

Economics of enterprise. An enterprise in modern system of economic management. Labour resources. Capital, productive funds and non-material resources. Innovative-investment activity of enterprise. The planning system at the enterprise. Production organizing and its service. Products essence, varieties and competitiveness. Expenses of enterprise. Effectiveness of the activity of enterprise. Anti-crisis activity of enterprise.

Fund of enterprise. The essence and basics of the enterprise funds organization. Organization of the enterprise money calculation. Formation and use of income. Taxation of the enterprise. Current assets and their organization in the enterprise. Crediting of the enterprise. Evaluation of the financial situation of the enterprises. Financial planning of the enterprises.

Accounting. Accounting, its essence and foundation of the organization. Subject and method of accounting. Accounting balance. Bookkeeping accounts and dual Recording. The initial observation, documentation and stocktaking. Chart of Accounts. Methods of accounting. Accounting business processes. Fundamentals of financial statements.

Statistics. Statistic observation. Summary and grouping. Systems of indexes. Mean value. Indexes of variation. Correlation analysis. Lines of dynamics, indexes. Land statistics. Statistics of Animal Husbandry Plant-growing, Labour, cost price. Statistics of efficiency of production.

Ecology. Scientific basis of environmental management and environmental protection. The development of productive forces and the human impact on the environment. Ecological and economic problems of natural resources use. Environmental management and legal protection of the environment. Environmental monitoring. Environmental information system. The economic and social efficiency of

environmental protection measures. Planning of rational environmental management and environmental protection. Environmental impact assessment and issues of the organization. Environmental education of the population.

Safety of vital functions. Negative factors in man's life of natural, technogenic, socio-political and military character. State measures are on defence of life of man. Facilities of individual defence of man. Collective facilities of defence of man. Liquidation of consequences of influence on the man of chemical and biological radioactive matters. Dangerous factors of environment, their effect operating on a man, bases of labour physiology and normative requirements to the operational conditions. Methods of identification of harmful and dangerous factors of the technical systems. Facilities of protecting from their operating on a man and natural environment in normal and emergency situations. There are organizational, legal and socio-economic knowledge in area of safety of vital functions.

1.3. Cycle of professional and practical training

Planning and organization of enterprise activity. The essence organization and methodological bases of enterprise planning. Sales planning. The production program of the enterprise. Operational scheduling and regulation of Production. Study of the production program by productive capacity. Planning logistical support of enterprise. Planning staff and salaries. Planning costs. Financial planning. The organizational of base of production. Production process and organizational types of production.

Financial Accounting. Fundamentals of Financial Accounting. Accounting of funds. Account transactions and other assets. Accounting of current liabilities. Accounting of material assets. Composition and recording of fixed assets. Accounting of labor and wages. Accounting of long-term liabilities. Revenue and results. Accounting of Investments. Accounting of equity and liabilities. Cost Accounting by the elements of activity. Cost Accounting by the types of activity. Revenue and financial results. Accounting of equity and provision of liabilities and payments. The financial statement of the enterprise.

Information systems and technology in the enterprise. Information support of companies: technologization, the structure of computer, OS commands, dialogs add-in, application packages, computer solving the economic problems. Acquiring computer practical skills.

Economics and labour regulation Object, objectiv and methodological foundations of labor economics. Workforce and employment potential of society. The relationship of employment and unemployment. Internal market of labor organization. Adjusting the organizational and economic relations in the organization. The essence meaning and objects of labor valuation. Analysis of labor process and expenditure of working hours. Standards and norms of labor costs. Valuation methods and ways of establishing labor standards. Productivity and effectiveness. Analysis of planning in the enterprise. Salaries and wages. Tariff regulation of wages. Planning of the organization social development. Analysis, reporting and auditing at the workplace.

Administrative costs. The essential characteristics of the costs. Regularities and factors of costs formation. Costs management. Formation of costs according to places and centers of responsibility. Cost of products and calculation. Costs control and incentive of saving resources. Analysis of "Input-Output-profit" as an instrument to study production and marketing decisions. Methods target formation, structural analysis and cost reduction. Adaptation of the operating system to change its criteria to download costs. Minimizing the cost for creating and storing inventory.

Tax system. Essence and types of taxes. Tax system and tax policy. State Tax Service of Ukraine. EPT. Land and property taxation. Indirect taxes. Taxation of small

businesses. Payments to the state target funds. The development of Ukrainian tax system.

Economic analysis. Subject and types of economic analysis. Method and instructional techniques of economic analysis. Information base and organization of economic analysis. Analysis of demand state of the market and sales of output of enterprise. Analysis of productive resources and services. Analysis of inputs. Analysis of production costs. Analysis of financial results and profitability. Analysis of the financial condition of the company.

Management. Theoretical foundations of management: evolution of management thought, strategy and tactics of modern management, school of manager, functions style of management, decision theory, psychology and ethics of business relations, ensuring the effective operation, management of economic activity. Motivation. Organization of control. Ethics of Manager. Organization and planning of manager work.

Fundamentals of Marketing. The essence of marketing and its modern concept. System and characteristics of modern marketing. Marketing Research. Marketing commodity policy. Marketing pricing. Marketing communication policy. Marketing distribution policy. Organization and control of the marketing company activity.

Labour protection. Work environment and its impact on people. Workplace conditions their classification and valuation. Production harm, human protection methods from its negative impact. Analysis and prevention of occupational diseases and injuries. Principles of safety. Legal and standard regulation of labour protection. Public health and labour protection management in Ukraine. Organization of labour protection in workplace conditions. Economic aspects of labour protection.

2. ELECTIVE ACADEMIC DISCIPLINES

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

Psychology. Psychology is in the system of sciences about the man. Psychology. Mental processes. Psychology of human emotional sphere. Psychology of personality. Personality and activity. Communication - an integral part of human life. Conflicts and solutions. Psychology of cooperation: Manager-subordinate. The success of the leader. Psychological image of the organization.

Political science. Politics as a particular social phenomenon, Ukrainian political science, and its main dominant and Ukrainian thought in general.

2.1.2 Cycle of mathematics and natural science (fundamental) training

Fundamentals of Agribusiness and Entrepreneurship. Essentials of Entrepreneurship and its organizational forms. Commercialization of agricultural complex. Privatization of ownership. Entrepreneurship and market. Legal regulation. Competition. As an entrepreneur. How to organize your work.

National economy. Economic theory and the basic institutions of national economy. The theory of social and social-market economy. Characteristics of economic potential. Institutional factors of national economy development. Operation of the national market infrastructure. Statehood and state control of the economy. Reconstructional structure of the national economy. Programming and forecasting of the national economy. The policy of economic growth in national economy. Institutional forms of integration in world economy.

2.1.3. Cycle of professional and practical training

Pricing. The essence, types and functions of prices in a market economy. Pricing policy. Government regulation of pricing in Ukraine. Pricing policy of enterprise. Basic price formation factors. The structure of price and formation of its components. Methods of market pricing.

Investing. Economic essence and forms of investment. The structure of investment market. State regulation of investment activity. Methodological instrument and their evaluation. Investment instruments and their evaluation. Formation of investment strategy and tactic of investor. Investments in tangible assets. Business Planning. A portfolio formation of securities and their management. Main sources of financing of business projects.

Foreign-economic activity of enterprise. Objective, functions and organization of work of foreign trade services. Movement of goods in the world market. The role of joint ventures and free economic zones in international trade. Mechanism of state regulation of foreign-economic activity. The content and methodology, of concluding foreign economic contracts. Licensing and quoting of foreign economic operations. The system of laws that regulate foreign economic activity. Mode of goods transfer across the border and their duties (customs regulation of economic activity).

Field of technology. Principles of Agronomy. Fundamentals of Animal Husbandry. Fundamentals of mechanization and electrification of agricultural production. Manual skills and abilities in the production of agricultural products.

Introduction to specialty. Normative providing and organization of economic education according to specialty 5.03050401 «Economics of enterprise». Ethical and psychological aspects of the educational process. Professional attitude and ethics in economics. Professional sources. Innovative technologies of education and self-education. Fundamentals of business economics. Planning in the management system of the enterprise. Business Planning. International economics.

Junior Specialists training
Specialty «Marketing activity»
Training direction «Marketing»
Field of knowledge «Economics and Entrepreneurship»

Amount, credits ECTS - 120

Learning / teaching period, years:

Full-time – 3 years (on the basis of basic secondary education)

Qualification of graduate is a marketing services agent

Training of Junior Specialists is carried out in Separated Subdivision of NULES of Ukraine (licensed amount, persons: full-time/part-time):

- Irpin Economic College (50/-)
- Boyarka College of Ecology and Natural Resources (50/-)

Annotation of Specialty

Training of specialists of the Specialty «Marketing activity» provides enterprises and organizations of different patterns of ownership with highly skilled workers, who are in picture of a situation at the market and are able to use this information for the increase of efficiency of both subjects of manage and governmental control bodies. They have base knowledge and abilities of complex researche and prognosis of markets, activity, strategy and tactics of influence of competitors on customers (advertisement, price politics, service services and others), forming of demand and sales, planning and realization of sale operations, providing of terms of successful realization of enterprise products; market-oriented organization of production.

Practical Training

Students have practical training in the educational-experience enterprises and stations of NULES of Ukraine, trade enterprises: SE «Prodmerezha «Furshet», LTD «Eco», Supermarket «Ekomarket», network of building hypermarkets «Epitsentr-K», on industrial, intermediary, trade enterprises, and also in advertising agencies, logistic companies.

Approximate topics of the graduation works

State certification provides passing the state examination in the Specialty.

Graduate's Academic Rights

Students can continue studies on the preparation program of bachelor of direction 6.030507 «Marketing»

Graduates' Spheres of employment

Junior specialist are trained for professional work in enterprises and organizations of different ownership in the primary positions: marketing - Analyst, marketing expert, marketing consultant, specialist marketing department, merchandiser, brand-manager, PR-Manager, Art Director, Ads-Manager, broker of marketing department, marketing manager of the company.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Marketing activity»**

№	The name of the course, practice	Semester	Hours	Amount	
				Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian and socio-economic training*					
1	Bases of philosophical knowledge	4	108	2	3
2	Professional foreign language	4,5	216	4	6
3	Law Science	1	54	1	1,5
4	History of Ukraine	3	54	1	1,5
5	Sociology	3	54	1	1,5
6	ProfessionalUkrainian	5	108	2	3
7	History of Culture	3	54	1	1,5
8	Physical education	5	216	4	6
Total for the cycle			864	16	24
1.2. Cycle of natural science and economic training					
1	Political economy	3	108	2	3
2	Higher mathematics	5	108	2	3
3	Computer technique	4	108	2	3
4	Enterprise economy	3	162	3	4,5
5	Enterprise Finances	4	54	1	1,5
6	Accounting	4	108	2	3
7	Statistics	4	108	2	3
8	Ecology	3	54	1	1,5
9	Safety of vital functions	4	54	1	1,5
Total for the cycle			864	16	24
1.3. Cycle of professional and practical training*					
1	Marketing	4,5	216	4	6
2	Development of commodity	5,6	144	2,7	4
3	Logistic	5,6	144	2,7	4
4	Organization of purchase and sale	6	108	2	3
5	Market research	5,6	144	2,7	4
6	Communication activity	5	162	3	4,5
7	Pricing	4	108	2	3
8	Electronic commerce	6	162	3	4,5
9	The informative systems and technologies in marketing activity	5,6	162	3	4,5
10	Bases of labour protection	5	54	1	1,5
11	Industry labour protection	6	54	1	1,5
Total for the cycle			1458	27	40,5
Regulatory part, total			3186	59	88,5
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University*					
2.1.1. Cycle of humanitarian, social and economic training					
1	Specialty introduction	1	54	1	1,5
2	International marketing	5	108	2	3
3	Merchandising	4	108	2	3
4	Marketing price politics	5	108	2	3

5	Advertisement and stimulation of sale	5	108	2	3
6	Statistics of commodities and services market	4	108	2	3
Total for the cycle			594	11	16,5
Elective part, total			594	11	16,5
Practical training			540	10	15
Total, according to the field of study			4320	80	120

* Amount of educational hours/credits for specialists preparation is determined on the basis of basic secondary education.

**Names of disciplines cycles and form of state attestation - in accordance with the requirements of the industry standards of higher education, ratified in 2009, EQC and OPP specialty.

Description of curriculum disciplines

1. Regulatory academic disciplines

1.1. Cycle of humanitarian training

Descriptions of disciplines «Ukrainian language for professional purposes», «History of Ukraine», «History of Culture», «Professional foreign language», «Bases of philosophical knowledge», «Law Science », «Sociology» and «Physical education» are in paragraph 2.2.

1.2. Cycle of natural science and economic training

Political economy. Political economy as science. Production and its basic factors. Economic necessities of society. Relations of property are in economic life of society. Commodity production and commodity-money relations. General bases of market. Subjects of market economy. Mixed economy and its types. Public product and its forms. National income. Economy growing and its factors. Consumption, economy and welfare of man. An international economy and its role are in the increase of welfare of human association of the world.

Higher mathematics. Elements of theory of matrices and determinants. General theory of the systems of linear equalizations. Lines on a plane. Curves of the second order. Borders of function. Continuity of function. Derivative of function. Differential of function of one variable. Basic theorems of differential calculation. Differentiability of many variables' function. Research of many variables function on an extremum, conditional extremum. Indefinite integral. Certain integral.

Computer technique. Theoretical bases of information. Structure of the informative system. Personal computer hardware. Computer networks and Internet. Organization of computer software. Operating systems. Service software. Application software. To text and graphics editors. Tabular processors. Control system on the bases of data. Consulting and educational models.

Enterprise economy. An enterprise in the modern system of menage. Labour resources. Capital, productive funds and non-material resources. Innovative-investment activity of enterprise. The planning system on an enterprise. Organization of production and service. Products: essence, varieties and competitiveness. Charges of enterprise. Effectiveness of activity of enterprise. Anticrisis activity of enterprise.

Finances of enterprise. Essence and bases of enterprises finances organization. Organization of money calculations of enterprises. Forming and use of income. Taxation of enterprises. Turnover means and its organization on enterprises. Crediting of enterprises. Evaluation of the financial state of enterprises. The financial planning on enterprises.

Accounting. Record-keeping, its essence and bases of organization. Object and method of record-keeping. Book-keeping balance. Accounts of record-keeping and double record. Primary supervision, documentation and taking of inventory. Card of accounts of record-keeping. Forms of record-keeping. Account of economic processes. Bases of accounting control.

Statistics. Object and methodological base of statistics. Statistical supervision. Erection and grouping of statistical data. Absolute and relative values. Averages and indexes of variation. Rows of dynamics. Indexes. Statistics of products. Statistics of quantity and personnel productivity. Statistics of production efficiency.

Ecology. Object, method and task of ecology. Development of productive forces and anthropogenic influence on an environment. Economic mechanism of management of nature-using. Legal adjusting of environment protection. Economic methods of environmental management and environment protection. Organization of rational environmental management and environment protection. World experience and international cooperation in the field of environment protection.

Safety of vital functions. Normative-legal adjusting of safety of vital functions of a man. Sources of danger for a man. Protecting a man from influence of harmful, dangerous and striking factors of natural, technogenic and socio-political character. Protecting a man from influence of negative factors of environment of everyday activity.

1.3.Cycle of professional and practical training

Marketing. Marketing essence and its modern conception. Classification and basic categories of marketing. Marketing descriptions. Marketing research . Marketing commodity politics. Food innovations. Marketing price politics. Methods of pricing and their classification. Marketing politics of distribution. Marketing politics of advancement. Marketing communications. Plan of marketing of enterprise. Organization of marketing and control of marketing.

Development of commodity. Market of commodities and services. A price in the system of market descriptions of commodity. Commodity politics and management an assortment. Quality of products and methods of its evaluation. Competitiveness and its indexes. Pre-conditions of creation and mastering of new commodities. Planning and development of new commodity. Design of new commodity. Target market of commodity and methodology of its choice. Setting and types of authentication of products. Commodity brands and packing.

Logistic. The logistic in a market economy. Classification of forms of logistic formations. Description of basic elements of logistic. Technological processes and management material streams. Essence of distributive logistic. Internal productive logistic. Logistic of mediation. Logistic of abolition. Transport logistic. Transport-expeditionary logistic services.

Organization of purchase and sale. A purchase in the system of enterprise marketing. Program of purchase of material and technical resources. Delivery and storage of technical resources. A purchase of products for state necessities. Planning of sale on an enterprise. Channels of distribution and organization of sale on an enterprise. Stimulation of sale. A management a sale in the field of services. Control of inventories of commodity-material resources. Evaluation of efficiency of purchase and sale.

Market research. Essence, kinds and setting of market research. Market information and its varieties. Structure and process of market research. Methods of collection of primary information. Secondary information generators. Determination of capacity of market and its segments. Forecast research of sale. Research of concrete environment, competitors, behavior of consumers, trade marks.

Communication activity. Communications in the system of marketing. Strategies and planning of marketing communications. Organization of marketing communications. Promoting product. Stimulation of commodities sale. Organization of work with public. An advertisement in place of sale. Direct response marketing. Organization of exhibitions and fairs. Personal sale of commodities. Packing as mean of communication. Evaluation of efficiency of marketing communications.

Pricing. Essence, kinds and functions of prices in a market economy. Price politics of the state. Government control of processes of pricing in Ukraine. Price politics of enterprise. Basic pricing factors. Pattern of prices and forming of its constituents. Methods of the market pricing. Costs of exchange trade. Costs of foreign market.

Electronic commerce. Basic concepts of electronic commerce. Marketing in electronic commerce. Advertisement in electronic commerce and its efficiency. The payment and financial systems on the Internet. Safety and priv in electronic commerce. Electronic market on a base of the Internet. Electronic support of consumers. Tactical receptions of electronic commerce. Prospects of electronic commerce. Virtual enterprises.

The informative systems and technologies in marketing activity. Informative systems and technologies, their role in economy management. Economic information and its facilities, the formalized description. Creation and functioning of the informative systems. Technological query, collection and piling up of marketing information facilities. Technological facilities of support of acceptance of marketing decisions. Organization of marketing research with the use of computer technologies. Information technologies of decision of marketing tasks.

Bases of labour protection. A productive environment and its influence on a man. State administration of labour guard in Ukraine. Normative-legal adjusting of labour protection. A management of labour guard at production. Labour conditions on a production, their classification and setting of norms. Productive to harmfulness and methods of defence of man from their negative influence. Analysis and prophylaxis of professional disease and productive traumatism. Economic aspects of labour protection.

A labour protection in industry. Basic legislative and normatively-legal acts on a labour protection in the industry. Control system by the guard of labour in organization. Traumatism and professional diseases in the industry. Investigation of accidents. The special divisions of labour protection in industry of professional activity. Basic measures of fire prophylaxis on branch objects. Social security from an industrial accident and professional disease.

2. ELECTIVE ACADEMIC DISCIPLINES

2.1. Disciplines chosen by University

2.1.1.Cycle of professional and practical training

Specialty introduction. Professional-qualifying description of specialist on marketing. Marketing as educational discipline, its connection with other disciplines. Origin and evolution of marketing conception. Basic concepts of marketing. Social responsibility and marketing ethics. Marketing and enterprise. A Normatively-legal base of marketing activity is in Ukraine.

International marketing. Essence and organization of the international marketing on an enterprise, International marketing research. World market segmentation. Choice of foreign markets. Models of included in a foreign market. Complex of the international marketing. International marketing complex: commodity politics. International channels of distribution. International marketing communications. International price politics.

Merchandising. State and prospects of development of production and consumption of commodities. Raw material, its composition and properties. Bases of production and technological features of separate groups of commodities, conformity to law of forming of their quality and consumer properties. Principles of classification and range of goods. Terms of storage and transporting of commodities. Norms of natural losses of commodities. Requirements to quality and methods of estimation of quality of commodities.

Marketing price politics. Forming of price politics. System of prices and their classification. Factors of the marketing pricing. Conceptions of pricing in the system of marketing. Price as instrument of marketing politics. Marketing research in the process of realization of price politics. Marketing strategies of prices. Errors and risks in establishment of prices. The legal adjusting of pricing is in Ukraine

Advertisement and stimulation of sale. Evolution of advertisement activity in the world and in Ukraine. The legislative adjusting of activity on sales and advertisement promotion. Classification of advertisement. Features of market development of media-advertisements in Ukraine. Sales promotion: determination, typology, strategies. Organization of advertisement business on an enterprise. Methods of estimation of efficiency of advertisement and measures on sales of products promotion.

Statistics of commodities and services market. Statistics of macroeconomic demand and macroeconomic supply of commodities and services. Statistics of market prices. Methodology of statistical branch market analysis. A statistical study of direct motion of commodities at the internal market. Statistics of commodities and services in foreign economic activity. Statistical evaluation of the state of affairs of commodity market. Statistical monitoring of business activity of enterprises.

Junior Specialists training
Specialty «Commercial activity»
Training direction «Marketing»
Field of knowledge «Economics and Entrepreneurship»

Amount, credits ECTS - 120

Learning / teaching period, years:

Full-time - 2 years 10 months (on the basis of basic secondary education)

Full-time - 1 year 10 months (on the basis of secondary education)

Graduate Qualification – commercial agent

Training of Junior Specialists is carried out in Separated Subdivision NULESU (licensed amount, persons: full-time/part-time):

- Zalizhchyky Agricultural College named after Y. Khraplyvy (25/0)
- Crimean Technical College of Hydromelioration and Mechanization of Agriculture (40/30)

Annotation of Specialty

Junior specialist of specialty «Commercial activity» prepared for the performance of professional functions for one or more of the economic activities. The purpose of this training is to provide businesses and organizations with highly skilled workers who would own information about the market situation and be able to use it to improve business entities to facilitate efficient organization of supply and marketing operations.

Qualification «Junior Specialist» specialty «Commercial activity» allows a graduating student to identify quickly the main trends of the market development, predict trends and develop measures to adapt to them, and make economic calculations.

Practical Training

Bases of practice are computer labs of the college, OSP «Zalizhchyky cereal company» with its laboratory, warehouses for grain storage, two mills for processing wheat and corn, grain processing enterprise, PE «Liakhovich V.I.» service cooperative «Ratay» on processing of cereals, OSP «Zalizhchyky Canning Plant», OSP «Dairy gifts «PE» Adriatic» for the production of bakery products, groceries PE Chubatyy V.D., «rozhai» PE Grynyk M., Supermarket PAKKO district consumer society and other Grocery DisCS.

Approximate topics of the graduation works

State certification involves passing of the comprehensive state examination.

Graduate's Academic Rights

They can continue their studies at the level «Bachelor» in the direction of 6.030507 «Commercial activity» and «Marketing».

Graduates' Spheres of employment

Graduates of this Specialty are commercial agents, commodity, and representatives of advertising.

**Curriculum of training the specialists of EQL «Junior Specialist»
in Specialty «Commercial activity»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian and socio-economic training*					
1	Ukrainian language for professional purposes	1	54	1,0	1,5
2	Fundamentals of philosophical knowledge	1	54	1,0	1,5
3	Foreign language for professional purposes	3-4	216	4,0	6,0
4	History of Ukraine	1	54	1,0	1,5
5	Sociology	2	54	1,0	1,5
6	Cultural Studies	1	54	1,0	1,5
7	Jurisprudence	1	54	1,0	1,5
8	Physical education	1-3	216	4,0	6,0
Total for the cycle			756	14,0	21,0
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Political economy	1	108	2,0	3,0
2	Higher mathematics	2	108	2,0	3,0
3	Computer Sciences and Computer Equipment	2	108	2,0	3,0
4	Economics of enterprise	2	108	2,0	3,0
5	Finances of enterprises	3	54	1,0	1,5
6	Accounting	1	108	2,0	3,0
7	Statistics	1	54	1,0	1,5
8	Ecology	1	54	1,0	1,5
9	Safety of vital functions	1	54	1,0	1,5
Total for the cycle			756	14,0	21,0
1.3. Cycle of professional and practical training*					
1	Commercial activity		216	4,0	6,0
2	Commercial Commodity		144	2,7	4,0
3	Financial accounting		144	2,7	4,0
4	Communicative Activity		108	2,0	3,0
5	Infrastructure of commodity market		108	2,0	3,0
6	Market research		144	2,7	4,0
7	Entrepreneurship		108	2,0	3,0
8	Pricing		108	2,0	3,0
9	Information systems and technologies in commercial activity		162	4,0	6,0
10	Labour Protection		54	1,0	1,5
11	Training practice in Computer Sciences and Computer Equipment		54	1,0	1,5
12	Training practice in Commercial Commodity		108	2,0	3,0
13	Training practice in Commercial Activity		216	4,0	6,0
14	Training practice in Financial		54	1,0	1,5

	Accounting				
14	Training practice in Entrepreneurship		54	1,0	1,5
15	Training practice in Information systems and technologies in commercial activities		54	1,0	1,5
16	Productive practice		162	3,0	4,5
Total for the cycle			1998	37	55,5
Regulatory part, total			3510	65,0	97,5
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University*					
2.1.1. Cycle of humanitarian, social and economic training					
1	Psychology		54	1,0	1,5
2	Political science		54	1,0	1,5
Total for the cycle			108	2,0	3,0
2.1.2 Cycle of mathematics and natural science (fundamental) training					
1	Marketing		54	1,0	1,5
2	Management		54	1,0	1,5
Total for the cycle			108	2,0	3,0
2.1.3. Cycle of professional and practical training*					
1	Tax system		108	2,0	3,0
2	Commodity policy of enterprise		108	2,0	3,0
3	Advertising and promotion		54	1,0	1,5
4	Field Technology		54	1,0	1,5
5	Fundamentals of Stock Activity		54	1,0	1,5
6	Technology of storage and processing of agricultural products		54	1,0	1,5
7	Planning and organization of the enterprise activity		54	1,0	1,5
8	Introduction to the Specialty		54	1,0	1,5
Total for the cycle			540	10,0	15,0
Chosen by University, total			756	14,0	21,0
2.2. Disciplines chosen by students					
Chosen by students, total			0	0	0
Elective part, total			756	14,0	21,0
Practical training			702	13	19,5
Degree examination			54	1,0	1,5
Total, according to the field of study			4320	80,0	120,0

**Amount of educational hours/ credits is determined on the basis of the secondary education for the training of specialists.

****Names of disciplines cycles and form of state certification – accordingly requirements of industry standards of higher education, ratified 2009, EQC and EPP of Specialty.

Subjects annotations of the curriculum**1. Regulatory academic disciplines****1.1 Cycle of humanitarian, social and economic training**

Annotations of the disciplines: «Ukrainian for professional purposes», «History of Ukraine», «Culturology», «Foreign language for professional purposes», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see paragraph 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Political economy. Economic relations productive forces. Production and its factors. The economic needs of society. Property relations. Commodity production and market. Money, inflation, financial and credit system. Entrepreneurship and its forms. Capitalist economy as the highest form of market economy. Transition economy. The role of state in a market economy. Social product and its shapes. National income. Economic growth. Distribution of national income. Consumption, savings. International Economics.

Higher mathematics (professional aspiration). Elements of the theory of matrices and determinants. The general theory of systems of linear equations. Lines in the plane. The curves of the second order. Boundary function. Continuity of functions. The derivative function. Differential functions of one variable. Basic theorems of differential calculus. Differentiation function of many variables. Investigation of functions of several variables on the extremum, - conditional extremum. Indefinite integral. Definite integral. Differential equations of the 1st order.

Computer sciences and computer engineering. Theoretical bases of information. Structure of the informative system. Architecture of the personal computer. Computer network the Internet. Organization of software of the computer. Operating systems. Service software. Applied software. The text and graphics editors. Table processors. Control system of the database. Consulting and educational models.

Economics of enterprise. An enterprise in modern system of economic management. Labour resources. Capital, productive funds and non-material resources. Innovative-investment activity of enterprise. The planning system at the enterprise. Production organizing and its service. Products essence, varieties and competitiveness. Expenses of enterprise. Effectiveness of the activity of enterprise. Anti-crisis activity of enterprise.

Fund of enterprise. The essence and basics of the enterprise funds organization. Organization of the enterprise money calculation. Formation and use of income. Taxation of the enterprise. Current assets and their organization in the enterprise. Crediting of the enterprise. Evaluation of the financial situation of the enterprises. Financial planning of the enterprises.

Accounting. Accounting, its essence and foundation of the organization. Subject and method of accounting. Accounting balance. Bookkeeping accounts and dual Recording. The initial observation, documentation and stocktaking. Chart of Accounts. Methods of accounting. Accounting business processes. Fundamentals of financial statements.

Statistics. Statistic observation. Summary and grouping. Systems of indexes. Mean value. Indexes of variation. Correlation analysis. Lines of dynamics, indexes. Land statistics. Statistics of Animal Husbandry, Plant-growing, Labour, cost price. Statistics of production efficiency.

Ecology. Scientific basis of environmental management and environmental protection. The development of productive forces and the human impact on the environment. Ecological and economic problems of natural resources use. Environmental management and legal protection of the environment. Environmental

monitoring. Environmental information system. The economic and social efficiency of environmental protection measures. Planning of rational environmental management and environmental protection. Environmental impact assessment and issues of the organization. Environmental education of the population.

Safety of vital activity. Negative factors in man's life of natural, technogenic, socio-political and military character. State measures on human life protection. Facilities of individual defence of man. Collective facilities of defence of man. Liquidation of consequences of influence on the man of chemical and biological radioactive matters. Dangerous factors of environment, their effect on a man, bases of labour physiology and normative requirements to the operational conditions. Methods of identification of harmful and dangerous factors of the technical systems. Facilities of protecting from their influence on a man and natural environment in normal and emergency situations. Organizational, legal and socio-economic knowledge in protection of vital functions.

1.3. Cycle of professional and practical training

Commercial activity. Formation of the range of goods in trade. Forming relationships between market subject. Organization of consignment agreement. Sale promotion and service. Forms and methods of commercial success achieving.

Commercial commodity. The essence and importance of standardization. Control and examination of agricultural products. The range and quality of crop production, livestock and their processing, including drinks, alcoholic and non-alcoholic.

Financial Accounting. Fundamentals of Financial Accounting. Accounting of funds. Account transactions and other assets. Accounting of current liabilities. Accounting of material assets. Composition and recording of fixed assets. Accounting of labor and wages. Accounting of long-term liabilities. Revenue and results. Accounting of Investments. Accounting of equity and liabilities. Cost Accounting by the elements of activity. Cost Accounting by the types of activity. Revenue and financial results. Accounting of equity and provision of liabilities and payments. The financial statement of the enterprise.

Communication activity. Communication in the marketing system. Strategies and planning of marketing communications. Organization of marketing communications. Advertising goods. Promotion of goods sale. Work with the public. Advertising to sell. Direct Marketing. Organization of exhibitions and fairs. Personal selling goods. Packaging as a mean of communication. Evaluation of the effectiveness of marketing communications.

Infrastructure of commodity market. Infrastructure of commodity market and the problems of development. Principles and characteristics of mediators in the commodity market. Wholesale Enterprises. Retailers. Commodity exchange. Brokerage in commodity exchange. Leasing. Personal selling.

Market Research. Nature, types and purpose of market research. Market Information and types. Structure and market research process. Methods of collecting of primary data. Sources of secondary information. Determination of market volume and its segments. Research market conditions. Predicted sales research. Specific environment and competitors research. The study of consumer behavior. Research brands. Research in services.

Entrepreneurship. Overview of entrepreneurship. Typology of business. Small business. Establishing technology of own business. Business strategy. Formation of business capital. The investment policy of the company. Entrepreneurship planning. Treaty mutual relations and partnerships in business. Entrepreneurial success and business culture.

Pricing. The essence, types and functions of prices in a market economy. Pricing policy. Government regulation of pricing in Ukraine. Pricing policy of enterprise.

Basic price formation factors. The structure of price and formation of its components. Methods of market pricing.

Information systems and technologies in commercial activity. Organizational and methodological basis of the creation and operation of information systems in commercial activity. Microsoft Office program potentials and special applications softwares for automated data processing in commercial activity.

Labour protection. Work environment and its impact on people. Workplace conditions, their classification and valuation. Production harm, human protection methods from its negative impact. Analysis and prevention of occupational diseases and injuries. Principles of safety. Legal and standard regulation of labour protection. Public health and labour protection management in Ukraine. Organization of labour protection in workplace conditions. Economic aspects of labour protection.

2. ELECTIVE ACADEMIC DISCIPLINES

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

Psychology. Psychology in the system of sciences about human. Psychology. Mental processes. Psychology of human emotional sphere. Psychology of personality. Personality and activity. Communication - an integral part of human life. Conflicts and solutions. Psychology of cooperation: Manager-subordinate. The success of the leader. Psychological image of the organization.

Political science. Politics as a particular social phenomenon, Ukrainian political science, and its main dominant and Ukrainian thought in general.

2.1.2 Cycle of mathematics and natural science (fundamental) training

Marketing. The essence of marketing and its modern concept. System and characteristics of modern marketing. Marketing Research. Marketing commodity policy. Marketing pricing. Marketing communication policy. Marketing distribution policy. Organization and control of the marketing company activity.

Management. Theoretical foundations of management: evolution of management thought, strategy and tactics of modern management, school of manager, functions style of management, decision theory, psychology and ethics of business relations, ensuring the effective operation, management of economic activity. Motivation. Organization of control. Ethics of Manager. Organization and planning of manager work.

2.1.3. Cycle of professional and practical training

Tax system. Essence and types of taxes. Tax system and tax policy. State Tax Service of Ukraine. EPT. Land and property taxation. Indirect taxes. Taxation of small businesses. Payments to the state target funds. The development of Ukrainian tax system.

Company trade policy. Organization of retail trade chain. Structure and planning of commercial establishments. Trade and technological processes in the shops. Organization of retail of goods and servicing customers. Warehouse. Transport operations in trade.

Advertising and sales promotion. Psychological essentials of advertising. Advertising organization. Advertising market research. Advertising planning. Advertising media and channels of distribution. Displaying commodity items. The effectiveness of advertising.

Field of technology. Principles of Agronomy. Fundamentals of Animal Husbandry. Fundamentals of mechanization and electrification of agricultural

production. The acquire of manual skills and abilities in the production of agricultural products.

Fundamentals of exchange activity. Fundamentals of exchange activity. Commodity, Currency and Stock Exchange. Exchange agreements, order of transactions and according to them.

Technology of storage and processing of agricultural products. Storage and processing of agricultural products. Canning. Chemical Engineering production control. Equipment for storage, processing and transportation of products. Practical mastering of technological processes.

Planning and organization of enterprise activity. Organisation of production proceses and preparation of production and development of new products, storage and processing. Remuneration and providing of incentives for the outcomes. New forms of economic relations, production management. Acquisition of abilities and skills is fullfilled in practice.

Introduction to Specialty. Normative providing and organization of economic education according to Specialty 5.03050702 «Commercial activity». Ethical and psychological aspects of the educational process. Professional attitude and ethics of a businessman. Professional and information sources. Innovative information technolyges training and self-education. Fundamentals of economy of enterprice. The essence of commerce and commercial activity. World Trade Organization. The Bases of market research .

Junior Specialists training
Specialty «Finance and credit»
Training direction «Finance and credit»
Field of knowledge «Economics and Entrepreneurship»

Amount, credits ECTS – 120

Learning / teaching period, years:

Full-time – 3 years (on the basis of base secondary education)

Part-time – 2 years (on the basis of complete secondary education)

Qualification of a graduate is a junior specialist in finance and credit

Training of Junior Specialists is carried out in Separated Subdivision of NULES of Ukraine (licensed amount, persons: full-time/part-time):

- Irpin Economic College (50/25)
- Zalishchyky Agricultural College named after Y. Khraplyvy (25/-)
- Nemishaievo Agrotechnical College (50/-)
- Bobrovytsia College of Economics and Management named after O. Mainova (50/-)
- Mukacheve Agricultural College (25/25)

Annotation of Specialty

Educating on Specialty «Finance and credit» is aimed at training of specialists for professional activity in the public organs of power of regional and municipal level, banks, exchanges, managements (separations) of the State treasury, financial and insurance companies, investment funds, tax inspections, custom service, financial departments of enterprises and organizations of all patterns of ownership.

Practical Training

Students pass practical training in the educational-experience enterprises and stations of NULES of Ukraine, in PJSC CB «Privat», PJSC CB «Nadra Bank», JSC Bank «Kyivska Rus», «Khreshchatyk» and in other banks, in financial institutions, insurance companies, investment funds, managements (separations) of the State treasury, state tax inspections, control-revision managements, financial departments of enterprises.

Approximate topics of the graduation works

State certification provides passing the state examination in the Specialty.

Graduate's Academic Rights

Students can continue studies on the preparation program of bachelor in direction 6.030508 «Finance and credit ».

Graduates' Spheres of employment

Junior Specialist is trained for work in the financial management, the State Tax Inspectorate, CAD, departments of local administrations in budgetary institutions and organizations, enterprises and organizations of different ownership. Graduates of this specialty can work as brokers (intermediaries) of the Securities; dealers (sellers) Securities, insurance agents, inspectors, loan, exchange service inspectors, inspectors, auditors, accountants, cashiers, experts, controllers operators.

**Curriculum of training the specialists of EQL «Junior Specialist»
in Specialty «Finance and credit»**

№	The name of the course, practice	Semest er	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian and socio-economic training*					
1	Bases of philosophical knowledge	4	108	2	3
2	Professional foreign language	4,5	216	4	6
3	Science of Law	1	54	1	1,5
4	History of Ukraine	3	54	1	1,5
5	Sociology	3	54	1	1,5
6	ProfessionalUkrainian	5	108	2	3
7	History of Culture	3	54	1	1,5
8	Physical education	5	216	4	6
Total for the cycle			864	16	24
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Political economy	3	108	2	3
2	Higher mathematics	5	108	2	3
3	Computer technique	4	108	2	3
4	Enterprise economy	3	108	2	3
5	Finances of enterprise	4	108	2	3
6	Accounting	4	108	2	3
7	Statistics	4	108	2	3
8	Ecology	3	54	1	1,5
9	Safety of vital functions	4	54	1	1,5
Total for the cycle			864	16	24
1.3. Cycle of professional and practical training*					
1	Bank transactions	5,6	180	3,3	5
2	Tax system	5,6	144	2,7	4
3	Finance	3	144	2,7	4
4	Money and credit	3	144	2,7	4
5	Budgetary system	4	162	3	4,5
6	Treasury business	5,6	108	2	3
7	Audit and accounting in commercial banks	5,6	180	3,3	5
8	Insurance services	4	108	2	3
9	The informative systems and technologies in financial-credit institutions	5,6	180	3,3	5
10	Bases of labour protection	5	90	1,7	2,5
11	Industry labour protection	6	54	1	1,5
Total for the cycle			1494	27,7	41,5
Regulatory part, total			3222	59,7	89,5
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University*					
2.1.1. Cycle of professional and practical training *					
1	Specialty introduction	1	54	1	1,5
2	Audit and accounting in budgetary	5,6	162	3	4,5

	establishments				
3	Financial account	5,6	180	3,3	5
Total for the cycle			396	7,3	11
Elective component, total			396	7,3	11
Practical training			702	13	19,5
Total, according to the field of study			4320	80	120

* Amount of educational hours/credits for specialists preparation is determined on the basis of base secondary education.

**Names of disciplines cycles and form of state attestation - in accordance with the requirements of the industry standards of higher education, ratified in 2009, educationally-qualifying description and educationally-professional preparation of Specialty.

Description of curriculum disciplines

1. Regulatory academic disciplines

1.1. Cycle of humanitarian training

Descriptions of disciplines «Ukrainian language for professional purposes», «History of Ukraine», «History of Culture», «Professional foreign language», «Bases of philosophical knowledge», «Science of Law», «Sociology» and «Physical education» are in paragraph 2.2.

1.2. Cycle of naturally-scientific and economic training

Political economy. Political economy as science. Production and hitsim basic factors. Economic necessities of society. Relations of property in economic life of society. Commodity production and commodity-money relations. General bases of market. Subjects of market economy. Mixed economy and its types. Public product and its forms. National income. Economy growing and his factors. Consumption, economy and welfare of man. An international economy and its role are in the increase of welfare of human association of the world.

Higher mathematics. Elements of theory of matrices and determinants. General theory of the systems of linear equalizations. Lines on a plane. Curves of the second order. Borders of function. Continuity of function. Derivative of function. Differential of function of one variable. Basic theorems of differential calculation. Differentiability of many variables' function. Research of many variables function on an extremum, conditional extremum. Indefinite integral. Certain integral.

Computer technique. Theoretical bases of information. Structure of the informative system. Architecture of the personal computer. Computer networks and Internet. Organization of computer software. Operating systems. Service software. Application software. To text and graphics editors. Tabular processors. Control system by the bases of data. Consulting and educational models.

Enterprise economy. An enterprise in the modern system of menage. Labour resources. Capital, productive funds and non-material resources. Innovative-investment activity of enterprise. The planning system on an enterprise. Organization of production and service. Products: essence, varieties and competitiveness. Charges of enterprise. Effectiveness of activity of enterprise. Anticrisis activity of enterprise.

Finances of enterprise. Essence and bases of enterprises finances organization. Organization of money calculations of enterprises. Forming and use of income. Taxation of enterprises. Turnover means and its organization on enterprises. Crediting of enterprises. Evaluation of the financial state of enterprises. The financial planning on enterprises.

Accounting. Record-keeping, its essence and bases of organization. Object and method of record-keeping. Book-keeping balance. Accounts of record-keeping and double record. Primary supervision, documentation and taking of inventory. Card of accounts of record-keeping. Forms of record-keeping. Account of economic processes. Bases of accounting control.

Statistics. Object and methodological base of statistics. Statistical supervision. Erection and grouping of statistical data. Absolute and relative values. Averages and indexes of variation. Rows of dynamics. Indexes. Statistics of products. Statistics of quantity and personnel productivity. Statistics of production efficiency.

Ecology. Object, method and task of ecology. Development of productive forces and anthropogenic influence on an environment. Economic mechanism of environmental management. Legal adjusting of environment protection. Economic methods of environmental management and environment protection. Organization of rational environmental management and environment protection. World experience and international cooperation in the field of the environmental management.

Safety of vital functions. Normative-legal adjusting of safety of vital functions of a man. Sources of danger for a man. Protecting a man from influence of harmful, dangerous and striking factors of natural, technogenic and socio-political character. Protecting a man from influence of negative factors of environment of everyday activity.

1.3.Cycle of professional and practical training

Bank transactions. Types of banks and order of their setting up in Ukraine. Organization of commercial bank activity. Operations on forming of commercial bank resources. Operations on maintenance of pay turnover. Operations with cash. Operations with plastic cards. Credit operations. Operations on a grant and repayment of credits. Operations with the bills of exchange. Security-related operations. Investment operations. Foreign currency transactions of banks. Operations on the grant of bank services. Operations on providing of a bank financial stability.

Tax system. Principles of organization of the tax system of Ukraine. Value-added tax. Excise duties and duty. Enterprises income tax. Fixed agricultural income. A tax on the physical person profits. Simplified system of taxation of small business entities. Soil paying. Resources and services paying. Collections to the funds of state social security. Other taxes. Development of the tax system of Ukraine.

Finances. Subject of financial science. Essence and functions of finances. Financial politics of the state. Financial system. Finances of subjects of menage. Taxes. Budget. State credit and national debt. Local finances. Special purpose funds of the state. Insurance market. Financial market. International finances.

Money and credit. Essence and functions of money. Money turnover and amount of money, that serves it. Money-market. Money systems. Inflation and money reforms. Currency market and currency systems. Quantitative theory of money. Necessity and credit essence. Kinds, functions and credit role. Financial mediators at the money market. Central banks. Commercial banks.

Budgetary system. Principles of the budgetary mode. Composition and structure of the budgetary system of Ukraine. Composition and structure of earnings of the state budget of Ukraine. Composition and structure of charges of the state budget of Ukraine. Financing of the state budget of Ukraine. Maintenance of debt obligations of the state budget of Ukraine. Profits and charges of local budgets of Ukraine. Budgets of local self-government. Interbudgetary mutual relations. Budgetary planning and control.

Treasury business. The Normatively-legal adjusting of treasury business in Ukraine. Setting up and development of treasury business in Ukraine. Organizational structure and budgetary plenary powers of the State treasury of Ukraine. Payment system of implementation of budgets. Treasury maintenance of budgets after profits.

Maintenance of budgets after charges. Maintenance of state special purpose funds. A record-keeping and accounting about implementation of budgets. Control in the system of treasury.

A record-keeping and accounting in commercial banks. The system of record-keeping and accounting in banks. Account of property asset. Account of cash operations. Account of calculation operations. Account of deposit operations. Account of credit operations. An account of operations in foreign currency. Account of operations with valuable papers. Account of the fixed assets and non-material assets. Account of interbank operations. Accounting of incomes, charges and financial result of activity of bank. Stowage of the financial reporting.

Insurance services. Essence, principles and classification of insurance. Government control of insurance activity. Insurance risks and their evaluations. Insurance services and features of their realization. The medical ensuring and insurance against accidents. Agricultural insurance. Motor transport insurance. Property and responsibility of citizens insurance. Financial activity of insurance company.

The informative systems and technologies in finance-credit establishments. Informative systems and technologies, their role in economy management. Economic information and facilities of its formalized description. Creation and functioning of the informative systems. Automation of interbank calculation, credit and deposit operations. Automation of treatment of information in the tax system of Ukraine. E-mail and system of interbank e-Payments. Electronic internetwork of interbank calculations.

Bases of labour protection. A productive environment and its influence on a man. State administration of labour protection in Ukraine. Normative-legal adjusting of labour protection. A management of labour protection at the place of production. Labour conditions at the place of production production, their classification and setting of norms. Productive to harmfulness and methods of defence of man from their negative influence. Analysis and prophylaxis of professional disease and productive traumatism. Economic aspects of labour protection.

Labour protection in industry. Basic legislative and normatively-legal acts on a labour protection in the industry. Control system by the guard of labour in organization. A traumatism and professional diseases in the industry. Investigation of accidents. The special divisions of labour protection in industry of professional activity. Basic measures of fire prophylaxis on branch objects. Social security from an industrial accident and professional disease.

2. SELECTIVE EDUCATIONAL DISCIPLINES

2.1. Disciplines chosen by educational establishment

2.1.1. Cycle of professional and practical training

Specialty introduction. Organization of finance-economic education. Essence of finances and financial activity in modern society. Financial system and its constituents. Credit as link of the financial system. An acquaintance with work of financial organs and institutes. Organization of financial work on an enterprise. Budgetary system. Tax system of Ukraine. Insurance in market conditions. Financial market.

An account and accounting in budgetary establishments. Theoretical bases of record-keeping in budgetary establishments. Organization of record-keeping in budgetary establishments. Accounting of incomes. Account of charges. Account of financially-calculation operations. An account of calculations is from a salary, insurance and grants. Account of inconvertible assets. Account of supplies. Account of productive

charges. Account of property asset. Account of results of implementation of estimates. Accounting of budgetary establishments.

Financial account. Organization of financial account. Account of monetary resources. Account of calculation operations and other assets. Account of supplies. Account of investments. Account of inconvertible assets. Account of property asset and providing of obligations. Account of calculations after payments to the workers and after insurance. Account of obligations. An account of charges iafter elements. An account of charges after the types of activity. Accounting of incomes and financial results. Financial reporting.

Junior Specialists training
Specialty «Evaluation activity»
Training direction «Finance and credit»
Field of knowledge «Economics and Entrepreneurship»

Amount, credits ECTS – 120

Learning / teaching period, years:

Full-time – 3 years. (on the basis of basic secondary education)

Full-time – 2 years (on the basis of secondary education)

Qualification of the graduate – assessment expert

Training of Junior Specialists is carried out in Separated Subdivision NULESU (licensed amount, persons: full-time/part-time):

- Crimean Agroindustrial College (50/-)
- Irpin Economic College (30/-)
- Boyarka College of Ecology and Natural Resources (25/-)

Abstract of the specialty

Almost all parts of the enterprise associated with the use of assessment methods in the sale, leasing, investment and agricultural production. Junior valuation specialists to analyze and predict in assessment activities, organize commodity-monetary and credit relations related to the operation of assessment facilities, conduct financial and economic analysis in the evaluation.

Practical training

Educational and research farms and stations of NULES of Ukraine, Ukraine's leading valuation companies, real estate agencies, stock exchanges (Ukrainian Stock Exchange, Ukrainian universal exchange, Ukrainian Agrarian Exchange).

Estimated diploma topics

State certification involves passing of the complex state examination.

Academic rights of the graduates:

Graduates can continue their training programs for bachelors in the direction of the signs which are placed in the curriculum of junior specialist OPP, starting with the first course: 6.030508 «Finance and credit».

Scope of employment of graduates

Classification of occupations in Ukraine DK 003-95 (2006) for graduate level «Junior specialist» skills set the qualification of «Assessment expert» (code 3417). Graduates may be employed as auctioneers, appraisers, property valuers, experts, or continue their education at EQL «Bachelor».

**Curriculum of training the specialists of EQL «Junior Specialist»
in Specialty «Evaluation activity»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian and socio-economic training*					
1	Ukrainian language for professional purposes	2	54	1	1,5
2	Foreign language for professional purposes	3	216	4	6
3	Fundamentals of Philosophical knowledge	1	54	1	1,5
4	Law	1	54	1	1,5
5	Sociology	2	54	1	1,5
6	Physical Training	3	216	4	6
7	Culturology	1	54	1	1,5
8	History pf Ukraine	1	54	1	1,5
Total for the cycle			756	14	21
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Political Economy	1	108	2	3
2	Higher Mathematics	2	108	2	3
3	Informatics and Computer Studies	2	108	2	3
4	Business Economics	1	108	2	3
5	Accounting	1	108	2	3
6	Statistics	2	54	1	1,5
7	Safety of Vital Functions	2	54	1	1,5
8	Finance of Companies	4	54	1	1,5
9	Ecology	2	54	1	1,5
Total for the cycle			756	14	21
1.3. Cycle of professional and practical training*					
1	Assessment activities	2-4	180	3,3	5
2	Methods and models of assessment	2-4	180	3,3	5
3	Legal regulation of assessment activities	2-3	162	3	4,5
4	Financial market infrastructure	4	108	2	3
5	Financial Accounting	3	108	2	3
6	Money and Credit	1	108	2	3
7	Information systems and technologies in assessment activities	5-6	162	3	4,5
8	Tax system	3	126	2,3	3,5
9	Finance	3	108	2	3
10	Occupational Health	2	54	1	1,5
11	Occupational Safety and Health in the field	4	54	1	1,5
Total for the cycle			1350	24,9	37,5
Regulatory part, total			2862	52,9	79,5
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University*					
2.1.1. Cycle of humanitarian, social and economic training					
1	Ethics	2	54	1	1,5
2	Psychology	2	54	1	1,5

2.1.2 Cycle of mathematics and natural science (fundamental) training					
1	Marketing	2	54	1	1,5
2	Management	4	54	1	1,5
3	Economic Analysis	2	54	1	1,5
2.1.3. Cycle of professional and practical training*					
1	Pricing	1	108	2	3
2	Financial Law	2	108	2	3
3	Insurance	2	108	2	3
4	Exchange operations	4	108	2	3
5	Evaluation of real estate	4	108	2	3
6	Real estate activities	4	108	2	3
7	Analysis of the property market	4	108	2	3
Chosen by University, total			1026	19	28,5
2.2. Disciplines chosen by students					
2.2.1. Cycle of humanitarian, social and economic training					
1	Foreign language	1-2	108	2	3
Total for the disciplines chosen by the student			108	2	3
Elective component, total			1134	22	33
Practical training			324	6	9
Total, according to the field of study			4320	80	120

* Number of hours / credits is identified for training on the basis of basic secondary education.

** Names of cycles of the disciplines and forms of state certification are given in accordance with industry standards for higher education, approved in 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian and socio-economic disciplines

Annotations of the disciplines: «Ukrainian for professional purposes», «History of Ukraine», «Culturology», «Foreign language for professional purposes», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see paragraph 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Political Economy. The purpose of the discipline is to develop a system of knowledge about economic relations as a social form of production, the problem of effective use of limited productive resources and ways of social needs in different socio-economic formations.

Higher Mathematics. The purpose of the discipline is acquisition of basic mathematical knowledge, the use of mathematical knowledge in the solution of economic problems, the construction of economic and mathematical models, the development of analytical thinking.

Informatics and Computer Studies. The purpose of the discipline is to develop knowledge and skills in using the application of modern information technologies, the formation of skills of work in local and global computer networks. The discipline involves the study of the theoretical foundations of computer science, general principles of modern computer technology, the use of system and application software in information systems, practical skills application of new information and communication technologies.

Business Economics. The purpose of the discipline is to provide theoretical knowledge and practical skills in applied economics, organization and effectiveness of management at primary social production. The objective of the discipline is the study of the theory and practice of enterprise management in a particular environment, developing abilities of efficient use of resources and industrial and economic potential, providing expanded reproduction based on investment and innovative model of business entity.

Accounting. The purpose of the discipline is to develop knowledge of the theory and practice of accounting in enterprises. Studying methods and rational organization of accounting based on the use of progressive forms and national standards, the acquisition of skills and processing of accounting information in management.

Statistics. The purpose of the discipline is to provide knowledge about the methods of collection, processing and analysis of information on the socio-economic phenomena and processes. Studying of statistical observations, calculations of statistical methods of analysis of socio-economic phenomena and processes.

Safety of Vital Functions. The purpose of the discipline is to develop knowledge systems to maintain health under adverse environmental factors of residence and work. Studying the nature and characteristics of negative factors specific to the medium of everyday human activities, practical skills to prevent and protect people from their impact.

Finance of Companies. The purpose of the discipline is to develop basic knowledge of the theory and practice of financial relations of entities, development of financial resources, financial planning, financial performance of companies. Studying the nature and functions of, financial resources and sources of their formation, organization of company finance, acquiring skills of financial accounts; mastering techniques of financial planning, evaluating financial condition of the company.

Ecology. The purpose of the discipline is to provide knowledge of the basic laws of human interaction, society and nature, the formation of ecological thinking and environmental consciousness. Studying the mechanism of management of natural resources and environmental protection, the use of specific administrative, legal, economic and educational means to influence environmental.

1.3. Cycle of professional and practical training

Assessment activities. The purpose of the discipline is to develop theoretical and practical knowledge on the basis of expert assessment of property, tangible assets, enterprises and businesses. Study of the principles, methods and procedures for determining the value of property, intangible assets, companies and businesses.

Methods and models of assessment. The purpose of the discipline is to provide knowledge on the methodology and tools for building economic and mathematical and statistical models for the practical implementation of evaluation. Studying theory and the acquisition of skills of analysis, modeling and prediction of objects in the evaluation of macro- and microeconomic levels.

Legal regulation of assessment activities. The purpose of the discipline is studying of laws and regulations that govern property rights, valuation activities in the country and the process of determining the value of the property. Mastering the nature of legal documents, forming abilities of the application of rules and regulations in the practice of valuation.

Financial market infrastructure. The purpose of the discipline is to provide theoretical and practical knowledge about financial market infrastructure and the role of its structural elements in the development of the financial system. Forming student knowledge of the basic issues as the nature and importance of the financial market, its main elements, the institutional functioning of financial markets.

Financial Accounting. The purpose of the discipline is to develop knowledge of the organization and methodology of accounting in organizations. Studying rational methods of accounting under market economy conditions, proper display of business transactions in the accounts of financial accounting, making entries in the accounting records, the skills to use financial statements to monitor and analyze business.

Money and Credit. The purpose of the discipline is to develop basic knowledge of the theory of money and credit, the assimilation patterns of functioning of the money market as the theoretical basis of the state of monetary policy and banking. The objective of discipline is the study of the nature, functions, concepts and the role of money and credit in a market economy, patterns of functioning money market and monetary system, foundations of banking systems and banking transactions; patterns of development and functioning of the foreign exchange market.

Information systems and technologies in assessment activities. The purpose of the discipline is to develop theoretical and applied knowledge of information systems and computer technologies and their possible use in the evaluation. The acquisition of skills to use information technologies, database management systems and application packages for solving practical problems of property assessment.

Tax system. The purpose of the discipline is to examine the financial relationships related to the expropriation and redistribution of the value of the national product to form a national fund of resources. The acquisition of theoretical and organizational principles of the tax system and tax policy, payment methods, order payment of direct and indirect taxes corporations and individuals, alternative tax systems.

Finance. The purpose of the discipline is to develop basic knowledge of finance theory, the assimilation patterns of functioning at the macro and micro levels. Studying the nature and the characteristics of finance, their role and place in the economic system, based on financial policy and implementation mechanism, areas and parts of the financial system and their interaction.

Occupational Health. The purpose of the discipline is to develop knowledge of the legal, economic and organizational issues, create safe working conditions, protection of rights at work. Studying the legal and regulatory framework for safety in Ukraine, the impact of work environment on humans, classification of working conditions, organizational and economic aspects of health and safety at the plant.

Occupational Safety and Health in the field. The purpose of the discipline is to develop theoretical and practical knowledge of organizational issues creating a safe working environment for professional work. Rules of conduct and operation of computer technologies in performing professional tasks, the operation of special technical devices for the measurement of land and other facilities.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

Ethics. The purpose of the discipline is to develop knowledge of the history and modern concepts of ethics and aesthetics, as an important indicator of specialist literacy. The aim of the discipline is to study the theory of ethics and aesthetic forms of social consciousness. Acquiring the skills of ethical, aesthetic and general analysis of social and cultural life.

Psychology. The purpose of the discipline is to develop knowledge of the fundamentals of the theory of Psychology, of mastering the basic concepts of general Psychology and Pedagogy; clarify the characteristics of psychological and cognitive processes. Developing the knowledge of the psychology of personality as the highest

values of society, the elucidation of mental processes mechanisms of the personality traits, bases of its forming in the upbringing, training, education.

2.1.2 Cycle of mathematics and natural science (fundamental) training

Marketing. The purpose of the discipline is to develop knowledge of the basic categories of marketing, methodological aspects of marketing activities and their priorities in the modern world. The objective of discipline is the study of theoretical concepts and categories of marketing, current trends in this area of expertise, mastery of methodological apparatus of marketing activities in enterprises, acquiring the capacity for creative exploration of improving marketing activities.

Management. The purpose of the discipline is to develop knowledge of the basic categories of marketing, its principles and methods, major tools and technology of market research and organization of marketing activities. Studying the basic concepts of marketing systems and algorithms, practical skills to solve specific marketing objectives, developing creative abilities to search the reserves for the improvement of the enterprise marketing activities.

Economic Analysis. The purpose of the discipline is studying of systematic evaluation of organizations, identifying internal reserves for management of material, labor and financial resources. Studying modern methods of economic analysis including using mathematical and statistical techniques and methods.

2.1.3. Cycle of professional and practical training

Pricing. The purpose of the discipline is to examine the complex of economic, political, social and psychological factors, the economic potential of the company to implement an effective pricing policy. The objective of the discipline is to study the mechanism of price formation in a market economy, government regulation of prices, methodological issues of pricing policy of the company, modern methods of pricing.

Financial Law. The purpose of the discipline is to develop theoretical and practical knowledge in the field of finance as a separate unit of law, the laws and other regulations relating to the sphere of social relations. The object of the discipline is to study the finance theory, acquisition of skills for analysis of the use of financial legislation, legal regulation of citizen, businesses, government and other entities protection.

Insurance. The purpose of the discipline is to study the theory and practice of insurance of property interests of businesses and individuals, thorough study of the insurance mechanism. Studying the nature and role of insurance, organization and development of the insurance market, state regulation of insurance; necessary skills to analyze insurance market.

Exchange operations. The purpose of the discipline is the creation of knowledge concerning the organization and functioning of the stock markets, regulation and stock brokerage. The object of the discipline is the study of the nature and patterns of exchange activities, methods of analysis of market conditions, the acquisition of skills to analyze the effectiveness of exchange operations.

Evaluation of real estate. The purpose of the discipline is to develop theoretical and practical knowledge on the basis of expert evaluation assets, intangible assets, companies and businesses. Study of the principles, methods and procedures for determining the value of property, intangible assets, companies and businesses.

Real estate activities. The purpose of the discipline is to develop theoretical and practical knowledge in the field of real estate activity, the basics of mediation, real estate management, real estate expertise, organizing and conducting a public bidding, auctions and tenders of immovable property. The object of the discipline is the study of

the theory and practice of real estate activity; necessary skills to provide real estate services, the study of legislation on real estate activities.

Analysis of the property market. The purpose of the discipline is to provide students with the necessary theoretical knowledge and practical skills in organization and methods of analysis of the real estate market, the study of regulation, technology, selection of the most suitable analytical forms for the implementation of various businesses, organizations, societies, associations, market research, detailed analysis of the real estate market and its individual segments, taking into account existing investor resources and land.

2.2. Disciplines chosen by students

2.2.1. Cycle of humanitarian, social and economic training

Foreign language. Thorough study of discipline improves students' skills, abilities and knowledge of a foreign language in the process of communication with other countries on various issues related to the life, culture, traditions, promoting comprehensive development of the individual student and his foreign language socialization in society.

Junior Specialists training
Specialty «Accounting»
Training direction «Accounting and Auditing»
Field of knowledge «Economics and Entrepreneurship»

Amount, credits ECTS - 120

Learning / teaching period, years:

Full-time - 2 years 10 months (on the basis of basic secondary education)

Part-time - 1 year 10 months (on the basis of secondary education)

Qualifications Graduate - Junior Specialist in accounting.

Training of Junior Specialists is carried out in Separated Subdivision of NULESU (licensed amount, persons: full-time/part-time):

- Berezhany Agrotechnical Institute (50 / -)
- Nizhyn Agrotechnical Institute (60/ 25)
- Irpin Economic College (250/ 31)
- Zalishchyky Agricultural College named after Y. Khraplyvy (60/ 30)
- Crimean Agroindustrial College (125/ 30)
- Bobrovitsa College of Economics and Management named after O. Mainov (30 /30)
- Mukachiv Agricultural College (50/ 50)

Annotation of Specialty

Today agriculture changes approached to accounting, so the need for specialists in accounting in the formation of different types of agricultural property, farms, small businesses, financial institutions, governmental funds are constant. Junior professionals in accounting should accept, validate and process accounting records, held synthetic and analytical accounting, determine income, expenses and financial results, prepare financial statements.

Practical Training

Teaching and research farms and stations of NULESU, regional agencies such as the Office of the Pension Fund, Department of the Treasury, the Department of Social Protection, Finance Department District Administration, Department of Statistics, as well as leading banks — Savingbank, Privat, Raiffeisen Bank «Aval», UkrSibBank, Nadra Bank, which concluded contracts for creative collaboration, teaching accounting college, Agricultural Enterprises and farms.

Approximate topics of the graduation works

State certification involves compiling a comprehensive state examination.

Graduate's Academic Rights

The graduate has the right to continue training for the educational qualification of «Bachelor» in the direction of preparation 6.030509 «Accounting and Auditing».

Graduates' Spheres of employment

In organizations, enterprises and institutions of all forms of property, the bodies of the financial system, social security system, the State Tax Inspectorate, Control-Auditing Service, departments of local administrations, budget institutions and organizations as an accountant, auditor, head cashier, inspector inventory, inspector - auditor, auditor etc.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Accounting»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian and socio-economic training*					
1	Fundamentals of philosophical knowledge	3	54	1	1,5
2	Foreign Language (by prof. direction)	4,5	216	4	6
3	Law	2	54	1	1,5
4	History of Ukraine	3	54	1	1,5
5	Sociology	3	54	1	1,5
6	Ukrainian language (by prof. direction)	5	54	1	1,5
7	Cultural Studies	1	54	1	1,5
8	Physical Education	5	216	4	6
Total for the cycle			756	14	21
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Political Economy	3	108	2	3
2	Higher Mathematics	4	108	2	3
3	Informatics and computer technologies	4	108	2	3
4	Economics of Enterprise	4	108	2	3
5	Finance of Enterprise	5	54	1	1,5
6	Accounting	3	108	2	3
7	Statistics	3	54	1	1,5
8	Ecology	1	54	1	1,5
9	Safety of vital activity	3	54	1	1,5
Total for the cycle			756	14	21
1.3. Cycle of professional and practical training*					
1	Financial Accounting	4,5,6	270	5	7,5
2	Economic Analysis	5,6	108	2	3
3	Informational Systems and Technologies in Accounting	5,6	162	3	4,5
4	Accounting in Budgetary Institutions	5	162	3	4,5
5	Control and Auditing	5,6	108	2	3
6	Tax System	5,6	162	3	4,5
7	Treasury	5,6	108	2	3
8	Finance	4	108	2	3
9	Money and Credit	5,6	108	2	3
10	Labour Protection	4	54	1	1,5
Total for the cycle			1350	25	37,5
Regulatory part, total			2862	53	79,5
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by the University*					
2.1.1. Cycle of humanitarian, social and economic training					

2.1.2 Cycle of mathematics and natural science (fundamental) training					
1	Allocation of productive forces	4	54	1	1,5
2.1.3. Cycle of professional and practical training*					
1	Managerial Accounting	6	54	1	1,5
2	Planning and organization of enterprises	4,5,6	135	2,5	3,75
3	Technology Industry	3,4	108	2	3
4	Management	4	54	1	1,5
5	Marketing	4	54	1	1,5
6	Branch Occupational Health	6	54	1	1,5
Total sum in elective components			513	9,5	14,25
Practical Training			594	11	16,5
Degree examinations			351	6,5	9,75
Total, according to the field of study			4320	80	120

*The number of training hours/credits defined for preparation of specialists on the basis of basic secondary education

**The names of cycles of disciplines and forms of state attestation – according to the requirements of industry standards for higher education approved 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian and socio-economic disciplines

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Cultural Studies», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Political Economy. Political Economy as a fundamental social science. Production and its main factors. The economic needs of society. Property relations in the economic life of society. Goods production and goods-money relations. The general principles of the market. Subjects market economy. Mixed economy and its types. Social product and its forms. National income. Economic growth and its factors. Consumption, savings and welfare rights. International economics and its role in promoting of the welfare of human community in the world.

Higher mathematics. Trigonometric functions. Complex numbers. Elements of vector algebra. Analytic geometry. Systems of linear inequalities and linear programming. Differential calculus of functions of one variable. Differential calculus of functions of several variables. Integral calculus. Differential equations. Elements of the theory of probability.

Informatics and computer technology. The contents of the subject is covered by theoretical foundations of informatics and structure of the information system; construction of the personal computer, computer networks and the Internet, organizing of computer software; operating systems, service software, application software, text and graphical editors; spreadsheet, database systems, expert systems and training.

Economics of Enterprise. During the course knowledge the system of sections: enterprise in the modern management system, human resources, capital, productive assets and intangible resources, innovation and investment activities of the company; planning system in the enterprise, organization of production and its maintenance;

production: the nature, variety and competitiveness; the cost of the enterprise; performance of the company, the anti-crisis activities of the company are taught.

Enterprise Finance. The contents of the discipline is covered by the subjects: the nature and foundations of finance companies, organization of cash settlements companies, the formation and use of profits, taxation, current capital and the organization of business, lending, financial evaluation of companies, firms financial planning of firms.

Accounting. The content of the discipline id covered by the subjects: accounting, its essence and foundation of the organization; subjects and methods of accounting, balance sheet, bookkeeping accounts and double records; initial observation, documentation and inventory, chart of accounts, forms of accounting, accounting business processes, fundamentals of accounting.

Statistics. The contents of the discipline is covered by the subjects: the subject and the methodological basics of statistics, statistical observations, reduction and clustering statistics; the absolute and relative size, medium size and performance variation, time series, indexes; production statistics, population statistics and productivity, efficiency statistics of production.

Ecology. The content of the discipline is covered by the subjects: subject, method and tasks of ecology; the development of productive forces and the human impact on the environment; the economic mechanisms of environmental management; law regulation of environmental protection; economic management of natural resources and protection of environment, organization of environmental and health protection; international experience and international cooperation in the field of environmental protection.

Safety of Vital Activity. The content of the discipline is covered by the subjects: legal regulation of safety human life; the source of danger to humans, protection of human exposure to harmful, dangerous and damaging factors of natural origin; protection of human exposure from harmful, dangerous and damaging factors emergencies; human protection from adverse factors of socio-political nature; protection of man from adverse environmental factors daily activities.

1.3. Cycle of professional and practical training

Financial Accounting. The content of the discipline is covered by the subjects: bases of financial accounting; accounting of funds; account receivables; fixed assets in accounting; accounting of intangible assets; long-term financial investment accounting; inventory accounting, cost accounting production; records of finished goods; accounting of current financial investment; accounting equity; accounting provision for liabilities and charges; accounting of long-term liabilities; accounting of current liabilities, accounting work and its remuneration; accounting deductions for social insurance; records of income and expenditure of the company; accounting financial results of the company, accounting calculations budget; financial statements of the enterprise.

Economic Analysis. The content of the discipline is covered by the subjects: the subject and the types of economic analysis; economic analysis of instructional techniques; methods of factor analysis; informational base and organization of economic analysis; analysis of production and services; analysis and evaluation of enterprise resource efficiency; analysis of production costs; analysis of the financial performance of the company; analytical study of the production program and evaluating of its implementation; analysis of sales and contractual obligations.

Information systems and technologies in accounting. The content of the discipline is covered by the subjects: information systems and technologies, their role in economic management, economic information and means of formalized description; organization of after machine informational database; organization of the informational

base machine; the creation of computer technologies; computer operation, creation and operation of informational systems' automation of fixed assets, property accounting automation, automation of accounting and wages; accounting automation of finished products and its implementation; automation of financial accounting and settlement of transactions, automation of the cost of production; automation consolidated accounting and reporting.

Accounting in budget institutions. The content of the discipline is covered by the subjects: theoretical basis of accounting in budgetary institutions; organization of accounting in budgetary institutions; accounting income; accounting expenses; accounting and settlement of financial transactions; the payments of wages, insurance, scholarships; accounting of fixed assets; inventory accounting; account production costs; equity accounting , accounting results of the estimates; statements of budgetary institutions.

Control and audit. The content of the discipline is covered by the subjects: economic control in Ukraine: the nature, condition and prospects; organization and planning of the audit; control and audit of cash and bank transactions; monitoring and revision settlement operations; monitoring and audit of fixed assets and intangible assets; control and audit inventory; monitoring and auditing of the use of human resources and payroll; control and audit of the cost of production and implementation; monitoring and revision of equity; control and audit obligations.

Tax system. The content of the discipline is covered by the subjects: principles of Ukraine's tax system; value added tax; excise tax and customs duties; enterprise income tax; fixed agricultural income, the tax on personal income; simplified system of taxation of small businesses; land tax; payment for supplies and services; contributions to social insurance funds; other taxes; the development of the tax system of Ukraine.

Treasury. The content of the discipline is covered by the subjects: legal regulation treasury of Ukraine; establishment and development of treasury in Ukraine; organizational structure and budgetary powers of the State Treasury of Ukraine; payment system of budget execution; treasury budgets for revenues; expenditures budgets; public service trust funds; accounting and reporting on budget execution, monitoring system in the Treasury.

Finance. The content of the discipline is covered by the subjects: nature and functions of finance; financial policies of state; financial system; finance businesses; taxes; budget; state loans and public debt; local finance; special state trust funds; insurance market; financial market; international finance.

Money and credit. The content of the discipline is covered by the subjects: nature and function of money; money circulation and money supply, which it serves; money market; monetary systems; inflation and monetary reforms; foreign exchange market and currency systems; the quantity theory of money; need and nature of credit; types, functions and the role of credit; financial intermediaries in the money market; central banks; commercial banks.

Occupational Health. The content of the discipline is covered by the subjects: work environment and its impact on people; public health and safety management in Ukraine; legal regulation of labour management in the workplace; working conditions in the workplace, their classification and valuation; industrial hazards and methods of protection of human from their impact; analysis and prevention of occupational diseases and industrial accidents; occupational safety regulations in the use of computers; economic aspects of health and safety.

2. Elective academic disciplines

2.1. Disciplines chosen by the University

2.1.2 Cycle of mathematics and natural science (fundamental) training

Allocation of Productive Forces. The content of the discipline is covered by the subjects: rules, principles and factors of allocation of productive forces, population and labour resources; natural-resources potential and its economical value, productive and scientific-technical potential; agricultural complex of Ukraine, its general characteristics and structure; interdepartmental complexes of industry, its structure and allocation; transport complexes.

2.1.3. Cycle of professional and practical training

Managerial Accounting. The content of the discipline is covered by the subjects: theoretical basics of managerial accounting; classification and particularity of expenses; accounting expenses methods and calculation of cost production; accounting expenses of subsidiary production; accounting expenses of organization and management of production; accounting expenses and calculation of cost production of crop growing and animal breeding; accounting expenses in services production and farms; accounting out of balance accounts.

Planning and Organization of Enterprise Activity. The content of the discipline is covered by the subjects: organizational-economical basics market form of a farm; organization of agrarian market Infrastructure; organization of agricultural services cooperatives; means of production, its planning and organization of using; organization and labour norms, valuation of workplaces; organization of labour payments; planning activity of agrarian enterprises.

Industrial Technologies. The content of the discipline is covered by the subjects: technologies production of crop growing; technologies production of animal breeding; basics of mechanization and electrification in agricultural production.

Management. The content of the discipline is covered by the subjects: concept and essence of management; organization as management of subject; taking managerial decisions; planning in organization; organization as managerial function; motivation; managerial control; leadership; management; conflicts and stresses of management; managerial efficiency.

Marketing. The content of the discipline is covered by the subjects: concept of marketing and its modern conception; marketing classification and its main categories, marketing researches; segmentation and positions on market; marketing goods and prices politics; organizations and control marketing activity of enterprise.

Branch Occupational Health. The content of the discipline is covered by the subjects: international norms in branch occupational health; legal regulations acts of labour safety; social insurance from accidents and professional diseases on enterprise; state supervision and public control of labour safety condition; organization and secure equipment of working places during exploitation of computer techniques; production environment and its influence on a man; main preventive measures against fire on branches objects.

Junior Specialists training
Specialty «Commodity research and commercial activity»
Training direction «Merchandising and commercial business»
Field of knowledge «Economics and Entrepreneurship»

Amount, credits ECTS - 120

Learning / teaching period, years:

Full-time – 3 years (on the basis of base secondary education)

Part-time – 2 years (on the basis of complete secondary education)

Qualification of a graduate is an expert-merchant

Training of Junior Specialists is carried out at Separated Subdivision of NULESU (licensed amount, persons: full-time/part-time):

- Irpin Economic College (75/25)

Annotation of Specialty

Specialist in «Commodity research and commercial activity» specialty has the work related to the implementation of commodity-commercial tasks due to assortment and quality of goods primarily by providing administrator and operator, partially heuristic procedures work; operational decisions within its competence to preserve the quality of goods during; stock movement; primary operational control units - linear (main activity) or functional (preparatory and auxiliary activities) as well as independent organizations that are not primarily of management, provision of goods trade, the management range of products, ensuring efficiency technology trade processes; the examination of goods and containers, monitoring of the implementation of treaties, agreements, contracts, improvement of trade and business, the management of material and financial position of the enterprise, strategic and operational business planning, marketing strategy of development, external development strategies on a commodity market, research of effectiveness of the organization and management of trade and production process.

Practical Training

Students have practical training at the enterprises: SE «Prodmerezha «Furshet», LTD «Eco», Supermarket «Ekomarket», LTD «Height-market»; Store «Fora»; Trade Network NOVUS; LTD «Vista», LTD «Complex Agromars», LTD «Amida», LTD «Trading Company «Slovyanochka».

Approximate topics of the graduation works

State certification provides passing the state examination in the specialty.

Graduate's Academic Rights

Students can continue studies on the preparation program of bachelor of direction 6.030510 «Merchandising and commercial business».

Graduates' Spheres of employment

Graduating students can apply the knowledge and skills in many spheres of professional activity - commodity expert, commercial, trade-enterprise, and marketing. Positions that graduating students can occupy after specialty "Merchandising and commercial activity" are: trade agent, representative trade, trade inspector, commodity inspector-expert, commodity expert, commodity and logistics specialist, merchandiser, dispatcher and others.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Commodity research and commercial activity»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian and socio-economic training					
1	History of Ukraine	3	108	2	3
2	Professional Ukrainian	5	108	2	3
3	History of culture	3	54	1	1,5
4	Philosophy	3	108	2	3
5	Sociology	4	72	1,3	2
6	Science of Law	1	54	1	1,5
7	Physical Training	5	216	4	6
8	Professional foreign language	4,5	216	4	6
Total for the cycle			936	17,3	26
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Higher Mathematics	4	108	2	3
2	Safety of Vital Functions	3	54	1	1,5
3	Bases of ecology and safety of public consumption commodities	5	108	2	3
4	Computer techniques	4	162	3	4,5
5	Psychology	4	54	1	1,5
6	Business ethics	6	54	1	1,5
7	Political economy	3	108	2	3
Total for the cycle			648	12	18
1.3. Cycle of professional and practical training*					
1	Merchandising:				
1.1	Theoretical bases of merchandising	3	216	4	6
1.2	Merchandising of food stuffs	5,6	216	4	6
1.3	Merchandising of unfood commodities	4,5	216	4	6
2	Bases of standardization, metrology and quality management	4	108	2	3
3	Labour protection	4	108	2	3
4	Organization and technology of trade processes	6	162	3	4,5
5	Equipment of trade enterprises	5	108	2	3
6	Commercial activity	5,6	162	3	4,5
7	Marketing bases	5	108	2	3
8	Management bases	6	108	2	3
9	Bases of trade enterprise	4	72	1,3	2
10	Trade economy	3	108	2	3
11	Logistic	6	54	1	1,5
12	Accounting	5	144	2,7	4
13	Labour Protection in Industry	6	36	0,7	1
Total for the cycle			1926	35,7	53,5
Regulatory part, total			3510	65	97,5

2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by the University					
2.1.1. Cycle of humanitarian, social and economic training*					
1	Specialty introduction	1	54	1	1,5
2	Organization and technology of intermediary services	6	54	1	1,5
3	Foreign economic activity	6	54	1	1,5
4	Trade advertisement	6	54	1	1,5
5	Exchange activity organization	6	54	1	1,5
Total for the cycle			270	5	7,5
Elective component, total			270	5	7,5
Practical training			540	10	15
Total, according to the field of study			4320	80	120

* Amount of educational hours/credits for specialists' preparation is determined on the basis of base secondary education.

**Names of disciplines cycles and form of state attestation - in accordance with the requirements of the industry standards of higher education, ratified in 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Cultural Studies», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Higher mathematics. Elements of theory of matrices and determinants. General theory of the systems of linear equalizations. Lines on a plane. Curves of the second order. Borders of function. Continuity of function. Derivative of function. Differential of function of one variable. Basic theorems of differential calculation. Differentialities of many variables' function. Research of many variables function on an extremum, conditional extremum. Indefinite integral. Certain integral.

Safety of vital functions. Normative-legal adjusting of safety of vital functions of a man. Sources of danger for a man. Protecting a man from influence of harmful, dangerous and striking factors of natural, technogenic and socio-political character. Protecting a man from influence of negative factors of environment of everyday activity.

Bases of ecology and safety of commodities of folk consumption. Theoretical and practical aspects of ecology. Scientific and technical progress and contamination of environment. Basic legal and organizational aspects of environment protection, rational nature-using and safety of commodities. Modern ecological problems in Ukraine. Ecology of foodstuffs and its value for the health of a man. Ecological aspects of unfood commodities production. Utilization of hard wastes from producing goods of folk consumption.

Computer technique. Theoretical bases of information. Structure of the informative system. Construction of a personal computer. Computer networks and Internet. Organization of computer software. Operating systems. Service software. Application software. Text and graphics editors. Tabular processors. Control system by the bases of data. Consulting and educational models.

Bases of psychology. Psychical processes and emotional-volitional sphere of a personality. Psychology of personality of a salesman and a customer. Psychological aspects of process of commodity realization. Professional culture of communication and business etiquette. Conflict as a psychological phenomenon. Business relationships in a trade group.

Business ethics. Ethics as the basis of modern business. Corporate ethics. Ethic bases of business relationships in business. Ethics and etiquette. Style and manners of a business man. Organization and realization of business measures: standards of etiquette. Ethics in international business relationships.

Political economy. Political economy as a science. Production and its basic factors. Economic necessities of a society. Relations of property are in economic life of a society. Commodity production and commodity-money relations. General bases of a market. Subjects of market economy. Mixed economy and its types. Public product and its forms. National income. Economy growing and its factors. Consumption, economy and welfare of a man. An international economy and its role in the increase of welfare of the human association of the world.

1.3. Cycle of professional and practical training

Theoretical Foundations of commodity. Object and subject of commodity. Methodology of commodity. Scientific basis for the formation of product requirements. Requirements for the goods. Properties catalogues. Quality products and methods of assessment. The range of goods. Classification of goods. Fundamentals of maintaining the quality and quantity of goods in commodity circulation. Coding. Product details.

Commodity (Food). Wheat products. Fruits, vegetables, mushrooms and products of their processing. Taste goods. Dietary fats. Starch, sugar, sugar substitutes, and honey. Confectionery. Milk and milk products. Eggs and egg products. Meat and meat products. Fish and fish products. Food concentrates.

Commodity (non-foods). Household goods. Textile, sewing and knitted goods. Shoe products. Fur products. Items of everyday use. Jewelry products and household clocks. Fancy goods. Pharmacy products. Weapon. Commodity books.

Bases of standardization, metrodology and quality management. Basic functions and principles of standardization. Principles of public policy in the field of standardization. Unitization as the method of establishment of rational nomenclature of products. Self-reactance standardization and its mathematical base. Concept of the systems of standardization. Economic efficiency of standardization. Metrodology as a science. Quality of products as the material basis of satisfaction of meeting the personal and public needs of people.

Bases of labour protection. Productive environment and its influence on a man. State administration of labour protection in Ukraine. Normative-legal adjusting of labour protection. Management of labour protection in production. Labour conditions of production, their classification and setting of norms. Harmfulness products and methods of human protection from their negative influence. Analysis and prophylaxis of professional diseases and productive traumatism. Economic aspects of labour protection.

Organization and technology of trade processes. Principles of organization of retail trade network. Organizational structure of trade sphere and description of its basic components. Functional pattern of trade. Concept of trade assortment and its tasks concerning its forming. Organization of processes of acceptance, storage and preparation of commodities for selling. Methods of sales of commodities and services promotion. Forms and methods of distribution. Role and functions of containers and packing in organization of trade-technological processes and distribution.

Equipment of trade enterprises. Scientific and technical progress in trade. Trade-unmechanic equipment. Weight-measured equipment. Electronic control-cash vehicles. Vending machines. Refrigeration equipment. Lifting-transport equipment. Technological equipment.

Commercial activity. Objects and subjects of commercial activity. System of economic connections of subjects of commercial activity. Organization of wholesale purchases of commodities. Organization of distribution. Forming of range of goods in the channels of distributing. Efficiency of commercial activity, commercial risk.

Marketing bases. Marketing essence and its modern conception. Classification of marketing. Basic categories of marketing. Complex and marketing descriptions. Types of marketing researches, their structure and methods of realization. Marketing commodity politics. Food innovations. Marketing price politics. Methods of pricing and their classification. Marketing politics of distribution. Marketing politics of advancement. Marketing communications. Plan, organization and control of marketing.

Management. The essence of the role and methodological foundations of management. Laws and principles of management. Management process. Planning, organizing, motivating, controlling, regulating, general management functions. Information and communication management. Management and leadership. Performance management.

Bases of trade enterprise. Essence, role of enterprise and its features in the field of trade. Terms, factors and principles of the development of a trade enterprise. Legal forms of a trade enterprise. Formation of trade business entities. Entrepreneurial activity in the field of retail business, restaurant economy, wholesale, foreign trade, trade real estate, services. Bases business-planning. Government control of entrepreneurial activity. Ethic and social responsibility trade

Trade economy. Essence of trade and trade activity. Trade as process and industry of manage. Commodity and service as a trade object. Economic description of retail business, wholesale, foreign trade. Market of consumer goods and services, trade role in providing of its development. Commodity turnover as the performance of trade enterprise indicator. Commodity supplies and commodity providing of trade enterprise. Directions of efficiency increasing of trade enterprise activity.

Logistics. Conceptual Foundations of logistics. Objects of logistics management and logistics operations. Logistics activities and logistics functions. Logistic approach to material management in the sphere of circulation. Logistic approach to customer services. Optimize procurement and inventory management solutions in logistics systems. Structure and transport in logistics.

Accounting. Record-keeping, its essence and bases of organization. Object and methods of record-keeping. Book-keeping balance. Accounts of record-keeping and double record. Primary supervision, documentation and taking of inventory. Cards of accounts of record-keeping. Forms of record-keeping. Accounting of economic processes. Bases of accounting control.

A labour protection in industry. Basic legislative and normatively-legal acts on labour protection in the industry. Occupational safety management system in organization. Traumatism and professional diseases in the industry. Investigation of accidents. The special divisions of labour protection in the field of professional activity. Basic measures of fire prophylaxis on branch objects. Social security from industrial accidents and professional diseases.

2. ELECTIVE ACADEMIC DISCIPLINES

2.1. Disciplines chosen by the University

2.1.1. *Cycle of humanitarian, social and economic training*

Specialty introduction. History of origin and development of merchandizing as a science. Merchandizing and modern trade. Basic concepts and terms. Professional ethics of future commodity experts. Practical activity of commodity experts on trade enterprises.

Organization and technology of intermediary services grant. Intermediary activity as a market element. Commercial terms of agreements with resellers. Wholesale as one of basic types of mediation at the commodity market. Technology of grant of intermediary services in other spheres of entrepreneurial activity. Features and prospects of development of intermediary activity in Ukraine.

Foreign economic activity. Essence, specific and tendencies of mechanism of functioning of foreign economic activity in Ukraine. Subjects of foreign economic activity and forms of rolling them out to the foreign markets. Contractual relations at foreign markets. Analysis of economic efficiency of foreign economic activity of enterprise and backlogs of its increase.

Trade advertisement. Development of advertisement activity. Role and functions of trade advertisement. Psychological bases of advertisement. Requirements to the facilities of advertisement. Demonstration and depict-verbal facilities of advertisement. Registration and production of facilities of advertisement. Planning of advertisement. Advertisement campaigns. Ads efficiency.

Organization of exchange activity. An origin, setting up and progress of exchange market trends in Ukraine. Role of the state in the forming and functioning of exchange market. Organization and technology of exchange trade. Types of exchanges and mechanism of their functioning. Pricing and risks in exchange activity and criterion of their estimation.

Junior Specialists training
Specialty «Organization of production»
Training direction «Management»
Field of knowledge «Management and Administration»

Amount, credits ECTS - 150

Learning / teaching period, years:

Full-time - 3 years 5 months (on the basis of basic general secondary education)

Part-time - 2 years 5 months (on the basis of full general secondary education)

Qualification of Graduate - organizer of production

Training of Junior Specialists is carried out in Separated Subdivision of NULESU (licensed amount, persons: full-time/part-time):

- Bobrovitsa College of Economics and Management named after O. Mainov (30/40)
- Boyarka College of Ecology and Natural Resources (50/25)

Annotation of Specialty

The purpose of training young specialists of the organization of production is to provide companies and organizations in agribusiness and natural resources highly qualified personnel of primary level management departments, operating systems and processes. Specialist in management must be able to adapt to domestic economic relations of enterprises and organizations, develop and implement the elements of the management system, establish an effective system of motivations.

Practical Training

Students receive practical training in teaching and research farms and stations in SS of the NULESU, agricultural holdings, agricultural limited liability companies, agricultural production cooperatives, farms, joint stock companies.

Approximate topics of the graduation works

State certification involves compiling a comprehensive state examination.

Graduate's Academic Rights

Graduate has the right to continue learning for education and qualification level «Bachelor» in the direction of training 6.030601 «Management».

Graduates' Spheres of employment

At the enterprises, organizations and institutions of different branches of activity of all forms of ownership in positions: the heads of production units, managers, controllers, masters of production activities, techniques for labor, referents of the core activities, inspectors on staff, dispatchers for the production of finished products.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Organization of production»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine	3	54	1	1,5
2	Culturology	1	54	1	1,5
3	Basics of philosophic knowledge	3	54	1	1,5
4	Basics of psychology	6	54	1	1,5
5	Ethics of Business Communication	5	54	1	1,5
6	Sociology	5	54	1	1,5
7	Ukrainian Language (for professional direction)	6	54	1	1,5
8	Basics of Law Science	2	54	1	1,5
9	Foreign Language (for professional direction)	4,5,6	216	4	6
10	Physical Training	5,6	270	5	7,5
Total for the cycle			918	17	25,5
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Higher Mathematics	3,4	108	2	3
2	Economic Theory	3	108	2	3
3	Allocation of Productive Forces and Regional Economy	3	54	1	1,5
4	Statistics	5	108	2	3
5	Informatics and Computer Technics	3,4	270	5	7,5
6	Basics of Ecology	1	54	1	1,5
7	Safety of Vital Activity	4	54	1	1,5
Total for the cycle			756	14	21
1.3. Cycle of professional and practical training*					
1	Economics of Enterprise	4,5	216	4	6
2	Economic Analysis	7	108	2	3
3	Accounting	5,6	216	4	6
4	Finance of Enterprise	7	108	2	3
5	Commercial Law	7	81	1,5	2,25
6	Marketing	6,7	162	3	4,5
7	Management	6,7	243	4,5	6,75
8	Office Work	3	54	1	1,5
9	Labour Law	4,5	81	1,5	2,25
10	Technology Industry	3,4	216	4	6
11	Organization of Production	5,6	243	4,5	6,75
12	Basics of Labour Protection	3	54	1	1,5
Total for the cycle			1782	33	49,5
Regulatory part, total			3456	64	96
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by the University*					
2.1.1. Cycle of humanitarian, social and economic training					

1	Family Consume Culture and Home Economics	6	54	1	1,5
2.1.2 Cycle of mathematics and natural science (fundamental) training*					
1					
2.1.3. Cycle of professional and practical training*					
1	Technology of Storage and Processing of Products	4	108	2	3
2	Traffic Regulations	5,6	108	2	3
3	Structure and Exploitation of Car	5	54	1	1,5
4	Car Driving and Basics of Traffic Safety	6	54	1	1,5
5	Agrarian Law	7	54	1	1,5
6	External Economic Activity	7	81	1,5	2,25
7	Labour Protection in Industry	7	54	1	1,5
Chosen by the University, total			567	10,5	15,75
Chosen by the students, total					
Elective component, total			567	10,5	15,75
Practical training			1026	19	28,5
Degree examination			351	6,5	9,75
Total, according to the field of study			5400	100	150

*Number of hours / credits identified for training specialists on the basis of basic general secondary education

**Names of cycles of disciplines and forms of state certification - in accordance with industry standards for higher education, approved in 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Culturology», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

Basics of psychology. The content of the discipline is covered by the subjects: general principles of psychology, psychological research methods, psychology of personality and work, psychology of social groups and communities, the psychological requirements to a manager.

Ethics of Business Communication. The social phenomenon of communication. Non-verbal and business communication. Culture of conducting disputes in business communication. Organizer as a key figure in production. Production conflict. Official etiquette. Features of international communication.

1.2. Cycle of mathematics and natural science (fundamental) training

Higher Mathematics (for professional direction). During the learning course trigonometric functions, linear and vector algebra and analytic geometry, differential and integral calculus, complex numbers in volume for using basic sciences a system of knowledge are laid out.

Economic Theory. Contents of ownership. Economic needs and interests. The laws of the market economy. The development of commodity-money relations of Ukraine. Economic categories and principles, relations and objective laws of social production, the theory of the market and its mechanism.

Allocation of Productive Forces and Regional Economy. Trends, regularities, principles and factors of location of productive forces. Placing of natural resources of Ukraine and its economic evaluation. Economic regions and territorial organization of the productive forces. Population and labor. Scientific and technical progress, production and scientific potential. Economic complex of Ukraine, its general characteristics and structure. The complexes of industry between branches, their structure and location. Regional economy, economy of regions.

Statistics. Statistical observation. Summary and grouping of statistics data. Absolute and relative values. Average values. Rows of dynamics, indexes. The graphics images. Statistics of products. Statistics of numbers and productivity of staff. Statistics of efficiency of production.

Informatics and Computer Technics. Theoretical foundations of computer science. Computing techniques. Operating systems. Computer networks and telecommunications. Computer network of Internet. Text processing system. Systems for processing tabular data. Database Management Systems. Computer and information technologies in the work of manager. ARM of manager.

Basics of Ecology. Environmental problems of our time, environmental problems of Ukraine and ways to solve them. The Basic Law of Ukraine on Environmental Protection. Basic principles of environmental management, sources of pollution of the biosphere, environmental regulations, environmental measures, the concept of safety of food and raw materials. Environmental knowledge about the consequences of economic activity, understanding the character of signs and the ways of preventing the negative phenomena.

Safety of Vital Activity. Negative factors of natural, technological, socio-political and military nature in human life. Government measures to protect human life. Personal protection rights. Collective protection rights. Dealing with the consequences of human exposure to radioactive, chemical and biological substances. Hazardous environmental factors and their effect on people. Fundamentals of physiology of labor and regulatory requirements for the activity. Methods for the identification of harmful and dangerous factors of technical systems. Means of protection from their effects on humans and the environment under the normal and emergency situations. Organizational, legal and socio-economic knowledge in the field of safety of vital activity.

1.3. Cycle of professional and practical training

Economics of Enterprise. Enterprise in the modern system of farming. Personnel of an enterprise. Capital, production funds and intangible resources. Investments and working capital. Regulation, forecasting and planning of activity. The organization of production and industrial infrastructure. Production, quality and competitiveness of the products. Productivity, motivation and remuneration. Intensification. Costs of production and production costs. Financial and economic results and efficiency of activity.

Economic Analysis. Informational base and organization of economic analysis. Types of economic analysis. Method and instructional techniques of economic analysis. Analysis of demand, the condition of the market and sales of enterprise. Analysis of production, works and services. Analysis of production resources. Analysis of production costs. Analysis of financial results and profitability. Analysis of the financial condition of the company. Analysis of bank lending.

Accounting. The essence of accounting, balance sheet, payment system. Registers and forms of accounting. Accounting for cash payments. Basic and working capital. Labor and fees. Manufacturing, records of marketing. Accounting reports.

Finance of Enterprise. The essence, the organization of finances of enterprises and basics of their organization. Organization of cash settlement of enterprises. Cash

receipts and expenditures of enterprises. Formation and distribution of profits of enterprise. Taxation of enterprises. Lending of enterprises. Financial support for playback of fixed assets. Current assets of the enterprise, their organization, regulation and use. Financial planning. Financial readjustment of enterprises. Evaluation of the financial condition of enterprises.

Commercial Law. Concepts, method and system of commercial law. Economic legislation. The subjects of commercial law. Legal regulation of ownership. Commercial contracts. Responsibility in economic relations. Legal regulations of bankruptcy. Legal basis of antitrust regulation. Legal regulation of privatization of state property. Legal regulation of exchange activity. Legal regulation of prices and pricing. Legal regulation of foreign economic activity.

Management. Essence and task of management. The evolution of the theory and practice of management. The subjects of entrepreneurship and conditions of managing. Management as a system. Management in a social and economic system. Functions of management. Organization of meetings, discussions and commercial negotiations. Development and management decisions. Social responsibility and ethics in management. Social and psychological aspects of leadership. Management personnel. Management groups, management and leadership in management. Conflict management. Production management. Management of entrepreneurship and market structures. Innovation management. Investment management. Financial management. International management.

Marketing. Marketing: mechanism of creation of value and relationships with consumers. Marketing environment. Ethics and social responsibility in marketing. Consumer behavior. Access to international markets. Marketing research. Segmentation. Development of new products and services. Management products and services. Pricing. Managing of sales channels. Marketing logistics. Integrated marketing communications. Advertising, sales promotion and public relations. Personal selling and managing personal selling. Using of online and multichannel marketing. Strategic marketing. Relationships of marketing and corporate strategy.

Office Work. Basic requirements to a modern office work. Organization of office work in the institution. Preparation for piling and drawing up the documents. Design of organizational and administrative documentations. Preparation and making of documents of managing and foreign trade. Preparation of documents used in the work with the staff. Document workflow. Organization of mass service and business events.

Labour Law. System and sources of labor law. Collective contracts and agreements. Employment. Employment contracts. Transfer to another job. Termination of employment contract. Working time and rest. Wages. Labor discipline. Disciplinary liability. Liability of parties to the employment contract. Labour protection. Labor disputes. Regulation of employment of employees who work in the company, as well as the individual person under the employment contract.

Technology Industry. Fundamentals of soil science, agriculture, crop growing and livestock breeding. Sanitary conditions of keeping animals, quality of raw materials and finished products. Using effective technologies of production for agricultural products.

Organization of Production. Development of land and property relations in agriculture. Types of businesses and organizations, their organizational and economic framework. The economic mechanism of management in the agricultural environment. Organization of land area of agricultural units. The organization of using means of production and labour resources in agricultural units. Industrial and social infrastructure. The system of farming. The organization of production, processing, storage and marketing of production of livestock-breeding and crop-growing. Organization of feed-production. Socio-economic foundations of the enterprise and agribusiness. The

organizational and legal forms of farming in agribusiness. Opening of business in agribusiness. Personality, culture and risks of an entrepreneur. Investment planning of the development of agribusiness.

Basics of Labour Protection. Work environment and its impact on people. Conditions of labour in the workplace, their classification and standardization. Production harm, methods of protection of human from its negative impact. Analysis and prevention of occupational diseases and production injuries. Principles of safety. Legal and normative regulation of safety. State management of labour protection in Ukraine. The organization of labour protection at the production. Economic aspects of labour protection.

2. ELECTIVE ACADEMIC DISCIPLINES

2.1. Disciplines chosen by the University

2.1.1. Cycle of humanitarian, social and economic training

Family Consume Culture and Home Economics. Habitation and its supporting. Planning and landscaping of the homestead and gardening area. Homestead gardening, horticulture, animal husbandry, and beekeeping. Organization of rational nutrition and saving. Budget of a family. Planning of a family budget. Family resources and savings. Consumers and their interests. Consumer protection.

2.1.2 Cycle of mathematics and natural science (fundamental) training

2.1.3. Cycle of professional and practical training

Technology of Storage and Processing of Products. Storage and processing of agricultural products. Preserving of food. Chemical and technological control of production. Equipment for storage, processing and transportation of products. Practical mastering of technological processes.

Traffic Regulations. The structure and operation of the vehicle. The Traffic Rules. Fundamentals of driving and traffic safety. Driving. Consultations.

Structure and Exploitation of Car. General structure of the vehicle. The system of maintenance and repairing of vehicles. Diagnosis of technical condition. Labour safety during maintenance, repairing of the vehicles. Daily maintenance of the vehicle. General structure and workflow of an engine. Electric equipment of the vehicle and trailer. The power transmission of the car. Running gear. Mechanisms of driving. Body-work. The additional equipment. Trailers. Operation of the vehicle.

Car Driving and Basics of Traffic Safety. During the learning of the course is laid out a system of knowledge of the sections: The Basics of driving. Traffic safety. Medical traffic safety ensuring. Fundamentals of motor transport law.

Agrarian Law. Subject and system of agrarian law. Sources of agricultural law. Agricultural legal relationship. The subjects of agrarian legal relations. Legal status of the farmer. State regulation of agriculture. Legal regulation of transition to market relations in agriculture. Legal regulation of social development of the village. Legal regulation of agricultural land use. The legal regime of property of agricultural producers. The legal regulation of economic activities in the agricultural sector. Legal regulation of the financial activities of the subjects of agrarian entrepreneurship. The legal regulation of labor relations in agriculture. The legal condition of enterprises of different forms of ownership. Legal regulation of contractual relations of agricultural producers. Organizational and legal forms of legal services of subjects of agrarian enterprises. Agrarian law of foreign countries.

External Economic Activity. External economic activity as a kind of entrepreneurship. Regulatory and legal support of foreign economic activity of enterprises. Marketing in external economic activity. The foreign trade operations. External investment activity of the enterprises. Customs regulations of foreign economic

activity of the enterprises. Movement of goods at the world market. The mechanism of state regulation of foreign economic activity.

Labour Protection in Industry. International standards in industry of labour protection. The basic legislative and regulatory-legal acts on labour protection in AIC. The system of management of labour protection in AIC. Injuries and occupational diseases in AIC. Investigation of accidents in the workplace. Special sections of labour protection in the field of professional activity. The main measures of prophylaxis of fire safety at the objects of AIC. State supervision and public control for the condition of labour protection in AIC. Social insurance against accidents and occupational diseases in the workplace.

Junior Specialists training
Specialist «Applied ecology»
Training direction «Ecology, environmental protection and sustainable
development»
Field of knowledge «Natural Sciences»

Amount, ECTS credits– 180

Learning / teaching period, years:

Full-Time – 4 (on the base of basic secondary education)

Part-Time – 3 (on the base of full secondary education)

Qualification of Graduate - Technician – ecologist

Training of Junior Specialists is carried out at the Separated Subdivision of NULESU (licensed amount, persons: full-time/part-time):

- Berezhany Agrotechnical Institute (35/50)
- Zalizchyky Agricultural College named after Y. Khraplyvy (25/25)
- Boyarka College of Ecology and Natural Resources (50/25)

Annotation of Specialty

Training of junior specialists is aimed at training highly qualified specialist who is able to solve a wide range of issues related to environmental protection and natural resource management in various industries and other areas of economic activity. Technician ecologist provides environmental research of the environment, chemical analysis of soil, water and air to identify surplus and harmful pollutants in the region.

Practical Training

Teaching and experimental farms and stations of NULESU, Administration Department for Environment, Sanitary and Epidemiological Station, district veterinary bacteriological laboratories, farms (holdings) with developed infrastructure of production and processing of agricultural production, management and sewerage water utilities, waste disposal companies, forest management, forestry and hunting economy.

Approximate topics of the graduation works

State certification involves compiling a comprehensive state examination.

Graduate's Academic Rights

Graduates can continue their education by the program of Bachelor by direction 6.040106 «Ecology, environmental protection and sustainable development».

Graduates' Spheres of employment

After gaining specialty «Applied ecology» the graduates are trained to perform work related to the study of the physical and chemical environment and they can take the following primary positions: technician ecologist, technician-dosimetric, laboratory technicians.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Applied ecology»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine	5	54	1	1,5
2	Ukrainian language for professional direction	6	54	1	1,5
3	Cultural Studies	2	54	1	1,5
4	Fundamentals of philosophical knowledge	5	108	2	3
5	Economic Theory	4	54	1	1,5
6	Sociology	7	54	1	1,5
7	Fundamentals of Law	2	54	1	1,5
8	Foreign language (for professional direction)	5,6,7	216	4	6
9	Physical training	5,6,7	162	3	4,5
Total for the cycle			810	15	22,5
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Higher Mathematics	4	108	2	3
2	Physics	4	81	1,5	2,3
3	General Biology	3	108		3
4	Meteorology and Climatology	5	54	1	1,5
5	General Chemistry	3	108	2	3
6	Analytical Chemistry	4	126	2,33	3,5
7	Physical and chemical analysis	5	108	2	3
8	General Ecology	2,3	108	2	3
9	Informatics	3	81	1,5	2,3
10	Life Safety	5	54	1	1,5
Total for the cycle			936	17,3	26
1.3. Cycle of professional and practical training*					
1	Geology with the basics of Geomorphology	4	126	2,33	3,5
2	Hydrology with the basics of Hydrogeology	6	108	2	3
3	Soil Science	6	108	2	3
4	Environmental Geochemistry	5,6	180	3,33	5
5	Environment Protection	7,8	216	4	6
6	Environmental impact assessment	7	144	2,66	4
7	Methods of measurement of environmental	6	252	4,66	7
8	Wildness protection	8	108	54	3
9	Computer processing of environmental information	7,8	180	3,33	5
10	Environmental Monitoring	6	108	2	3
11	Metrology and Standardization	7	54	2	1,5

12	The balanced Environmental Management	8	162	3	4,5
13	Environmental Legislation	7	54	1	1,5
14	Fundamentals of labor protection	6	54	1	1,5
15	Landscape Ecology	8	108	2	3
16	Labor protection in branch	8	54	1	1,5
Total for the cycle			2016	37,33	56
Regulatory part, total					105
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by the University					
2.1.1. Cycle of humanitarian, social and economic training					
1	Political Science	8	54	1	1,5
2	Introduction to specialty	1	54	1	1,5
3	Fundamentals of Environmental Education and Culture	2	54	1	1,5
2.1.2 Cycle of mathematics and natural science (fundamental) training*					
1	Organic and Bioorganic Chemistry	4	144	2,66	4
2.1.3. Cycle of professional and practical training*					
1	Topography of the basics of cartography	5	108		
2	Bioinorganic Chemistry	5	72	1,33	2
3	Control and safety the quality of agricultural products	8	72	1,33	2
4	Ground ecosystems and biomonitoring methods	7	144	2,66	4
5	Devices of research environment	5	72	1,33	2
6	Bioconversion and utilization of waste	7	72	1,33	2
7	Microbiology with the basics of Virology	5	108	2	3
8	Normalization of anthropogenic impact on the environment	8	144	2,66	4
Elective component, total			1098	20,33	30,5
Practical training			1134	21	32
Examination period			486	9	13,5
Degree examination					
Total, according to the field of study			6480	120	180

* The number of training hours/credits defined for preparation of specialists on the basis of basic secondary education

** The names of cycles of disciplines and forms of State attestation – according the requirements of industry standards for higher education approved 2009, EQC and OPP specialty.

Annotations of the subjects of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian and socio-economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Culturology», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» and «Economic theory» see section 2.2. and Section 1.1 of the specialty «Jurisprudence».

1.2. Cycle of mathematics and natural science (fundamental) training

Higher Mathematics (professional direction). Elements of vector algebra, matrices, their properties and actions with them, methods for solving systems of linear equations, derivatives and differentials, functions of several variables, classical optimization methods, basic techniques of integration.

Physics. Mechanics and biomechanics, hydrostatics and hydrodynamics, Waves, biorhythmology, molecular physics, thermodynamics of biological systems, electrostatics and DC, bioelectric, magnetism, optics, atomic physics and atomic nuclei, Photobiology of crops, physical control methods and quality of crop production.

General Biology. The structure of cells, genetics and evolution, diversity of flora and fauna.

Meteorology and Climatology. Composition, structure and basic properties of the atmosphere, soil temperature and hydrosphere, precipitation and air currents, weather and synoptic analyzes, climate and climatology, climate. General chemistry. The structure of atom and chemical bond, the basic laws of chemical processes, chemical elements, metals and non-metals, the role of chemistry in society.

Analytical chemistry. Conduct qualitative and quantitative analysis of water, soil, air, fertilizers, pesticides, plant foods.

Physical and chemical analysis. Optical methods of analysis, electrochemical methods of analysis, physical and chemical separation techniques, other methods of physicochemical analysis.

General ecology. The key environmental concepts, environment and patterns of environmental factors, land- air living environment, water environment, soil as a habitat, ecology and population coexistence, classification and properties of ecological systems, material and energy flows in ecosystems, cyclic processes biosphere, systems analysis in ecology and agricultural ecosystems.

Informatics. Computer systems store, process and transmit information systems training text data, data processing spreadsheet, database management systems, computer networks, system representations of objects environment, handling graphics, bases of information systems.

Life Safety. Basic concepts and definitions in the security of life, systemic-structural approach to the safety of life, the concept of a system of "human-living environment" natural hazards and their effects on humans, technological hazards, socio-political risk, risk-based approach to modeling of hazardous situations, the legal basis for security of life, management by the Ministry of emergencies of the population in emergency situations of natural and man-made disasters.

1.3. Cycle of professional and practical training

Fundamentals of labor protection. Work environment and its impact on people. Conditions in the workplace, their classification and valuation. Protection of human methods of its negative impact. Analysis and prevention of occupational diseases and injuries. Principles of safety. Legal and regulation of safety. Public health and safety management in Ukraine. The organization of the workplace. Economic aspects of health and safety.

Safety in the branch. International cooperation in the field of labor, the organization of work in the field in modern terms, the organization of safety management in the enterprise, in the field of occupational injuries and methods of its prevention, safety requirements for major manufacturing operations in the field of fire safety in the industry, providing emergency medical assistance in specific industrial injuries.

Geology with the basics of Geomorphology. Land and crust, minerals and rocks, geological processes and phenomena, elements geotectonic and geomorphology, geological processes and phenomena.

Hydrology with the basics of hydrogeology. Factors shaping water treatment and distribution of water on Earth, water balance, the statistical nature of the flow, Water Resources of Ukraine, their use and protection.

Soil Science. General soil, properties and mode of soil zonal soil, basic agriculture.

Environmental Geochemistry. Distribution of chemical elements migration and concentration of chemical elements, the overall geochemical organization of the biosphere, the noosphere formation and behavior of chemical elements, eco-geochemical assessment of the environment.

Environmental Protection. Natural Resources, as the object of study of environmental foundations environment and its conservation problems , ways of preserving the environment , international cooperation in the field of environmental protection.

Environmental impact assessment. Environmental impact assessment in Ukraine, the use of materials during the environmental review, the use of air, environmental assessment under the state registration of agrochemicals, environmental requirements for the design of industrial facilities.

Methods for measurement of the environment. Introduction to methods for measuring quality of the environment, methods of measurement of air, water and soil. Wilderness protection. Research and theoretical principles of reserves, organization of reserves in Ukraine, principles, approaches and national legislative and regulatory framework of conservation and sustainable environmental management.

Wildness protection. Research and theoretical principles of reserves, organization reserves in Ukraine, principles, approaches and national legislative and regulatory framework of conservation and sustainable environmental management.

Computer processing of environmental information. Using of applications and software packages to process environmental information, the use of special computer technology to process environmental information, use of AWS, AMS and other special software for processing and recording environmental information.

Environmental Monitoring. Organizational support systems for environmental monitoring, monitoring of air pollution, monitoring of land surface water pollution, soil pollution monitoring, monitoring of pollution of the environment by biological methods.

Metrology and Standardization. Theoretical, methodological and organizational principles of standardization, quality control of agricultural products through standardization and certification, basic metrology.

The balanced Environmental Management. The process of social interaction with the environment, that is achieved by the optimal balance between economic activities of society, providing material and spiritual needs of the people and maintaining the quality of the environment, natural resources in Ukraine, the mechanism of compensation for damages caused by violations of environmental law, the state budget financing of environmental measures.

Environmental legislation. The concept of the system and the principles of environmental law Ukraine, the sources of environmental law and human rights, environmental and legal status of a person, the legal foundations of management and control, legal protection of the environment and environmental security, international environmental law.

Landscape Ecology. Geosystem as a matter of landscape ecology, Geosystems, their environment heotopy, human pressure on geosystem, landscape and ecological forecasting environmental situations.

2. Elective academic disciplines

2.1. Disciplines chosen by the University

2.1.1. *Cycle of humanitarian, social and economic training*

Political Science. The formation of science policy, the policy as a regulator of social life, the political system, political system of the state, ethnic communities and religious groups.

Introduction to specialty. Qualification requirements for environmental experts, systematic approach to environmental studies, system training environmental experts in Ukraine.

Fundamentals of Environmental Education and Culture. Ecological culture as an activity, human activity and ecological crisis, ecological culture as a means of self-organizing systems «man-Biosphere», Environmental Education as a tool for environmental culture.

2.1.2 *Cycle of mathematics and natural science (fundamental) training*

Organic and bioorganic chemistry. Theoretical foundations of organic chemistry, saturated and unsaturated hydrocarbons, alcohols, aldehydes chemistry, carboxylic acids and carbohydrates.

2.1.3. *Cycle of professional and practical training*

Topography with the basics of cartography. Summary of topographic maps, contour theodolite surveying, leveling, geodetic network survey area.

Bioinorganic Chemistry. Characteristics of bio elements and complex compounds, chemistry major elements and by subgroups, properties and characteristics of bimetal.

Control and safety the quality of agricultural products. General characteristics of nutrients, hazardous substances in agricultural production, agricultural product quality monitoring, quality control, livestock and crop production.

Ground ecosystems and biomonitoring methods. Theoretical aspects ekosystemology, major land biomes, mining, marine conservation and agro-ecosystems, industrial and urban ecosystems biomonitoring.

Devices of research environment. General information about the dimensions of quality of the environment, equipment and fluorescent photometric analysis, spectral analysis instruments, gas analyzers, instruments titration analysis, gravimetric analysis instruments, apparatus for sampling air, water, soil, meteorological instruments, chromatographs, instruments for microbiology.

Bioconversion and utilization of waste. Ways to reduce environmental pollution on the basis of low-waste production, reducing pollution Solid waste management measures to protect air quality, reduce water pollution, livestock farms, poultry houses, the organization receiving, decontamination and disposal of toxic waste in specialized landfills.

Microbiology with the basics of virology. Microscopic methods, the basic forms of bacteria, sterilization and culture media, fermentation microorganisms.

Normalization of anthropogenic impact on the environment. Rationing of anthropogenic pressures on water bodies, air and land resources.

Junior Specialists training
Specialty «Maintenance of program systems and complexes»
Training direction «Computer Sciences»
Field of knowledge «Information and computer science»

Amount, credits ECTS - 180

Learning / teaching period, years:

Full-time - 4 years (on the basis of basic secondary education)

Qualification of Graduate - Technician Programmer

Training of Junior Specialists is carried out in Separated Subdivision NULES of Ukraine (licensed amount, persons: full-time/part-time):

- Boyarka College of Ecology and Natural Resources (25/-)

Annotation of Specialty

The use of advanced modern information technology sets new requirements for the operation of enterprises, organizations, government agencies, businesses, etc.. The task of ensuring the smooth operation of key applications, management information systems and technical support is one the most important tasks IT of departments. Junior specialists in this specialty should ensure demand for highly skilled technicians, programmers who can perform the work of installation and maintenance of computer systems, software systems.

Practical Training

Institute of Cybernetics named after V.M Glushkov of NAS of Ukraine, «Institute of Power Electronics», LLC «Unified information network», LLC «SEC Security Systems», LLC «Production and Commercial Firm Salda», LLC «EPOS», OOO «NPF Helios», LLC «Krai 2», PE «Tarkhun», JSC «ATP Boyarske».

Approximate topics of the graduation works

State certification involves compiling of comprehensive examination in the specialty.

Graduate's Academic Rights

Students can continue training programs for bachelors in the direction 6.050101 «Computer Science».

Graduates' Spheres of employment

Junior specialist in specialty «Maintenance of software systems and complexes» receives training required to work in the IT services of businesses and organizations of different sectors and ownership of positions: Technician Programmer, Computing Center, operator of computers, engineer of maintenance of computer networks , an expert in information technology, local network administrator.

**Curriculum of training the specialists of EQL «Junior Specialist»
in Specialty «Maintenance of program systems and complexes»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training *					
1	History of Ukraine	2	72	1,3	2
2	Ukrainian	3	54	1	1,5
3	Culturology	3	54	1	1,5
4	Basics of philosophical knowledge	7	72	1,3	2
5	Sociology	8	54	1	1,5
6	Economics	3	72	1,3	2
7	Law Science	1,2	126	2,3	3,5
8	Foreign Language	5,6	162	3	4,5
9	Physical training	5-7	180	3,3	5
Total for the cycle			846	15,7	23,5
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Higher Mathematics	3-5	468	8,7	13
2	Discrete Mathematics	4	216	4	6
3	Theory of Probability and Mathematical Statistics	5	126	2,3	3,5
4	Theory of algorithms	3	126	2,3	3,5
5	Physics	3,4	234	4,3	6,5
6	Numerical Methods	6	144	2,7	4
7	Mathematical Methods of Operations Research	7	162	3	4,5
8	Life Safety	3	54	1	1,5
9	Basics of ecology	1	54	1	1,5
Total for the cycle			1584	29,3	44
1.3. Cycle of professional and practical training*					
1	Algorithmic and Programming	3,4	252	4,7	7
2	Object-Oriented Programming	5,6	198	3,7	5,5
3	Electrical engineering and electronics basics	5	126	2,3	3,5
4	Operating Systems	8	162	3	4,5
5	Organization of data and knowledge	5	144	2,7	4
6	WEB-technology and WEB-design	7,8	162	3	4,5
7	Computer Graphics	4	144	2,7	4
8	Development of client-server applications	7	162	3	4,5
9	Technology of software products	7,8	162	3	4,5
10	The technology of information security	7,8	162	3	4,5
11	Testing of software systems and complexes	7	126	2,3	3,5
12	Administration of software systems and complexes	8	162	3	4,5
13	Computer circuitry and computer architecture	5,6	198	3,7	5,5
14	Computer Networking	5,6	162	3	4,5

15	Basics of labor protection	4	54	1	1,5
16	Labour protection in industry	8	54	1	1,5
17	Basics of marketing	6	54	1	1,5
18	Economics and bases of IT business	5	126	2,3	3,5
Total for the cycle			2610	48,3	72,5
Regulatory part, total			5040	93,3	140
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University*					
2.1.1. Disciplines of mathematics and natural science (fundamental) training					
1	Mathematical Logic	3	54	1	1,5
Total for the cycle			54	1	1,5
2.1.2. Cycle of professional and practical training					
1	Introduction to specialty	2	54	1	1,5
2	Systems and Technology of Management Database	6	180	3,3	5
3	Information theory	8	144	2,7	4
4	Information Technology	4	144	2,7	4
The total number of cycle			522	9,7	14,5
Chosen by University, total			576	10,7	16
Elective part, total			576	10,7	16
Practical training			864	16	24
Total at the specialty			6480	120	180

* Number of hours / credits identified for training on the basis of basic secondary education.

** Names of cycles disciplines and forms of state certification - in accordance with industry standards for higher education, approved in 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1. Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Culturology», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Higher mathematics. Determinants of the matrix. Systems of linear algebraic equations. Vectors. Lines and surfaces of the second order. Derivatives. Indefinite integral. Definite integral. Improper integrals. Differential Equations. Laplace transform and its basic properties. Operating method for solving differential equations. Functional and its variation. Differential Equations of extreme. Extremum. Variational principles. Numerical series. Functional series. Power series. Trigonometric series. The double integral. Triple integral. Application of multiple integrals. Scalar field. Curved integral. Vector field. Hamiltonian operator. Characteristics of vector fields. Surface integrals.

Discrete Mathematics. Sets. Ratio. Functions. Basic concepts of combinatorics. Types of associations. Propositional calculus. The truth table. Validity. The logical consequence. The functions of the algebra of logic. Boolean algebra. Derived from Boolean functions. Zhehalkina and linear algebra functions. Predicate logic. Formal systems. Counts. Euler graphs. Languages and grammars. Types of

grammars. Finite automata. Basic requirements for the algorithms. Turing machines. Recursive functions.

Theory of Probability and Mathematical Statistics. Basic concepts of probability theory. Combinatorial methods in the theory of probability. Theorems on probability events. The consequences of addition and multiplication theorems. Sequence of independent trials. Discrete random variables. Continuous random variables. The statistical distribution of the sample. Statistical estimation of parameters of the distribution. Statistical tests of hypotheses about the parameters of the distribution. The elements of the correlation analysis.

The theory of algorithms. Basic terms and definitions of the theory of algorithms. Computational functions. Primitive recursive functions. Partial recursive functions. Algorithmic models based on deterministic devices. Finite combinatorial process post. Abstract computer Turing. Machines with random access. The theory of normal algorithm Markov. Equivalence of algorithmic models. Nerozv'yazuvani algorithmic problems. The complexity of algorithms. Data structures. Algorithms for sorting. Search algorithm.

Physics. Introduction. Statics. Kinematics. The dynamics of a point. Basics continuum mechanics. Basics the molecular-kinetic theory of gases. Transition phenomena. Basics thermodynamics. Electric field. Magnetic field. The magnetic field of an electric current. Electromagnetic theory of light. The wave properties of light. Corpuscular properties of light. Speed of light. Basics Special Relativity. The structure of the atom. The wave properties of matter. Physics of Atomic Nuclei. Physics of elementary particles.

Numerical Methods. Mathematical modeling and computational experiment. Elements of the theory of errors. Solving systems of linear equations (SLE). Integration methods for solving SLE. Linear algebra. Methods for solving nonlinear equations. Methods for solving systems of nonlinear equations. Approximation of functions. Polynomial interpolation. Approximation of functions. Numerical differentiation. Numerical integration. Numerical solution of ordinary differential equations and systems.

Mathematical Methods of Operations Research. Subject, characteristics and scope of optimization methods in economics, classification tasks. General linear programming problem and its solution methods. Both binary problem. Transport problem (TC). Formulation, solution methods and analysis. Network models. Integer linear programming problem. Some methods to solve them. Nonlinear programming

Life Safety. General life safety. Organization and management of security in the vital functions of the National Assembly.

Basics of ecology. Environmental laws and environmental regulations. Biosphere and transforming activity of man. Sources and types of pollution. Ways to protect air and soil pollution. Protection of flora and fauna. The consequences of pollution. Methods of estimation of environmental damage. Scientific basis of rational use and management of the environment. Environment and health.

1.3. Cycle of professional and practical training

Algorithmic and programming. Introduction to Programming. Variables and types of variables, variable declaration. Arithmetic operations language C. Operations appropriation, increment and decrement. Logical transactions, equity and respect. Operators branching. Operators cycle. Arrays. Functions. Pointers. Symbols and lines. Structures, unions, real bats. Working with files.

Object-oriented programming. Advantages of C + + over C. Paradigms OOP OOP terminology. Structures and classes. Constructors and destructors classes. Composition classes. Friendship function. Pointer this. Abstraction data. Container

classes and iterators. Transshipment operations. Inheritance. Virtual functions and polymorphism. Templates. Manage exceptions.

Electrical engineering and electronics basics. Electric field. DC circuit. Electromagnetism. Basic concepts of alternating current. Single-phase circuit. Transients in electrical circuits. Electrical measurement and instrumentation. Three-phase electric circuits. Transformers. Electric cars alternator. Electrical Machines DC. Semiconductor and photoelectronic devices. Electronic rectifiers, stabilizers. Amplifiers. Generators and Electronic Instrumentation.

Operating system. Concept, functions and structure of the OS. Management processes. Threads (flow control). Synchronizing threads. Memory management. File Systems. Mechanisms of safety and security in the OS.

Organization of data and knowledge. Database system. Concepts and architecture. Relational database model. Normalization of databases. Designing a database. Designing forms. Query language SQL. Designing reports. Knowledge base in modern intelligent information systems.

Web-technology and Web-design. Basics Web technologies. Web Standards. Model Standards Web - HTML, CSS and JavaScript. Development of the structure and stages of building a web site. Development of the structure and stages of building a web site. HTML. Construction of the HTML document. Basics HTML. Markup text content. Create interactive elements. Links to HTML. Tables and forms in HTML. CSS technology and its supporting browsers. Applying CSS to HTML. Custom scripts. Basics server programming. Creating a website template. Placing a website on the server. Based on XML.

Computer Graphics. History and application of computer graphics. Hardware and software for computer graphics. Types of computer graphics. Color. Models of color. Raster algorithms for generating curves. Raster algorithms for shading and filling areas. Fractals in computer graphics.

Development of client-server applications. Introduction to asp.net. Levels of client-server architecture. Settings surface attack server access and network flows sql server 2005. Access to configuration data sql server. Cooperative management servers, management running sql server. Management server activity. Setting sql server using the utility sql server management studio. Setting the parameters of parallel processing SQL SERVER. Client-server and language SQL. Items language sql for example transact-sql. Security in SQL SERVER 2005.

Technology of software products. The life cycle of software. Architecture of software applications. Theory and techniques of structured programming. Theory and methods of object-oriented analysis, design and programming. Client-server technology. Component Technology Development (sales Catfish, COM + DSOM). CORBA-technology. Basics UML. CASE technology design and maintenance of software applications. Reliability, quality and functionality of software applications. Documenting software applications. Testing and debugging software applications. Certification and certification of software applications.

Technology of information protection. Basics data security in computer systems. Identification and authentication of users. Protecting data against unauthorized access (GCD). Basics cryptography. Cryptography and encryption. Building Security System OS WINDOWS. Building security systems OS UNIX. Managing recovery.

Testing of software systems and complexes. Basics software quality. Models and quality characteristics. The processes of quality management software. Basics Software Testing. Types and levels of testing. Engineering testing. Analysis of test results. Methodology to improve the quality of the modern paradigm.

Administration of software systems and complexes. Job "System Administrator". Virtualization. Administering Windows Server. Review family of Windows

Server 2003. Management Console MMC. Managing user accounts. Account management groups, and computers. Files and folders. Data management. Data archiving. Office printers. Service operating system. Manage hardware and drivers. Management disk memory. The monitoring system. Recovery after system failure.

Computer circuitry and computer architecture. Logical foundations of computer circuitry. Triggers. Registers. Counters. Decoder and encoder. Multiplexers and demultiplexers. The concept of computer architecture. Principles of computers. Systems with a radial architecture and common bus. Physical basis of information in computers. Architecture microprocessors. Addresses and structure of teams. The system interrupts and organization of input / output data. Tires, slots and card adapters. Multiprocessor architecture. The physical layer input / output. Features of RAM in computers such as IBM PC. Computer interfaces and protocols. External memory devices.

Computer networks. Features generalized structure and classification of networks. Basic network topology. Physical environment data. Hardware CM. The reference model of open systems interconnection. Standard communication protocol stacks. Addressing in IP-based networks. Structuring large networks. Family ethernet network. Network Token Ring. Network FDDI. Network Fast Ethernet i 100VG-AnyLan. Technology Gigabit Ethernet. Global packet-switched networks. Network operating systems. Service LAN.

Basics of labor protection. Work environment and its impact on people. Conditions in the workplace, their classification and valuation. Production harm, protection of human methods of its negative impact. Analysis and prevention of occupational diseases and injuries. Basics of safety. Legal and regulation of safety. Public health and safety management in Ukraine. The organization of the workplace. Economic aspects of health and safety.

Labour protection in the industry. Organization and management of health and safety in the business sector. Security processes work at the facilities management. Electrical. Fire safety.

Basics of marketing. The essence of marketing and its modern concept. Classification of marketing. Systems and response marketing. Marketing research and information. Marketing environment of the enterprise. Market segmentation and positioning strategy. Marketing product policy. Marketing pricing. Complex marketing communications. Marketing policy of distribution of goods. Strategic marketing planning. Organization and control of the marketing of the company. International Marketing.

Economics and bases of IT business. Information systems and their role in the management of economic entities. Economic data and their means of formal description. Organizational and methodological basis for the creation and operation of information systems. Company as an entity. Forecasting, planning and regulation of activity. Land resources and their use. Labor, productivity and pay. Physical infrastructure companies. Core business. Revolving funds and funds circulation enterprises. Intangible assets of the company. Investment and innovation. Production costs and production costs. The pricing for products. Quality and competitiveness. Economic performance and efficiency of the enterprise.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

Mathematical Logic. Algebra statements. Normal forms. The use of algebraic statements to logical mathematical practice. Predicate logic. Elements of the theory of algorithms. Semantic mathematical theory of the first order.

2.1.2 Cycle of mathematics and natural science (fundamental) training

Introduction to specialty. The educational process of training technicians programmers. Education in the audience. Working with educational book. Personality in work and behavior. Cognitive processes of the individual. Emotional and volitional personality. Individual psychological characteristics of personality. Communication as communication. Socio-psychological climate. Conflict situations and solutions. The role of information technology in human activity. The history of computer technology. The role of programming and algorithmic techniques in the profession programmer.

Systems and Technology of Management database. Object, methods and objectives of discipline. Theoretical Foundations of databases. Databases MS SQL SERVER. Tables and understanding of relational databases. Keys. Primary keys. Foreign keys. Optimize time access to data. Communication between database tables. Managing transactions. Controlling access to the database. Privacy Policy. Access control schemes.

Information Theory. Information. Sampling theorem. The amount of information. The entropy of the source. Conditional entropy. Characterization of discrete channel information. Optimal statistical methods for data compression. Application of statistical compression algorithms to block the message. Mathematical coding. Dictionary compression methods os-Lempela. Compression systems. Basic principles of noise-immune coding. Linear block codes. Ways task of linear block codes. Syndrome decoding of linear block codes. Hamming code. Polynomial coding, cyclic codes.

Junior Specialists training

Specialty «Maintenance of computer systems and networks»

Training direction «Computer Engineering»

Field of knowledge «Information and computer science»

Amount, credits ECTS – 180

Learning / teaching period, years:

Full-time - 3 years (on the basis of completed secondary education)

Full-time - 4 years (on the basis of basic secondary education)

Qualification of the graduate - Technician of computer science

Training of junior specialists is carried out in SS of NULES of Ukraine

(licensed number of students: full-time / part-time):

- Berezhany Agrotechnical Institute (50/-)
- Nizhyn Agrotechnical Institute (30/-)
- Irpin Economic College (50/-)
- Zalishchky Agricultural College named after Y.Khraplyvy (50/-)
- Prybrezhne Agricultural College (30/-)

Annotation of Specialty

The widespread introduction of computer-integrated technologies, information systems, forming of extensive industry of electronic information resources, appearance of new computer-integrated technology and means of production greatly increases the demand for specialists in service of computer systems and networks. The graduates of the specialty «Maintenance of computer systems and networks» should have general scientific and professional competencies in such areas as mathematics, programming, circuitry, electronics and computer networks.

Practical Training

Educational and research farms and stations of NULESU, agricultural holdings, departments of computerization of production units, processing and industrial enterprises, banks, enterprises of different forms of property, which are engaged in project making, working out, creation, implementation and exploitation of computer systems and networks..

Approximate topics of the graduation works

1. Development of educational web-site on the subject.
2. Development subscriber access network based on Ethernet technology using fiber- optics.
3. Development of network protection project.
4. Organization of the diagnostic and repair station of computer power supply in the enterprise.
5. Development of security signal system in the enterprise.
6. Development of internal local network of the enterprises.
7. Protect of software against unauthorized access and malicious programs.

Graduate's Academic Rights

The graduates of the specialty «Maintenance of computer systems and networks» can continue their study for educational and qualification level «Bachelor» of area 6.050102 «Computer Engineering».

Graduates' Spheres of employment

The graduates of the specialty «Service of Computer Systems and Networks» can work as a technician of computing (information and computing) center, a technician of system administration, a technician-programmer, a technician of configurable computer system.

**Curriculum of training the specialists of EQL «Junior Specialist»
in Specialty «Maintenance of computer systems and networks»**

№	The name of the course, practice	Semest er	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine	3	81	1,5	2,3
2	Culturology	3	54	1	1,5
3	Ukrainian for professional purposes	6	54	1	1,5
4	Fundamentals of Philisophy	8	81	1,5	2,3
5	Economic theory	4	81	1,5	2,3
6	Fundamentals of law	4	81	1,5	2,3
7	Sociology	8	54	1	1,5
8	Foreign language for professional purposes	5-7	216	4	6
9	Physical training	5-7	270	5	7,5
Total for the cycle			972	18	27
1.2. Cycle of mathematics and natural science (fundamental) training					
1	Higher mathematics	3-5	324	6	9
2	Physics	4	135	2,5	3,8
3	Theory of electric and magnetic circles	3-4	216	4	6
4	Theory of probability and mathematical statistics	5	135	2,5	3,8
5	Algorithms and computer technique	6	108	2	3
6	Computer logic	6	135	2,5	3,8
7	Discrete mathematics	5	135	2,5	3,8
8	Engineering and computer graphics	3-4	135	2,5	3,8
9	Fundamentals of ecology	3	54	1	1,5
Total for the cycle			1377	25,5	38
1.3. Cycle of professional and practical training					
1	Programming	3-5	297	5,5	8,3
2	Computer electronics	4-5	243	4,5	6,8
3	Computer architecture	4-5	216	4	6
4	Computer circuit technique	5-6	162	3	4,5
5	System programming	7	162	3	4,5
6	Operational systems	5-6	216	4	6
7	Computer networks	6-7	162	3	4,5
8	Database organization	5	108	2	3
9	Fundamentals of softwear engineering	7-8	162	3	4,5
10	Economics and production planning	7-8	189	3,5	5,3
11	Life safety and labour protection	8	108	2	3
12	Labour protection in the branch	8	36	0,7	1
Total for the cycle			2061	38,2	57
Regulatory part, total			4410	81, 7	122,5

2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
2.1.1. Cycle of mathematics and natural science (fundamental) training					
1	Technology of production, storage and processing of agricultural products	4	81	1,5	2,3
2	Control and measuring devices with fundamentals of metrology	7	81	1,5	2,3
Total for the cycle			162	3	4,6
2.1.2 Cycle of professional and practical training					
1	Peripherals	7	108	2	3
2	Technical service of electronic computing machines	7-8	207	3,8	5,8
3	Automation and computer-aided manufacturing	6	81	1,5	2,3
4	Microcontrollers and microprocessor technology	6	81	1,5	2,3
5	Electro-radio materials and installation of electrical equipment	6	81	1,5	2,3
6	Introduction to Specialty	2	54	1	1,5
Total for the cycle			612	11,33	17
Elective component, total			774	14,33	21,5
Practical training			864	16	24
Degree examination			432	8	12
Total, according to the field of study			6480	120	180

* The number of training hours/credits defined for preparation of specialists on the basis of basic secondary education

** The names of cycles of disciplines and forms of State attestation – according the requirements of industry standards for higher education approved 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Culturology», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Higher mathematics. System of knowledge of the following parts is laid out in the course: Elements of the theory of matrices. General theory of systems of linear equations. Lines in the plane. Lines in the space. The curves of the second order. Functions and calculations. Boundary of functions. Derivative function. Basic theorems of differential calculus. Investigation of functions of several variables on the extremum. Indefinite integral. Numerical differential equations. Elements of linear and vector algebra. Use of derivative and integral. Complex numbers.

Physics. System of knowledge of the following parts is laid out in the course: electrostatics, electrodynamics, magnetism.

Theory of electric and magnetic circuits. System of knowledge of the following parts is laid out in the course: Linear circuits of DC. Magnetic field. Linear electric circuits of AC. Nonlinear circuits. Transient processes in electric circuits. Steady-state processes in electric and magnetic circuits. Semiconductor components. Elements and components of integrated circuits.

Theory of probability and mathematical statistics. System of knowledge of the following parts is laid out in the course: Random events and values. Laws of distribution and limit theorems of theory of probability, Laws of mathematical statistics.

Algorithms and computer technique. System of knowledge of the following parts is laid out in the course: Algorithms for solving problems by numerical methods. Numerical methods of optimization.

Computer logic. System of knowledge of the following parts is laid out in the course: Elements of automata theory and synthesis of combinational circuits. Logical foundations of digital machines and design of discrete devices.

Discrete mathematics. System of knowledge of the following parts is laid out in the course: Elements of set theory, statements and fundamentals of Boolean algebra. Elements of graph theory. Turing's machines.

Engineering and computer graphics. Projection drawing. Types, sections and cross sections. Sketches and drawings. Elements of constructive connections. Assembly drawings. Detailing. Orthogonal projections on the mutually perpendicular planes. Properties of projections of geometric elements. Positional and metrical tasks. Performing graphic works on the computer.

Fundamentals of ecology. System of knowledge of the following parts is laid out in the course: Biosphere and transformational human activities. Organization of agricultural production on the radioactively contaminated territories. Modern problems of nature protection in agricultural production. Rational use and protection of land resources. Water resources and their protection. Economic factors and organism. Air protection.

1.3. Cycle of professional and practical training

Programming. System of knowledge of the following parts is laid out in the course: structural and object-oriented programming, abstract classification of objects, types of program projects, graphical tools for creating objects, programming languages, programming in Delphi, C + +.

Computer electronics. System of knowledge of the following parts is laid out in the course: Semiconductor components. Elements and components of integrated circuits. Fundamentals of electronic circuitry. Devices of data display. Linear and nonlinear elements of impulse and digital devices. Impulse generators. Triggers. Functional units of digital and impulse devices. Selection of impulses.

Computer architecture. System of knowledge of the following parts is laid out in the course: Computer structure. Computer microprocessors. Storage devices and input-output controllers.

Computer circuit technique. System of knowledge of the following parts is laid out in the course: Combination and sequential typical elements. Controllers of computing machines and their programming. Dedicated devices and methods of construction.

System programming. System of knowledge of the following parts is laid out in the course: Software architecture of a basic processor. Methods and tools for writing functional modules of system software, operating systems, device drivers. Basic concepts of applied software. Basic technologies of system programming, system programming in assembly language.

Operational systems. System of knowledge of the following parts is laid out in the course: Basic Concepts of OS. OS architecture. General structure of OS Windows. Process and flow control. Fundamentals of administration of OS Windows XP. Storage control. Methods of memory allocation. Input-output control. File systems. Command Line Interface. Realization of file systems. Work with the system registry. Protection of information in operating systems. Modern concepts of operating systems design, OS UNIX, OS LINUX.

Computer networks. System of knowledge of the following parts is laid out in the course: Concepts of computer networks and their main components. Modern networking technologies for local or global networks. Fundamentals of operation and building of global computer network Internet. Security and information protection while working in computer networks.

Database organization. The concept of database, objects of the database MS Access, technology of creation, editing and control of the objects of database MS Access, creating applications using means of automation in the environment of MS Access. Use of databases.

Fundamentals of software engineering. System of knowledge of the following parts is laid out in the course: Basic concepts of software engineering. Principles of control of software development. Standardization in the creation and maintenance of software.

Economics and production planning. System of knowledge of the following parts is laid out in the course: Enterprise in the modern system of management. Resource supply of enterprise performance. Production planning. Results and efficiency of production.

Life Safety and labour protection. System of knowledge of the following parts is laid out in the course: Man-caused hazard. Danger. Risk as hazard assessment. Impact of human activities on the environment. Providing first aid to the victim. Legislative and regulatory normative framework of Ukraine on labor protection. Training in labour protection. General hygiene requirements for location of an enterprise, for production and support facilities. Public health and safety management and organization at the workplace. Analysis, forecasting, prevention of injuries and occupational diseases at the place of production. General safety requirements for manufacturing equipment and processes.

Labour protection in the branch. System of knowledge of the following parts is laid out in the course: Electrical safety. Fire and explosion safety. Ventilation of the workplace. Lighting of the workplace. Vibration, noise, ultrasound and infrasound. Fire Safety. Fundamentals of occupational safety. System of fire protection. Ionizing radiation. Fire prevention system.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of mathematics and natural science (fundamental) training

Technology of production, storage and processing of agricultural products. System of knowledge of the following parts is laid out in the course: technology of crop production, technology of livestock production, technology of processing of crop products, technology of processing of livestock products.

Control and measuring devices with fundamentals of metrology. System of knowledge of the following parts is laid out in the course: Fundamentals of metrology and measurement technique, fundamentals of theory and design of measuring instruments and devices, electrical measurements, non-electrical measurements in production.

2.1.2. Cycle of professional and practical training

Peripherals. Data storage devices, input and output devices, identify of conflicts of hardware peripherals, technical characteristics and exploitation conditions of modern office equipment, order of installation and adjustment of peripherals and software are studies.

Technical service of electronic computing machines. System of knowledge of the following parts is laid out in the course: general issues of PC exploitation and control, peculiarities of constructive use of PCs, control and measuring devices, planned - preventative maintenance of PC, searching for PC damages.

Automation and computer-aided manufacturing. System of knowledge of the following parts is laid out in the course: principles of work, properties and use of means of automation, elements of automation systems, fundamentals of automatic control theory.

Microcontroller and microprocessor technology. System of knowledge of the following parts is laid out in the course: general principles of the structure of microprocessor systems, microprocessor with CISC-architecture, microprocessor with RISC-architecture, industrial controllers.

Electro-radio materials and installation of electrical equipment. System of knowledge of the following parts is laid out in the course: radio materials, dielectrics, magnetic materials, conducting materials, semiconductors, radio components, technology of electrical-installation connections, installation of CEA elements, manufacture and installation of printed circuit boards, gathering electrical wiring elements.

Introduction to Specialty. The discipline is learnt before learning professional disciplines, it forms an idea of the future specialty, actuality of the chosen profession in modern conditions, requirements for professional training, fundamentals of professional ethics, organization of educational process in training according to the Specialty, computer engineering in agriculture, professional requirements for skills and abilities in servicing computer systems and networks.

Junior Specialists training
Specialty «Mounting, maintenance of tools and systems of automation of technological production»
Training direction «Automation and computer-integrated technologies»
Field of knowledge «Automation and control»

Amount, credits ECTS – 180

Learning / teaching period, years:

Full-time – 4 years (on the basis of basic secondary education)

3 years (on the basis of complete secondary education)

Graduate's qualification - electrician

Training of junior specialists is carried out in SS of NULES of Ukraine

(licensed number of students: full-time / part-time):

- Nizhyn Agrotechnical Institute (25/0)

Annotation of Specialty

Automation of an agricultural sector is an important factor in scientific and technological progress in agricultural production. The need for specialists in automation is relevant today due to introduction of information technologies in all areas of agricultural production. Automated process control and production based on modern computer integrated control systems are widely used in modern enterprises.

Practical Training

Curriculum provides 6 educational practices: introductory, in programming, electrical measuring, electroassembly, in technical maintenance of means of automation, plumbing. All kinds of educational practices are carried out in specialized laboratories of the institute. For practical training industrial base of agrarian formations of Chernihiv region (educational and research farms and stations, agricultural holdings with developed infrastructure of production and processing of agricultural products) is used.

Approximate topics of the graduation works

1. Automation of modes for drying corn.
2. Automatic temperature control in warehouses of finished products.
3. Automation of oil spill.
4. Development of automatic control of artificial lighting in the rooms on the basis of infrared sensor.
5. Development of an automated heating of greenhouses.
6. Improving the system of automatic boiler control.
7. Automation of active ventilation of grain for realization with energy-saving mode of drying.

Graduate's Academic Rights

Graduates of the Specialty «Mounting, maintenance of tools and systems of automation of technological production» can continue training for EQL «Bachelor» according to the area of training 6.050202 «Automation and computer- integrated technologies».

Graduates' Spheres of employment

Graduates of the Specialty «Installation, maintenance of automatic means and systems of technological production» can work as electricians, design technicians

(electrical engineers), technicians in automation of industrial processes, technicians in repairing and testing, in maintenance of automatic means.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Mounting, maintenance of tools and systems of automation of
technological production»**

№	The name of the course, practice	Semest er	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1.	History of Ukraine	3	54	1	1,5
2.	Ukrainian for professional purposes	6	54	1	1,5
3.	Cultorology	3	54	1	1,5
4.	Economic theory	4	54	1	1,5
5.	Fundamentals of philosophy	8	54	1	1,5
6.	Sociology	8	54	1	1,5
7.	Fundamentals of law	4	54	1	1,5
8.	Physical training	5-7	270	5	7,5
9.	Foreign language for professional purposes	5-6	216	4	6
Total for the cycle			864	16	24
1.2. Cycle of mathematics and natural science (fundamental) training					
1.	Higher mathematics	4-5	135	2,5	3,75
2.	Electronics and electrical measurements	3-4	216	4	6
3.	Descriptive geometry and engineering graphics	3-4	108	2	3
4.	Technical mechanics and details of knots of automatic means	5	135	2,5	3,75
5.	Electronics, microelectronics and circuitry	4-5	216	4	6
6.	Automatic electric drive	6	108	4	6
7.	Life safety	4	54	1	1,5
8.	Fundamentals of ecology	3	54	1	1,5
Total for the cycle			1026	19	28,5
1.3. Cycle of professional and practical training					
1.	Fundamentals of metrology and means of technological control	3-4	189	3,5	5,25
2.	Theory of automatic control and automatic controllers	4-5	324	6	9
3.	Automation of technological processes	6-7	324	6	9
4.	Installation and adjustment of technical means of automated systems	5-6	297	5,5	8,25
5.	Exploitation and repair of technical means of automated systems	7-8	189	3,5	5,25
6.	Fundamentals of programming and software	3-4	243	4,5	6,75

7.	Economics, management and production planning	7-8	216	4	6
8.	Fundamentals of labor protection	6	108	2	3
9.	Labour protection in the branch	8	36	0,7	1
Total for the cycle			1926	36	53,5
Regulatory part, total			3816	71	106
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by students					
2.1.1. Cycle of humanitarian, social and economic training					
1.	Psychology	8	54	1	1,5
2.	Logic	7	54	1	1,5
2.1.2 Cycle of mathematics and natural science (fundamental) training*					
1.	Technology of production, storage and processing of agricultural products	5	108	2	3
2.	Electric machines	5	108	2	3
3.	Electronic devices in control systems	7	189	3,5	5,25
2.1.3. Cycle of professional and practical training*					
1.	Microprocessor technology	7-8	189	3,5	5,25
2.	Computer graphics	8	81	1,5	2,25
3.	Electronic equipment of technological processes of agriculture	6-7	189	3,5	5,25
4.	Introduction to Specialty	2	54	1	1,5
Chosen by students, total			1026	19	28,5
Elective part, total			1026	19	28,5
Practical training			1188	22	33
Degree examination*			324	6	9
Total, according to the field of study			6480	120	180

* The number of training hours/credits defined for preparation of specialists on the basis of basic secondary education

** The names of cycles of disciplines and forms of State attestation – according the requirements of industry standards for higher education approved 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Culturology», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Higher mathematics (professional orientation). Learning the subjects allows, on the example of basic concepts and methods, to demonstrate the essence of scientific approach, specific character of the subject and its role in scientific and technological progress. During the course a student formulates a simple application problems and creates mathematical models of real objects and processes, occurring in them, develops rational research methods, conducts their qualitative and quantitative research, processes numerical data, obtained in the laboratory, field, agrochemical

experiments, analyzes the results; gets research skills in a range of tasks related to professional orientation, is able to formalize and classify them, analyze obtained results.

Electronics and electrical measurements. Basic laws of DC and AC. Design and principle of operation of electrical machines. Use of semiconductor technology. Use of electrical measuring device, their structure, principle of operation.

Descriptive geometry and engineering graphics. Projection drawings. Types of sections and cross sections. Sketches and drawings. Elements of structural connections. Assembly drawings. Detailing. Orthogonal projections on the perpendicular plane. Properties of projection of geometry elements. Positional and metrical tasks.

Technical mechanics and details of knots of automatic means. Plane converging and randomly deployed forces system. The spatial system of forces. Center of gravity. Kinematics. Dynamics, theorems of dynamics. Main model of strength. Tension and compression. Displacement and torsion. Tense and strained state at a point and theories of strength. Bend. Stability of rods. Dynamics of elastic systems. Details of units of automatic means.

Electronics, microelectronics and circuitry. Passive components of electronic circuits. Diodes and their model. Transistor circuits. Feedback. Operational amplifier. Characteristics of families of logic integrated circuits. Digital circuits.

Automatic electric drive. Static mechanical properties of DC and AC motors. Choice of engines for different modes. Equipment for control and protection of motors. Installation, pre-starting procedure, arrangement and problem-solving of motors, control units and protectors.

Life safety. Theoretical foundations of life safety. System "individual-environment". Sources and causes of hazards, their effects on an individual and environment. Life Safety in emergencies. Organization and management of life safety.

Fundamentals of ecology. Theoretical and practical aspects of ecology. Economic foundation of sustainable use of nature.

1.3. Cycle of professional and practical training

Fundamentals of metrology and means of technological control. Theoretical basis of electrical measurements. Methods of measuring electrical, magnetic and non-electrical quantities.

Theory of automatic control and automatic controllers. Basic principles and laws of construction and research of automatic control systems. Structure and principles of the key elements of automation systems, analysis techniques of automatic systems.

Automation of technological processes. Technological foundations of automation. Setting up automatic systems for a given mode. Troubleshooting basic elements of automation of production processes.

Installation and adjustment of technical means of automated systems. Tools, instruments and industrialization means of electrical works. Methodology and checking rules, implementation and acceptance of the performed work.

Exploitation and repair of technical means of automated systems. Organization, documental and technical support of exploitation, technical maintenance and repair of automated means. Technology of technical maintenance and repair of automated systems. Fundamentals of industrial and technical exploitation of automated systems. Methods of calculating and assessing the reliability of equipment. Requirements for quality of electric energy and for monitoring and maintaining an appropriate level of figures of merit. Measures of efficient use of electricity and other energy resource.

Fundamentals of programming and software. General structure of computing machine, operating systems, software shells, text and graphics editors, electronic worksheets and computer communication systems. Programming in assembler.

Fundamentals of in high level language programming. Use of specialized software for building computer-integrated control system.

Economics, management and production planning. Economics and industrial management. Planning and analysis of business activities of an enterprise. Profit and profitability. Internal planning. Rationing and wages.

Fundamentals of labor protection. Legal and institutional foundations of labor protection in agro-industrial complex. Fundamentals of physiology, hygiene and occupational health in agro-industrial complex. Fundamentals of life safety and fire safety in agro-industrial complex.

Labour Protection in the branch. Legislation on labour protection. Regulatory and legal acts on labour protection. Guarantees of citizens' rights for labour protection. Employees' rest time. Labour protection of women and youth. General provisions. Basic requirements for fire safety. Fire safety requirements for buildings of various purposes. Procedure in case of fire.

2. Elective academic disciplines

2.1. Disciplines chosen by students

2.1.1. Cycle of humanitarian, social and economic training

Psychology. The purpose of discipline is to enable students to gain knowledge about the basic laws of communication as a form of human activity. Communication is not only a source of information and positive emotions, effective means of self-expression and improving interpersonal relationships, but also an inexhaustible reserve of optimization of any professional activity. Therefore, study of this discipline will enable students to gain knowledge about peculiarities of communication, professional and interpersonal dialogue, social perception, interpersonal and intrapersonal conflicts, and also will form on this basis communicative qualities of a future professional.

Logic. Study of the subjects allows students to learn the basic concepts and nature of logic thinking, statements, questions and answers, arguments, learn the basic steps of right thinking, gain cultural communication skills, master the basics of logical reasoning and evidence.

2.1.2 Cycle of mathematics and natural science (fundamental) training

Technology of production, storage and processing of agricultural products. Fundamentals of soil science, arable farming, crop production and livestock production. Sanitary and hygienic conditions of animal husbandry, quality of raw materials and finished products. Implementation of efficient technologies and means of mechanization of agriculture product processing.

Electric machines. DC machines. Transformers. Synchronous machines. Asynchronous machines. Construction, operation modes and main characteristics. Electric apparatus.

Electronic devices in control systems. Studying subjects allows to form knowledge for solving engineering problems in exploitation of electronic devices, which are used in agricultural production. Conceptual modules of the discipline are: theoretical foundations of electronic devices, methods of calculation and selection of electronic devices.

2.1.3. Cycle of professional and practical training

Microprocessor technology. Architecture of microprocessors and microcomputers. Instruction code of microprocessors, hardware microprocessor of system. Circuitry engineering of control devices of manufacturing process based on microprocessors.

Computer Graphics. The purpose of the discipline is the acquisition of practical skills in using applied graphic programs for creating and editing images.

Electronic equipment of technological processes of agriculture. Electronic equipment for tillage, sowing, harvesting and processing machines. Climate control systems, electronic equipment of vehicles.

Introduction to Specialty. World experience of agricultural production and its development in Ukraine. Power base of agricultural production. Scientific and technological progress in agriculture. System of higher agricultural education.

Junior Specialists training
Specialty «Building and exploitation of buildings and constructions»
Training direction «Construction»
Field of knowledge «Construction and architecture»

Amount, credits ECTS – 173.25

Learning / teaching period, years:

Full-time – 4 years (on the basis of basic secondary education)

Part-time – 2years 8 months (on the basis of general secondary education)

Qualification of the graduate – technician – builder

Training of Junior Specialists is carried out in Separated Subdivision of NULESU (licensed amount, persons: full-time/part-time):

- Bakhchisaray College of Construction, Architecture and Design (100/100)

Annotation of Specialty

Training junior specialists is aimed at preparing specialist to be able to apply modern technologies of planning and construction of housing, civil, industrial and agricultural buildings, to provide their economic, power, economic and ecological efficiency.

Practical Training

Students pass practical training in leading construction organizations, project establishments: Joint-Stock COMPANY the Bahchisaray combine the «Building industry», LTD. PEP «Agropromenergo», the Nemirov college of construction and architecture, LTD. MBP «Impouls-BC», LTD. «Hibini», LTD. the «Ukrainian company Cerchboud», Trust CrimspetsAgroboud-2-2 PMC-58-58, LTD. the «Alpha and C Sevastopol», LTD. «Prestige plus» Simpferopol, Simpferopol construction lyceum, LTD. «Cantilever», LTD. «Monolith».

Approximate topics of the final works

State attestation foresees complex state examination, preparation and protection of diploma project.

Graduate's Academic Rights

Graduates can continue studying on the programs of bachelor training in direction 6.060101 «Construction».

Graduates' Spheres of employment

After completing study, the graduates are prepared to work in organizations that design, construct, and maintain building and structures and can hold such primary positions: technician–builder, maintenance technician, building maintenance, technician–designer, technician–laboratory assistant (construction) and technician for setting labor norms, technician for production preparation.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Building and exploitation of buildings and constructions»**

In specialty «Building and exploitation of buildings and constructions»					
№	The name of the course, practice	Semest er	Hours	Amount	
				Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	Ukrainian (for professional purposes)	5	54	1	1,5
2	History of Ukraine	3	54	1	1,5
3	Culturology	3	54	1	1,5
4	Bases of philosophical knowledges	5	54	1	1,5
5	Economic theory	4	54	1	1,5
6	Bases of jurisprudence	1	54	1	1,5
7	Sociology	7	54	1	1,5
8	Foreign language (for professional purposes)	5-6	108	2	3
9	Physical training	5-6	108	2	3
Total for the cycle			594	11	16,5
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Higher mathematics	3-4	162	3	4,5
2	Physics	4	54	1	1,5
3	Chemistry	3	54	1	1,5
4	Theoretical mechanics	3	81	1,5	2,25
5	Strength of materials	4	81	1,5	2,25
6	Bases of computer technologies	3-4	108	2	3
7	Bases of ecology	1	54	1	1,5
8	Safety of vital functions	7	54	1	1,5
9	Bases of enterprise and administrative activity	7	108	1,5	2,25
Total for the cycle			756	13,5	20,25
1.3. Cycle of professional and practical training*					
1	Metrology and standardization	6	54	1	1,5
2	Engineering drawing	2-4	216	4	6
3	Construction structure	4-5	270	5	7,5
4	Structural mechanics	5	108	2	3
5	Building materials	3-4	162	3	4,5
6	Bases of computation of construction structure	5-6	243	4,5	6,75
7	Bases of labour protection	6	54	1	1,5
8	Sanitary technical equipment of a building	6	108	2	3
9	Engineering survey	3	108	3	4,5
10	Construction economics	6	216	4	6
11	Electrical engineering in construction	4	108	2	3
12	Construction technique	5	108	2	3
13	Bases of computer-aided designs	6	81	1,5	2,25
14	Technology and organization of construction production	5-7	432	8	12
15	labour protection in construction	7	54	1	1,5

Total for the cycle		2430	44	65
Regulatory part, total		3780	68,5	101,75
2. ELECTIVE ACADEMIC DISCIPLINES				
2.1. Disciplines chosen by University				
2.1.1. Cycle of humanitarian, social and economic training				
1				
2.1.2 Cycle of mathematics and natural science (fundamental) training				
1	Introduction into a specialty	1	54	1,5
2.1.3. Cycle of professional and practical training*				
1	Pricing in Construction	7	81	1,5
2	Special course of survey	7	54	1
3	Agricultural construction	5-6	108	2
4	Reconstruction and exploitation of building	7	108	2
Chosen by University, total		405	7,5	11,25
2.2. Disciplines chosen by students				
2.2.1. Cycle of mathematics and natural science (fundamental) training*				
1				
2.2.2. Cycle of professional and practical training*				
1				
Chosen by students, total		-		
Elective part, total		405	7,5	11,25
Practical training		1620	30	45
Degree examination		432	8	12
Total, according to the field of study		6237	115,5	173,25

* The number of educational hours/credits is defined for specialist training on the basis of basic secondary education.

**The names of discipline cycles and the forms of state attestation are according to the requirements of the standards of fields in higher education, adopted in 2010, EQC and OPP specialties.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (for professional purpose)», «History of Ukraine», «Culturology», «Foreign language (for professional purpose)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2. and «Economic theory» see section 2.2. and p. 1.1 of specialty «Jurisprudence».

1.2. Cycle of mathematics and natural science (fundamental) training

Higher mathematics. Trigonometric functions. Complex numbers. Elements of vectorial algebra. Analytical geometry. Systems of linear inequalities and linear programming. Differential calculus of functions of one variable. Differential calculus of functions of many variables. Integral calculation. Differential equations. Elements of probability theory.

Physics. Physical bases of mechanics. Bases of molecular physics and thermodynamics. Bases of electrodynamics. Vibrations and waves. Optics. Quantum nature of radiation. Elements of quantum physics of atoms, molecules and solids. Elements of physics of atomic nuclei and elementary particles.

Chemistry. Chemical and physical properties of the most important inorganic, organic matters, basic information about the theory of structure of matter, elements of chemical thermodynamics and kinetics, study about solutions, bases of analysis of physical and chemical matters. Chemical processes and their practical use in future professional activity.

Theoretical mechanics. This discipline foresees the study of general laws of motion and equilibrium of material bodies. Teaching of discipline is to be practically oriented. Notions of force, types of relations and their reactions, systems of forces, that act on solids, basic concepts of kinematics, method of kinetostatic.

Strength of materials. For construction specialties it has for a purpose to give to the students basic information about the types of deformation of the squared beam and about the methods of computation of construction elements and machine details on durability, inflexibility and firmness. Studing of discipline is to be practically directed.

Bases of computer technologies. Modern computing engineering, software, technologies of automated treatment of information, practical skills of computer using in professional activity.

Bases of ecology. Biosphere and man, structure of biosphere, ecosystems, ecology and men's health, global problems of environment; ecological principles of the rational use of natural resources and conservancy; bases of nature exploitation economy, ecological protection technique and technology.

Safety of vital functions. Negative factors of natural, technogenic, socio-political and military origin in the men's life. State measures on men's life protection. Facilities of individual men's protection. Collective facilities of men's protection. Liquidation of consequences of influence on a man from radio-active, chemical and biological matters. Dangerous factors of environment, their action on a man, bases of physiology of labour and normative requirements to the terms of activity. Methods of authentication of harmful and dangerous factors of the technical systems. Facilities of protection from their action on a man and natural environment in normal and extraordinary situations. Organizational, legal and socio-economic knowledges in the field of safety of vital functions.

Bases of enterprise and administrative activity. Essence of enterprise, its organization, forms, state adjusting, bases of taxation.

1.3. Cycle of professional and practical training

Metrology and standardization. Metrology and its tasks, receipt of metrological information. Primitive physical information. Unity of measuring. Standards and systems of units. Technical measuring; basic methods and facilities of measuring. Standardization as a basis of quality. Categories and types of standards. Systems of standards in industry and construction and their application in researches, planning, production, construction and in using products.

Engineering drawing. Methods of projection, metrical tasks, methods of transformation of drafts. Draft, technique of draft and geometrical constructions, DSTU, ESCD, drafts of machines, buildings, architectural–constructional drafts.

Construction structure. Classification of construction structures and their role in creation of different frameworks of a building. Generals of structure planning. Planning of metal, reinforced concrete, stone and wooden structures. Planning of housing, industrial and agricultural buildings.

Structural mechanics. Structural mechanics and its tasks. Computation of building on durability, inflexibility and firmness. Bases of static computation.

Building materials. Classification of materials, used in construction, their composition and structure. Dependence of properties on composition and structure. Principle questions of production technology of the most important building materials,

industries of their application. Corrosion of materials, facilities of rising their longevity. Technical-economical efficiency of materials.

Bases of computation of construction structures. Classification of construction structures, materials for construction structures, their mechanical descriptions, planning and computation of metal, reinforced concrete, stone and wooden ones.

Bases of labour protection. Production environment and its influence on a man. Terms of labour on production, their classification and setting of norms. Production harmfulness, methods of protecting a man from its negative influence. Analysis and prophylaxis of vocational illness and production traumatism. Bases of accident prevention. Legal and normative adjusting of labour protection. State administration by a labour protection in Ukraine. Organization of labour protection on production. Economic aspects of labour protection.

Sanitary technical equipment of a building. Heating and gas supply, water-supply, sewage system and garbage chute, ventilation and conditioning of housing, industrial and agricultural building.

Engineering survey. Survey and its essence. Systems of co-ordinates, that are used. Direct and reverse survey tasks. Plans and cards. Measuring of corners, distances, exceeding. Survey examples. Basic types of survey works for pretentious novelties, planning, construction and exploitation of a territory and buildings.

Economy of construction. Estimate business. Prime price of construction and installation works, income of construction organizations. Economic efficiency of capital investments. General funds and working assets. Bases of market relations. Economic evaluations of engineering-technician decisions. Consideration, accounting and economic analysis.

Electrical engineering in construction. Electric circles and measuring. Transformers. Asynchronous machines. Machines of direct current. Synchronous machines. Bases of industrial electronics. Electric providing, illumination of houses, building, building objects and transport systems.

Construction technique. Mechanization of construction works. construction machines and facilities of small mechanization for implementation of construction works, their intention, structures, determination of productivity, technical-economical indexes.

Bases of computer-aided designs. Program package of ArchiCAD. Base notions. Working environment. Systems of co-ordinates. Instruments for creating construction structures. Instrument for creation of additional elements of draft. Additional objects. Registration of documents.

Technology and organization of construction production. Bases of planning of construction processes. Technology of implementation general construction and special works. Features of implementation of construction processes in the conditions of reconstruction. Design of construction production. Calendar planning. The net graphs. Orientation of construction site. General principles of construction operations management.

Labour protection in construction. Discipline foresees the study of actual questions of labour protection for construction industry in the field of economic, economic and research activity taking into account the features of future professional activity of graduating students, and also achievements of scientific and technical progress.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

2.1.2 Cycle of mathematics and natural science (fundamental) training

Introduction into a specialty. The study of course will allow students to develop their common vision on the profession of architect and will create pre-conditions for studying vocational educational disciplines, will enter into the curriculum and will increase student motivation to form and develop their personality traits necessary for effective perform of professional duties.

2.1.3. Cycle of professional and practical training

Pricing in construction. Basic principles of pricing in construction, drafting of local estimates for construction and special works, objective estimate and determination of agreed cost of object.

The special course of survey. Horizontal and vertical attachment of buildings, executive survey of stages of construction, control of quality of the executed works.

Agricultural building. Classification of agricultural buildings, features of their construction and exploitation, structural elements of agricultural buildings.

Reconstruction and exploitation of buildings. Inspection of buildings, determination of their physical tearing down, strengthening of construction structures, replacement of construction structures, replanning and reconstruction of a building, basic rules of building exploitation.

Junior Specialists training
Specialty «Mounting, maintenance of equipment and systems of gas-supply»
Training direction «Construction»
Field of knowledge «Construction and architecture»

Amount, credits ECTS – 150

Learning / teaching period, years:

Full-time – 3 years 6 months. (on the basis of basic secondary education)

Part-time – 2 years 8 months (on the basis of general secondary education)

Qualification of the graduate – maintenance technician for equipment and gas-supply systems.

Training of Junior Specialists is carried out in Separated Subdivision of NULESU (licensed amount, persons: full-time/part-time):

- Bakhchisaray College of Construction, Architecture and Design (50/50)

Annotation of Specialty

Training junior specialists is aimed at preparation of specialist to be able to apply the knowledge for correct and safe exploitation of gas equipment in dwelling-houses, industrial workshops, boiler rooms, where natural gas is used.

The specialist is prepared to the rational use and gas fuel economy.

Practical Training

Students pass practical training at VAT «Crimgaz», VAT «Sevastopolgaz», district gas utilities, educational-practical center at the Nemirov college of construction and architecture.

Approximate topics of the final works

State attestation foresees preparation and protection of diploma project.

Graduate's Academic Rights

Graduates can continue studying on the programs of bachelor training, in direction 6.060101 «Construction».

Graduates' Spheres of employment

After completing study the graduates are prepared to work in organizations that maintain gas equipment, gas networks and can hold such primary positions: responsible for gas service at enterprise; master of gas area on maintenance of underground pipelines, technician of gas distribution station and , technician of gas distribution equipment; master on maintenance of gas intranets and gas equipment; inspector of breakdown service; technician-designer.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Mounting, maintenance of equipment and systems of gas-supply»**

In specialty «Accounting, maintenance of equipment and systems of gas supply»					
№	The name of the course, practice	Semest er	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine	3	54	1	1,5
2	Ukrainian (for professional purposes)	5	54	1	1,5
3	Economic theory	3	54	1	1,5
4	Sociology	7	54	1	1,5
5	Culturology	3	54	1	1,5
6	Physical training	5,6	108	2	3
7	Foreign language (for professional purposes)	5,6	108	2	3
8	Bases of jurisprudence	1	54	1	1,5
9	Bases of philosophical knowledges	6	54	1	1,5
Total for the cycle			594	11	16,5
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Engineering graphic arts	2,3	135	2,5	3,75
2	The bases of technical mechanics	3	81	1,5	2,25
3	General electrical engineering	4	81	1,5	2,25
4	Hydraulics	3	81	1,5	2,25
5	Engineering survey	4	81	1,5	2,25
6	Safety of vital functions	6	54	1	1,5
7	Technique for using computer	3	108	2	3
8	Heating Engineering	4	81	1,5	2,25
9	Hydraulic machines	4	54	1	1,5
10	Materialogy	3	81	1,5	2,25
11	Higher mathematics	4	135	2,5	3,75
12	Ecology	1	54	1	1,5
Total for the cycle			1026	19	28,5
1.3. Cycle of professional and practical training*					
1	Engineering -technical building equipment	5	108	2	3
2	Gas boiler aggregates	5	81	1,5	2,25
3	Gas networks and equipments	4,5	162	3	4,5
4	Technology and organization of construction and installation works in the gas economy	5,6	162	3	4,5
5	Operation of equipment and gas-supply systems	6,7	189	3,5	5,25
6	Automation and telemehamics of gas-supply systems	7	81	1,5	2,25
7	Bases of labour protection	6	54	1	1,5
8	Economy and industry planning	7	108	2	3
9	Natural and artificial gases	3	81	1,5	2,25
10	Labour protection in industry	7	54	1	1,5
Total for the cycle			1080	20	30

Regulatory part, total		2700	50	75
2. ELECTIVE ACADEMIC DISCIPLINES				
2.1. Disciplines chosen by University				
2.1.1. Cycle of humanitarian, social and economic training				
1	-			
2.1.2 Cycle of mathematics and natural science (fundamental) training				
1	Bases of metrology, standardizations and certifications	5	54	1,5
2	Entry to specialty	1	54	1,5
3	Bases of computer-aided designs	6	54	1,5
Total for the cycle		162	3	4,5
2.1.3. Cycle of professional and practical training*				
1	Bases of enterprise and administrative activity	7	81	1,5
2	Implementation of polyethylene gas pipelines	5	54	1,5
3	Protection of gas pipelines from electrochemical corrosion	5	54	1,5
4	Setting of labour norms and estimate	6	54	1,5
Total for the cycle		243	4,5	6,75
Chosen by University, total		405	7,5	11,25
Practical training		1836	34	51
Degree examination*				
Total, according to the field of study		5400	57,5	150

* * The number of educational hours/credits is defined for specialist training on the basis of basic secondary education.

**The names of discipline cycles and the forms of state attestation are according to the requirements of the standards of fields in higher education, adopted in 2010, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (for professional purpose)», «History of Ukraine», «Culturology», «Foreign language (for professional purpose)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» and «Economic theory» see section 2.2. and p. 1.1 of specialty «Jurisprudence».

1.2. Cycle of mathematics and natural science (fundamental) training

Engineering graphic arts. The study of discipline is aimed at forming ability and skills for exposition of technical ideas by means of the draft, as well as understanding objects of machine construction and principle of action of a represented technical article after the draft. The receipt of knowledges and skills necessary for drawing and reading technical drafts is the basic task of educational course, drawing sketches of details, drafting designer and technical document of production.

The bases of technical mechanics. Basic concepts and axioms of statics. Basic concepts of kinematics. Work and power, friction. General theorems of dynamics. Tension and compression. Shear and twisting. Geometrical description of flat cuts. Bend. Bend and twisting. Studying bases of technical mechanic; acquaintance with the main methods of performing basic computations in theoretical mechanics and methods of performing computations and constructing of details and knots of common setting machines.

General electrical engineering. The electric field. Electric circles of direct current. Electromagnetism. Monophase circles of alternating current. Three-phase circles. Electric measuring. Transformers. Electric machines. Electric machines of alternating and permanent currents. Bases of Electromechanics. Transmission and distributing of electric energy. Semiconductor devices. Photoelectronic devices. Electronic emitters and stabilizers. Electronic strengtheners. Electronic generators and measuring technique. The integrated circuits.

Hydraulics. Basis of knowledges in the field of laws of equilibrium, motion of liquid and gas, theories of hydro machines, hydro pneumatic drive and their practical application.

Engineering survey. Survey and its essence. Systems of co-ordinates, that are used. Direct and reverse survey tasks. Plans and cards. Measuring of corners, distances, exceeding. Survey examples. Basic types of survey works for pretentious novelties, planning, construction and exploitation of territory and buildings.

Safety of vital functions. Negative factors of natural, technogenic, socio-political and military origin in the men's life. State measures on men's life protection. Facilities of individual men's protection. Collective facilities of men's protection. Liquidation of consequences of influence on a man from radio-active, chemical and biological matters. Dangerous factors of environment, their action on a man, bases of physiology of labour and normative requirements to the terms of activity. Methods of authentication of harmful and dangerous factors of the technical systems. Facilities of protection from their action on a man and natural environment in normal and extraordinary situations. Organizational, legal and socio-economic knowledges in the field of safety of vital functions.

Technique for using computer. Computer, its intention and application in engineering and scientific industries. Vehicle providing of the computer system. Computer system software. Operating systems. Utility functions. Operating system Windows. Standard by the programs WinSbws. Office programs. Text editors. Spreadsheets. Data-bases. Systems of the graphic image processing. Planning and computation of gas pipelines. Computer networks.

Heating engineering. Description of the thermodynamics systems, research of thermodynamics processes of ideal and real gases; knowledge of basic laws of thermodynamics, basic methods of transmission of warmth and Equations equalizations fixed in their basis.

Hydraulic machines. The discipline is aimed at giving knowledges related to making decision on technical questions of application and exploitation of hydraulic and aerodynamic machines in the systems of heating and gas supplying and ventilation; studying basic concepts and equalizations of thermodynamics and hydro aerodynamic in relation to the process of transformation of energy in aerodynamic and hydraulic machines; studying structures and principles of action of basic types of hydraulic and aerodynamic machines.

Materialogy. Task of discipline – giving knowledges in the bases of production, nomenclature and properties of building materials and articles, ability of their rational application in modern architectural-building practice. Students should know operating-technical, chemical properties of materials, their classification, bases of technology of production and rational application domains of building materials and articles; be able to present interrelation of material, structures and architectural form; be able to choose materials for finishing of walls, ceiling and floor from different types of materials on a project.

Ecology. Biosphere and man, structure of biosphere, ecosystems, ecology and men's health, global problems of environment; ecological principles of the rational use of natural resources and conservancy; bases of economy of nature using, ecoprotection technique and technology.

Higher mathematics. Complex numbers. Elements of linear algebra. Elements of vectorial algebra. Differential calculation. Integral calculation. Differential Equations. Rows. Elements of probability theory.

1.3. Cycle of professional and practical training

Engineering technical building equipment. Setting and classification of heating systems; basic elements of hot water heating systems; central heating supply; basic types of ventilation systems; elements of the systems, equipment's; basic concepts about the external water-supply; systems and charts of the internal plumbing; systems and charts of hot water-supply; basic concepts about the external water-supply; intranets of the sewage system.

Gas boiler aggregates. Elements of technical thermodynamics. Bases of warm transmission. Basic concepts on Gas boiler. Boiler rooms gas-supply. Boiler structure. Equipment for incineration of gas fuel in boilers. Exploitation of gas-supply systems of boiler rooms, safety measures during exploitation. Efficiency of work of gas boiler aggregates.

Gas networks and equipment's. Quality of gas fuel, gas nets of cities and settlements, main and interconnected village gas pipelines. Norms of gas nets planning. Gas regulation stations (GRP).

Internal gas equipment, norms of planning . Gas-burners. Gas equipment of industrial, and communal service enterprises.

Technology and organization of construction and installation works in the gas economy. Technology and organization of building and installation works. Technology of construction of external gas pipelines. Construction and mounting of gas regulation points and gas regulation stations. mounting the internal gas systems. Organization and technology of repair works. Technology of implementation of basic repair works of gas pipelines.

Operation of equipment and gas-supply systems. Organization of gas economy operation. Introducing to operation of gas economy objects. Technical supervision after construction and mounting of gas-supply systems. Putting into an operation gas-supply systems. Tacking new gas pipelines to the operating gas networks. Gas starting in gas networks and equipments.

Operation of underground and above ground gas pipelines. Inspection of routes of underground and ground gas pipelines. Organization of repair works on gas pipelines. Technical inspection of underground gas pipelines. Operating document on gas pipelines.

Automation and telemehamics of gas-supply systems. Standardization of facilities and methods of measuring. Measure devices. Automatic adjusting and regulators. Automation of gas economy. Automation of control devices. Centralization of control and management in the gas economy.

Bases of labour protection. Production environment and his influence on a man. Labour conditions on production, their classification and setting of norms. Production harmfulness, men's protection methods from its negative influence. Analysis and prophylaxis of professional illnesses and production traumatism. Bases of accident prevention. Legal and normative adjusting of labour protection. State administration of labour protection in Ukraine. Organization of labour protection on production. Economic aspects of labour protection.

Economy and planning of industry. General description of gas economy and its role in settlement of power crisis in Ukraine, the ways of privatization with development of variety of forms of own, scientific bases of gas economy management, problems of prognostication and internal production planning, scientific and technical progress and innovations in the industry.

Natural and artificial gases. General description of fuel. Laws of the gas state. Analysis of gaseous fuel. Natural combustible gases. Artificial oil gases. Dripping hydrocarbon gases. Gases of thermal disintegration of hard fuel. Gas preparation to transporting and use.

Labour protection in industry. General problems of labour protection. Common requirements of accident prevention. Production sanitation. Bases of fire safety. Bases of safety of technological processes during operation of equipment and gas-supply systems.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

2.1.2 Cycle of mathematics and natural science (fundamental) training

Bases of metrology, standardizations and certifications. Objects of measuring and their measure. Facilities of measuring of sizes. Basic theories of measuring of sizes. Mathematical treatment of measuring result. State standard system. Comparative analysis with relevant international standards. Measuring of gas pipeline parameters. Computer treatment of measuring results.

Entry to specialty. The goal of discipline is students preparation to the capture a future profession, forming of theoretical-methodological and methodical readiness to realization of professional activity. The task of discipline study is forming of professional oriented world view of future specialist and integral picture of his essence and role in modern society.

Bases of computer-aided designing. Principles and tasks of design. Automation of designer document registratio. Mathematical providing of the automated designing. Computer-aided designing of electronic equipment. Package of applied programmes of designing AUTOCAD.

2.1.3. Cycle of professional and practical training

Bases of enterprise and administrative activity. Essence of enterprise, its organizational forms, state adjusting of enterprise. Competition, demonopolization and enterprise. Finances and their sources. Commodity policy and planning. Marketing conception. Pricing. Production, delivery, sale of products. Organizational-economic bases of small enterprise. Joint-stock companies. Economic societies. Joint ventures. Financial-organizational activity of businessman. Bases of taxation. Business enterprise. Economic efficiency of investing in entrepreneurial activity.

Implementation of polyethylene gas pipelines. Polyethylene pipes and connectors of detail. Planning of gas pipelines made of polyethylene pipes. Construction of polyethylene gas pipelines. Operation and repair of gas pipelines made of polyethylene pipes. Repair of steel gas pipelines by method of installation of polyethylene pipes. Technic-economical indexes at their construction and operation.

Protection of gas pipelines from electrochemical corrosion. Basic concepts and determinations of corrosive projects. Chemical corrosion of metals. Electrochemical corrosion. Corrosive identification, isolating coverages. Cathodic protection of underground metal. Structures. Protector defence of pipelines and reservoirs. Protection from wandering currents. anticorrosive protection of above-ground gas pipelines.

Setting of labour norm and estimate. The contents of setting of labour norms, scientific principles of the technical setting of norms, classification of expenditures of working hours, classification of production norms of time, connection of setting of labour norms with development of estimates in the gas economy, technical ground of estimates, order of drafting of local estimate, development of objective and total estimates, order of drafting of estimate document, estimates in forming of agreed prices on mounting and gasification of objects.

Junior Specialists training
Specialty «Equipment of buildings and constructions and Building design»
Training direction «Construction»
Field of knowledge «Construction and architecture»

Amount, credits ECTS – 161,25

Learning / teaching period, years:

Full-time – 3 years 6 months (on the basis of basic secondary education)

Part-time – 2 years 8 months (on the basis of general secondary education)

Qualification of the graduate – technician-designer in construction

Training of Junior Specialists is carried out in Separated Subdivision NULESU (licensed amount, persons: full-time/part-time):

- Bakhchisaray College of Construction, Architecture and Design (25/25)

Annotation of Specialty

Training junior specialists is directed on preparation of specialist able to apply adaptive technologies for processing and registration of project documentation, participate in the development of finishing technologies and organization of building design.

Practical Training

LTD«Konsol», LTD «Monolith», «Professional», «Sevastopolstroy», «Ukrainian company» «Kerchbud», Trust Krymshpets Agrobud PMK-2-58, «Alpha and K» (Sevastopol).

Approximate topics of the graduation works

State attestation foresees complex state examination, preparation and protection of diploma project.

Graduate's Academic Rights

Graduating students can continue studying on the programs of training of bachelors in direction a 6.060101 «Construction».

Graduates' Spheres of employment

After graduation «Equipment of buildings and constructions and Building design» the graduating students can take the following primary positions: technician - designer, designer of layout-model design, graphic designer (junior specialist), environment designer (junior specialist).

**Curriculum of training the specialists of EQL «Junior Specialist»
in Specialty «Equipment of buildings and constructions and Building design»**

In Specialty «Equipment of buildings and constructions and Building design»					
№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	Ukrainian (for professional purposes)	7	54	1	1,5
2	History of Ukraine	-	54	1	1,5
3	Culturology	3	54	1	1,5
4	Bases of philosophical knowledges	5	54	1	1,5
5	Economic theory	3	54	1	1,5
6	Bases of jurisprudence	3	54	1	1,5
7	Sociology	-	54	1	1,5
8	Foreign language (for professional purposes	5-6	135	2,5	3,75
9	Physical training	5-7	135	2,5	3,75
Total for the cycle			648	12	18
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Higher mathematics	5	108	2	3
2	Fundamentals of Building Physics	5	54	1	1,5
3	Chemistry	3	54	1	1,5
4	Drawing and Perspective	3-4	162	3	4,5
5	Strengthe of materials	4-5	108	2	3
6	Bases of computer technologies	3-4	108	2	3
7	Drawing and Painting	3-4	162	3	4,5
8	Art History	3	54	1	1,5
9	Bases of geodesy	5	54	1	1,5
10	Bases of ecology	3	54	1	1,5
11	Safety of vital functions	7	54	1	1,5
12	Bases of enterprise and administrative activity	5	54	1	1,5
Total for a cycle			1026	19	28,5
1.3. Cycle of professional and practical training*					
1	Metrology and standardization	3	54	1	1,5
2	Materials Science	3-4	162	3	4,5
3	Construction structure	5-6	108	2	3
4	Color and spatial design	5-7	216	4	6
5	Architectural details and interior design	8	108	2	3
6	The technology of finishing work and protecting structures	6-7	108	2	3
7	Organization of painting and decorating	7-8	54	1	1,5
8	Fundamentals and technology of building production	5	54	1	1,5
9	Economy	7-8	162	3	4,5
10	Bases of labour protection	6	54	1	1,5
11	Management of buildings and reconstruction	7	54	1	1,5
12	Basics of Design (Introduction to specialty)	3	54	1	1,5

13	Technical drawing and graphic design	5-6	108	2	3
14	Basics of Architectural Design	5-6	135	2,5	3,75
15	Basics of Composition	5	54	1	1,5
16	Simulation and modeling of material	7-8	108	2	3
17	Basics cromatics and kolorystyka	4	108	2	3
	Training				
18	Training practice of plastering	4	108	2	3
19	Training practice of carpentry work	4	54	1	1,5
20	Training practice of stone and facing operations	4	54	1	1,5
21	Training practice of painting operations	4	108	2	3
22	Training practice for a working professionals	5	216	4	6
23	Training practice of building design	7	216	4	6
24	Process manufacturing practice	6	432	8	12
25	Pre-diploma practice	8	324	6	9
	Diploma planning		378	7	10,5
Total for the cycle			3591	66,5	99,75
Regulatory part, total			5265	97,5	146,25
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1.1. Cycle of professional and practical training*					
1	Mechanization of finishing and decorating and construction equipment	6	108	2	3
2	Basics of photography and photo shop	6	54	1	1,5
3	Computer design and arhikad	6-8	162	3	4,5
4	Labour protection in construction	8	54	1	1,5
5	3D-graphics	7-8	108	2	3
6	Pricing in Construction	3	54	1	1,5
Elective part, total			540	10	15
Practical training			1512	28	42
Degree examination*			378	7	10,5
Total, according to the field of study			5805	107,5	161,25

* The quantity of educational hours/credits is defined for preparation of specialists on the basis of basic secondary education.

** The names of discipline cycles and the forms of state attestation are according to the requirements of the standards of fields in higher education, adopted in 2010, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Culturology», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Higher mathematics. Trigonometric functions. Complex numbers. Elements of vectorial algebra. The method of coordinates. Derivative and integral functions.

Fundamentals of Building Physics. Introduction to the best practice building climatology and building physics, the main ways of creating energy efficient building

envelope and improving their thermal qualities of the renovation of buildings; specific features of thermal design calculations of protections and light environment in certain types of buildings, methods of research in the field of building physics.

Chemistry. Chemical and physical properties of the most important inorganic, organic matters, basic information about the theory of structure of matter, elements of chemical thermodynamics and kinetics, study about solutions, bases of analysis of physical and chemical matters. Chemical processes and their practical use in future professional activity.

Drawing and Perspective. The discipline involves the study of the theoretical foundations of geometric drawings, descriptive geometry, projection and construction drawings, shadows and perspective theory, practical skills execution drawings in accordance with state standards and.

Fundamentals of theoretical mechanics and strength of materials. Program courses include the study of the general laws of equilibrium and motion of material bodies, bases the calculation of elements of building construction, machine parts and structures in order to solve the major problems encountered in the construction industry due to the development of new production and new technology, based on deep knowledge of the laws and methods of Engineering Mechanics.

Computers and computer modeling. Modern computers, software, technology, automated data processing. Objectives, methods, problems and processes of computer aided design and modeling, mathematical foundations of computer simulation.

Drawing and painting. Discipline task - to provide the knowledge necessary for creative work designer of aesthetic taste, culture, vision, three-dimensional thinking, expressive skills.

Art History. History of art (painting, drawing, sculpture), architectural, artistic and historical process, style and art direction, the ability to use this knowledge in their own creative work.

Bases of geodesy. Basic terms of geodesy, surveying instruments and tools, methods of work with devices geodetic software on the construction site during the construction of buildings, geodetic control in the performance of the main stages of construction and finishing works and mastering techniques surveying during construction and finishing of buildings.

Bases of ecology. The study course is aimed at acquiring environmental knowledge, knowledge of the legal relationship between man and nature, professionally directed, responsible for professional activities.

Safety of vital functions. The aim of the course is theoretical and practical training for future professionals to create safe conditions of work and life, mastering the principles of harmonious personality development and sustainable development. Conditions of positive and negative effects on the livelihoods and health of external and internal factors study of optimal conditions and principles of life.

Bases of enterprise and administrative activity. Theory and practice of effective management of the enterprise, organization, institution or formation of their skills to make the right management decisions, choose rational forms and methods to create efficient and flexible management system.

1.3. Cycle of professional and practical training

Metrology and standardization. Basic concepts of metrology, standardization, certification and learning methods and measurement tools, take the concept of metrological service and the basic provisions of the state system of certification in Ukraine. Students learn to use tools of measurement used in construction, identify measurement errors, use building codes and regulations and other regulations on the design and construction of the proceedings.

Materials Science. Provides for obtaining the necessary knowledge from the raw material, and properties of building materials and products used for decoration of buildings, their management skills used in modern construction and finishing practice.

Construction of buildings and structures. Discipline creates a system of knowledge about the design of modern public and industrial buildings and engineering structures, protection and decoration, building in particular geophysical conditions, acquiring reading skills of working drawings, architectural and structural design, feasibility analysis adopted structures and space-planning decisions .

Color and spatial design. Discipline provides the base necessary knowledge for creative work, develops the aesthetic sense, trains in modeling different shapes and objects, plants, household and person, has a vision of culture, helps improve spatial thinking.

Architectural details and interior design. The methods of scientific research work in the project design development, relationship between man and environment color. The process of creative exploration, selection and ordering materials - and unique ideas, the basic idea of interior designing of residential and public buildings, the use of the regulatory framework.

The technology of finishing, decorating and protecting structures. Discipline studies the technology of finishing work and protection from negative factors acting on structures, introduces students to the latest advances in science and technology, best practices and technology of finishing work in construction, increase productivity, quality of work, saving and rational use of material resources, environment.

Organization of painting and decorating. Study advanced methods of construction industry in the construction of civil, industrial and agricultural buildings, preparation of construction production, design and performance of current methods, calendar (net) planning, developing and designing construction master plans and monitoring of construction from start of implementation to delivery of completed projects in operation.

Fundamentals and technology of building production.

Technology of general construction and special works. Features of the construction process in reconstruction. Simulation of construction process. Scheduling. Mesh graphics. Orientation construction site. General principles of construction industry.

Economy. Forming the necessary knowledge and skills on the basics of pricing and estimated cases in construction, economic design of residential, civil, industrial and agricultural facilities and their technical and economic evaluation, organization and wages in the design and construction organizations, study ways to improve the economic efficiency of capital investments and new technology.

Bases of labour protection. Production environment and its influence on a man. Terms of labour on production, their classification and setting of norms. Production harmfulness, methods of protecting a man from its negative influence. Analysis and prophylaxis of vocational illness and production traumatism. Bases of accident prevention. Legal and normative adjusting of labour protection. State administration by a labour protection in Ukraine. Organization of labour protection on production. Economic aspects of labour protection.

Management of buildings and reconstruction. Formation of technical knowledge of buildings and structures, the study of the organization of services, building maintenance, determination of physical deterioration and types of repair, inspection of the technical condition of buildings, structural elements of care, utilities and equipment, resolve issues of damp, rot and corrosion.

Basics of Design (Introduction to specialty). Learning design principles of complex objects from the perspective of a broad coverage of issues of human interaction with nature, subject-spatial environment to create a harmonious environment, learning basic design principles of internal and external space.

Junior Specialists training
Specialty «Architectural design and internal interior»
Training direction «Architecture»
Field of knowledge «Construction and architecture»

Amount, credits ECTS – 180

Learning / teaching period, years:

Full-time – 4 (on the basis of basic secondary education)

Qualification of graduate – technician-designer

Training of Junior Specialists is carried out in Separated Subdivision NULESU (licensed amount, persons: full-time/part-time):

- Bakhchisaray College of Construction, Architecture and Design (25/-)

Annotation of Specialty

Training junior specialists is aimed at training professionals able to apply modern technology design and construction of residential, civil, industrial and agricultural buildings to ensure their economic, energetic and environmental efficiency.

The features of this training is the need to own basis for drawing and painting, spatial thinking.

Practical Training

«Budproekt», «KrymNIIproekt», Department of Architecture, JSC «Voskhod Project», JSC «Architect» Project Office «Arhigrad» design and construction firm Astragal (Simferopol).

Approximate topics of the final works

State attestation foresees complex state examination, preparation and protection of diploma project.

Graduate's Academic Rights

Graduating students can continue studying on the programs of training of bachelors in direction of training:

6.060101 «Construction»

6.060102 «Architecture»

Graduates' Spheres of employment

Located in leading design institutions, architectural offices, on the leading enterprises of agricultural and environmental complex in accordance with state orders of training and commissioned strategic partners and businesses. Specialist may hold the following primary positions: techniques of architectural-design, designer, technician and technician superintendent and technician-draftsman and technician- inspector.

**Curriculum of training the specialists of EQL «Junior Specialist»
in Specialty «Architectural design and internal interior»**

In Specialty «Architectural design and interior»					
№	The name of the course, practice	Semest er	Hours	Amount	
				Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	Ukrainian (for professional purposes)	5	54	1	1,5
2	History of Ukraine	3	54	1	1,5
3	Culturology	4	54	1	1,5
4	Bases of philosophical knowledges	6	54	1	1,5
5	Economic theory	4	54	1	1,5
6	Bases of jurisprudence	1	54	1	1,5
7	Sociology	7	54	1	1,5
8	Foreign language (for professional purposes)	3-6	216	4	6
9	Physical training	3-6	324	6	9
Total for the cycle			648	12	18
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Higher mathematics	3-4	108	2	3
2	Drawings and basic of descriptive geometry	3-4	108	2	3
3	Technical mechanics	4	54	1	1,5
4	Safety of vital functions	6	54	1	1,5
5	Basics of geodesy	4	54	1	1,5
6	Basics of labor protection	5	54	1	1,5
7	Information and computer modeling	3-5	162	3	4,5
8	Drawing and Painting	1-7	297	5,5	8,25
9	Environmental science	2	54	1	1,5
10	Chromatics	3	54	1	1,5
Total for the cycle			999	18,5	27,75
1.3. Cycle of professional and practical training*					
1	History of Architecture	3-4	108	2	3
2	Structures and buildings	4-6	135	2,5	3,75
3	Architectural Design	5-7	486	9	13,5
4	Design Theory and Methods	5	54	1	1,5
5	Planning and improvement of settlements	5-6	108	2	3
6	Labor safety in construction	7	54	1	1,5
7	Basics of Construction Economics	7	54	1	1,5
8	Computer and architectural design	7	81	1,5	2,25
9	Architectural graphics	3-4	108	2	3
10	Engineering equipment of buildings	6	54	1	1,5
11	Modelling	4	54	1	1,5
12	Materials Science	3	54	1	1,5
13	Basics and technology of building production	5	54	1	1,5
14	Theoretical and methodological basics of architectural design	4	54	1	1,5

15	Basics of reconstruction and restoration	7	54	1	1,5
16	Architectural details and furnishings.	6-7	108	2	3
Total for the cycle			1620	30	45
Regulatory part, total			3267	60,5	90,75
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
2.1.1. Cycle of humanitarian, social and economic training					
1					
2.1.2 Cycle of mathematics and natural science (fundamental) training					
1	Introduction into a specialty	1	54	1	1,5
2	Art History	4	81	1,5	2,25
2.1.3. Cycle of professional and practical training*					
1	Basics of architectural composition	5-6	108	2	3
2	New technologies in architecture and construction	7	54	1	1,5
3	Basics of building typologies	5-6	108	2	3
4	Small architectural forms	7	54	1	1,5
5	Advertising design	7	54	1	1,5
Chosen by University, total			540	10	15
2.2. Disciplines chosen by students					
2.2.1. Cycle of humanitarian, social and economic training					
1					
2.2.2. Cycle of professional and practical training*					
1					
Chosen by students, total			-		
Elective part, total			540	10	15
Practical training			1296	24	36
Degree examination			432	8	12
Total, according to the field of study			5535	102,5	153,75

* The quantity of educational hours/credits is defined for preparation of specialists on the basis of basic secondary education.

**The names of discipline cycles and the forms of state attestation are according to the requirements of the standards of fields in higher education, adopted in 2010, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Culturology», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Higher mathematics. Complex numbers. Elements of linear algebra. The method of coordinates. Differential calculus. Integral calculus.

Drawings and basis of descriptive geometry. The program of the course include the study of the theoretical foundations of geometric drawings, descriptive

geometry, projective drawings, shadows and perspective of the theory, practical skills execution of drawings in accordance with state standards.

Technical mechanics. Basic concepts and axioms of statics. Basic concepts of kinematics. Work and power, friction. General theorems of dynamics. Tension and compression. The displacement and torsion. Geometric characterization of flat sections. Bend. Bending and torsion.

Safety of vital functions. Negative factors of natural, tekhnogenic, socio-political and military character in the men's life. State measures on men's life protection. Facilities of individual men's protection. Collective facilities of men's protection. Liquidation of consequences of influence on a man from radio-active, chemical and biological matters. Dangerous factors of environment, their action on a man, bases of physiology of labour and normative requirements to the terms of activity. Methods of authentication of harmful and dangerous factors of the technical systems. Facilities of protection from their action on a man and natural environment in normal and extraordinary situations. Organizational, legal and socio-economic knowledge in the field of safety of vital functions.

Basics geodesy. Provides familiarize students with the graphic documentation used in the architectural design, the main types of geodesic work performed in the planning and in solving various engineering and geodetic tasks during the design of buildings.

Basics of labor protection. Work environment and its impact on people. Conditions in the workplace, their classification and valuation. Production harm, protection of human methods of its negative impact. Analysis and prevention of occupational diseases and injuries. Basics of of safety. Legal and regulation of safety. Public health and safety management in Ukraine. The organization of the workplace. Economic aspects of health and safety.

Information and computer modeling. Modern computers, automated data processing technology, practical skills application of computers in professional activities.

Drawing and painting. The purpose of discipline - providing knowledge necessary for the creative work of the architect, aesthetic taste development, cultural education vision, three-dimensional thinking, the formation of fine art craftsmanship, execution drawings from nature, modeling different shapes and objects, plants, household and person; engineering graphics and watercolors, drawing from imagination.

Bases of ecology. Biosphere and man, structure of biosphere, ecosystems, ecology and men's health, global problems of environment; ecological principles of the rational use of natural resources and conservancy; bases of nature exploitation economy, ecological protection technique and technology.

Chromatics. The purpose of discipline - to teach students to work with color, possess theoretical material and practical skills, the development of aesthetic taste, mindfulness training and observation, the ability to use color in architectural projects.

1.3. Cycle of professional and practical training

History of Architecture. Study of developmental stages of tectonic systems that reflect the structural and ideological and artistic quest eras and nations due to the social order as well as the improvement of construction machinery, objective-historical causes and characteristics of cultural contacts with regional and temporal characteristics; fundamental differences in the architecture of adjacent cultural communities and similarities of architectural types in countries separated by distance and geographical environment.

Construction of buildings and structures. Classification of building structures and their role in creating different frames of buildings. Terms of designing structures.

Design of metal, concrete, stone and wooden construction. Design of residential, industrial and agricultural buildings.

Architectural design. The study of the basic laws of project business. The processes of creativity, selection and ordering of materials and ideas, and regulatory requirements. Practical skills development of architectural and construction of the project implementation in the design drawings. Theory and methods of design specifics and basic concepts. The origin, formation and evolution of concepts, methodology design (methods, tools, etc.).

Planning and improvement of settlements. Study of basic theory and principles of urban design, mastering the skills of independent practical work.

Labor protection in construction. The problems of organization and technical safe and harmless working conditions at the facilities of his future profession, the ability to make engineering decisions on safety on the construction site.

Economy of construction. Estimate business. Prime price of construction and installation works, income of construction organizations. Economic efficiency of capital investments. General funds and working assets. Bases of market relations. Economic evaluations of engineering-technician decisions. Consideration, accounting and economic analysis.

Computer design and architectural design. The study of modern software design process, practical skills application program Allplan FT. Providing knowledge and skills formation required for project work using special software.

Architectural graphics. Architectural drawings, architectural graphics techniques - linear, chiaroscuro, polychrome, properties of materials (pencil, ink, watercolor, gouache, tempera), use different tools (ruling pen, pen, brush). Techniques and Methods of architectural and engineering drawings in various stages of design. Implementation of technical and working construction drawings, state standards, and regulations of Ukraine.

Engineering equipment of buildings. Equipment for public buildings and settlements and their impact on space-planning, architectural and design solutions.

Modeling. Working with a model - modeling of future construction, development of spatial imagination, creating a model object reality.

Materials Science. Classification of materials used in construction, their composition and structure. The dependence of the properties of the composition and structure. The basic technology of the most important building materials industry applications. Corrosion of materials and tools to enhance their durability. Technical and economic materials.

The basic technology of the construction and production. Fundamentals of construction processes. Technology implementation of general and special works. Features of the construction process in reconstruction. Simulation of construction process. Scheduling. Mesh graphics. General principles of construction industry.

Theoretical and methodological foundations of architectural design. Combines both learning the basic methodological approach to architectural design and sections affecting specific areas of architectural - urban planning, landscape architecture and design of the urban environment (and typology of architectural objects of different functional groups).

Basics of reconstruction and restoration. Fundamentals of architectural restoration and renovation of public buildings of historical and mass housing and industrial buildings, excluding their moral and physical deterioration with increased performance planning and construction to the level of current regulations.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

2.1.2 Cycle of mathematics and natural science (fundamental) training

Introduction into a specialty. Basics of reconstruction and restoration. Fundamentals of architectural restoration and renovation of public buildings of historical and mass housing and industrial buildings, excluding their moral and physical deterioration with increased performance planning and construction to the level of current regulations.

Art History. The history of art and its forms. Arts Culture and its relationship with the attitudinal orientations. The origins of art and its main ideological orientation. Images and symbols in art. Ritual arts of the past and present. The consequences of secularization of art. The relationship of religion and art in Ukrainian culture, historical development of Ukrainian and world art.

2.1.3. Cycle of professional and practical training

Basics of architectural composition. Main laws of constructing tracks associative, frontal-plane, deep-space, three-dimensional.

New technologies in architecture and construction. Analysis of the latest technology and innovation in construction: construction materials and technology, architecture and urban planning, machinery and equipment, roads and buildings, utility systems and equipment, environment and safety in construction.

Basics of building typology. Types of public buildings - one of the most important sections of architectural theory and practice of education that determines the quantitative and qualitative parameters of the design and construction of buildings according to the level of material and spiritual needs of society.

Small architectural forms. Some information about small architecture. Types of small architectural forms. Materials and tools for making models of small architecture. Safety work and hygiene requirements, the organization of the workplace. Introduction to the technology of making models of small architectural forms.

Design of advertising. Designing principles of various types of advertising such as, the elements that are the part of advertising, and the means by which organized presentation of information, selection, emphasis, composition and expressive textual materials. The color values in the perception of advertising. Composite creation of advertising messages.

Junior Specialists training
Specialty «Construction, maintenance and repair of hydromelioration buildings»

Training direction «Hydraulic engineering (water resources)»
Field of knowledge « Construction and Architecture»

Volume, ECTS credits – 169,5

Learning / teaching period, years:

Full-time - 3 years 10 months (on the basis of basic secondary education)

Part-time - 3 years (on the basis of secondary education)

Qualifications Graduate - hydraulic technician

Training of Junior Specialists is carried out in Separated Subdivision NULESU (licensed amount, persons: full-time/part-time):

- Crimean Technical College of Hydromelioration and Mechanization of Agriculture (25/20)

Annotation of Specialty

Providing knowledge and specialist skills of the new generation in design, construction, operation, repair and maintenance of hydrotechnical systems and structures based on modern educational standards, adapted to the requirements of the world's best educational programs for the public and private sectors in Ukraine.

Practical Training

management of a water economy (Soviet, Razdolnenske, Dzhankojskyj, Bakhchisarai), interdistrict management of a water economy (Nizhnyohirske, Kirovske, Taiganskaya, Salhirske, Pervomayske), Lenin discharge control group, department Pobednenske North Crimean Canal, Soviet Branch PAC, Pervomayske control fittings channel, LLC «Hydro d-6», LLC «Krymvodoproekt» PP «Ahrovodproekt» Crimean State design Institute for reclamation and water-construction «Krymdiprovodhosp», LLC «Ukrzernoprom-Uyutnoe» KSG Agro S.A.

Approximate topics of the final works

State certification provides protection degree project.

Graduate's Academic Rights

Graduates can continue their training programs for bachelors, in the direction 6.060101 «Construction».

Graduates' Spheres of employment

After graduation in «Construction, maintenance and repair of hydromelioration buildings» graduates are trained to perform work related to the design, construction and maintenance of waterworks, irrigation systems, collector-drainage networks, water and wastewater systems, and can take the following initial PS: hydraulic engineering technician, engineering, hydrometers, laboratory technicians, technical designer, foreman and master building surveyor, head hydropower.

**Curriculum of training the specialists of EQL «Junior Specialist»
in Specialty «Construction, maintenance and repair of hydromelioration
buildings»**

№	The name of the course, practice	Semest er	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine	1	54	1	1,5
2	Ukrainian (for professional purpose)	3	54	1	1,5
3	Philosophy	3,4	108	2	3
4	Foundations of Economic Theory	4,5	108	2	3
5	Sociology	4	54	1	1,5
6	Basic of Law	4	54	1	1,5
7	Foreign language (for professional orientation)	2,3	216	4	6
8	Physical training	3,4,5	216	4	6
Total for the cycle			864	16	24
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Drawing	1,2	216	4	6
2	Hydraulics	1,2	108	2	3
3	Technical mechanics	1,2	108	2	3
4	Agricultural and Business Law	4	54	1	1,5
5	Computerization of production	2	108	2	3
6	Health and Safety	3	54	1	1,5
7	Principles of Ecology	6	54	1	1,5
Total for the cycle			702	13	19,5
1.3. Cycle professional and practical training					
1	Geodesy	1,2	216	4	6
2	Hydrology and hidrometriya	1,2	108	2	3
3	Building materials	1,2	162	3	4,5
4	agricultural water	3,4	216	4	6
5	Hydraulic structures	3,4	216	4	6
6	Agricultural reclamation	3,4	216	4	6
7	Economics, organization and planning of water management	5,6	162	3	4,5
8	Accounting in the enterprise, finance and credit	6	54	1	1,5
9	Organization and technology hydrotechnical works	5,6	189	3,5	5,25
10	Operation and maintenance of irrigation systems	5,6	189	3,5	5,25
11	Sewage	5	108	2	3
12	Structures and buildings	2,3	108	2	3
13	Sanitary equipment and buildings	6	108	2	3
14	Labour protection	3	54	1	1,5
Total for the cycle			2106	39	58,5
Regulatory part, total			3672	68	102

2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
2.1.1. Cycle of humanitarian, social and economic training					
1	Culturology	3	54	1	1,5
2	Family and household and home economics	5	54	1	1,5
2.1.2 Cycle of mathematics and natural science (fundamental) training					
1	Electrical Engineering of the basics of electronics	1,2	108	2	3
2	Meliorativnoe soil science and agriculture	1,2	108	2	3
3	Fundamentals of business and management activities	5	108	2	3
4	Fundamentals of standardization, metrology and quality	2	54	1	1,5
2.1.3. Cycle of professional and practical training					
1	Geology and Hydrogeology	2	54	1	1,5
2	Reclamation and Construction Machinery	3,4	162	3	4,5
3	Electric and automation HMS	6	54	1	1,5
4	Organization of repairs	6	54	1	1,5
Chosen by University, total			810		22,5
Elective part, total			810		22,5
Practical training			1620		45
Degree examination			270		
Total, according to the field of study			6102		169,5

* Number of hours / credits identified for training on the basis of basic secondary education.

** Names of cycles of disciplines and forms of state certification - in accordance with industry standards for higher education, approved in 2010, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Culturology», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

Basic of economic theory. Contents of property relations. Economic needs and interests. The laws of the market economy. The development of commodity-money relations Ukraine. We study the economic categories and principles, relations and objective laws of social production, the theory of the market and its mechanism.

1.2. Cycle of mathematics and natural science (fundamental) training

Drawings. Graphic design drawings, basic technical drawing, basic descriptive geometry and projective drawing elements topographical drawings.

Hydraulics. Physical properties of fluids, hydrostatic pressure, conditions swimming bodies. Types of fluid motion, Bernoulli equation, with modes of motion of liquids, hydraulic pressure loss, uniform and non-uniform movement of water discharge motion, hydraulic jump, Drains, etc..

Technical mechanics. Basic concepts and axioms of statics; plane converging system and randomly deployed forces, center of gravity, tension and compression, torsion, stability compressed cores, multi- hinged beam, flat trusses, arches, wall struts.

Agricultural and Business Law. Regulation of relations combined content, essence and purpose, consisting in the activities of the agricultural enterprise aimed at food production, food and raw materials of plant or animal origin, processing, transportation, storage and sale.

Computerization of production. Structure and principle of operation of a computer. Operating system. Table processors. Group programs Microsoft Office. Computer networks and telecommunications. The use of computer technology in the workplace. Computer network «Internet». Systems for processing tabular data.

Life Safety. Negative factors in human life natural, technological, socio-political and military nature. Government measures to protect human life. Personal protection rights. Collective protection rights. Dealing with the consequences of human exposure to radioactive, chemical and biological substances. Hazardous environmental factors and their effect on humans, basic physiology of labor and regulatory requirements for the activity.

Principles of Ecology. Environmental issues of the day, environmental issues Ukraine and solutions, basic laws of Ukraine on protection of the environment. Basic principles of environmental management, sources of pollution of the biosphere, environmental regulations, environmental measures, the concept of food safety and raw materials. Environmental knowledge about the consequences of economic activity, understanding the nature of manifestation and how to prevent negative phenomena

1.3. Cycle of professional and practical training

Geodesy. The concept and objectives of geodesy. General information orientation. Purpose and nature of theodolite survey. Measurement of vertical, horizontal angles and length on the ground. Devices . Field and desk work in the traverse motion . Calculation and allocation of space on the plans and maps. Methods and ways of leveling. Levels , their structure and working principle . Tacheometric and plane table survey. Topographic and geodetic survey . Geodetic works when you transfer in nature hydro projects and hydrotechnical structures.

Hydrology and hydrometrical. Physical and geometrical factors of runoff. Rivers , their power and mode. Organization of hydrometric observations. Measuring levels and water depth , flow velocity, loss. Accounting for water hydrotechnical systems. Water management calculations. Hydrological forecasts.

Building materials. General characteristics of the species and methods for producing building materials. Physical and mechanical properties. Products from rocks in hydrotechnical construction. Wood and wood products. Metals and metal products are used in the waterworks industry. Building solution. Cement concrete. Organic binders, asphalt. Thermal insulation of materials and products.

Agricultural water supply. The concept of supply and the impact of market economy development and operation of water supply systems. Consumers systems and water treatment . Facilities of the water withdrawal from underground sources. Methods for drilling water wells. Calculation of water supply equipment systems. Purpose, types and calculation of regulatory and emergency facilities. Pumps and pumping stations. Requirements for drinking water.

Waterwork. General information about the waterworks, filtration of water in the basics and shore abutment waterwork, canals and hydraulic structures on them, waterworks valves, dam and spillway, hydroelectric reclamation purposes.

Agricultural reclamation. Daily irrigation of crops. Methods and techniques of irrigation. Irrigation network. Prevention of salinization and waterlogging of irrigated lands. Drainage reclamation.

Economics, organization and planning of water management. Feasibility substantiation reclamation activities. Method for determining the overall economic efficiency of capital investments in land reclamation. Loss of production and costs in the water industry. Return on capital investments. Fundamentals of water pricing. Enterprises of Ukraine. Integrated quality management system works. Analysis of production-financial activity. Fixed assets and working capital. Basics of Economics and agricultural production on land reclamation .

Accounting in the enterprise, finance and credit. The bottom line accounting , balance sheet, payment system. Registers and forms of accounting. Accounting for cash payments. Basic and working capital. Labor and fees. Manufacture of accounting. Accounting .

Organization and technology hydrotechnical works. Waterworks building and its objectives. Organization of work, wages, comprehensive mechanization. Canal mechanically. Construction technology of closed drainage, dams, dikes, closed irrigation network. Building closed drainage. Construction of dams and dykes of local building materials. Organization of water management construction. Design of construction and manufacturing jobs. The production base construction and general plans . Organization of water management companies

Operation and maintenance of irrigation systems. Fundamentals of planning water use. Preparation of system plans. Operation and maintenance of special systems. Planning for current and capital repairs of irrigation system. Operation, maintenance and repair of drainage systems. Organization of exploitation. The cost of operation.

Sewage. Terms and drainage problems. Sanitary state waters. Ways of building villages. Circuits and drainage system , the estimated costs of wastewater. Design, hydraulic calculation and installation of sewage. Pumping of sewage. Composition and properties of sewage and sediment. Protection of water bodies from pollution. Methods and facilities for wastewater treatment. Design of wastewater treatment plants in rural communities.

Construction of buildings and structures. General information about buildings and structures water management purposes. Foundations and foundation. Ceilings and floors. Roofs and roofing. Partitions. Construction of drainage facilities. Fixing slope channels. The design discharge and vodovypuskyh structures.

Sanitary equipment and buildings. Designation and classification of heating . Heaters. Boilers and boiler installation. Characterization of ambient air space. The main types of ventilation systems. Calculation of air channels. Protection of the environment from pollution. The concept of external water supply. Hot water. Sewage .

Labour protection. The Law of Ukraine «On Labour Protection», industrial hygiene, the organization of work and best practices, investigation, analysis, accounting and reporting, improving working conditions, fire safety, Aid, an organization working on health .

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

Culturology. The specificity of cultural knowledge. The Genesis of culture. The main stages of development of the world culture. The Culture of Kievan Rus. Ukrainian culture of XIV - XVIII centuries the Ukrainian culture of XIX - XX centuries, the development Tendencies of world and Ukrainian culture. Culture of the person.

Family and household and home economics. Principles of planning and managing the family budget. Ways to make the best use of funds. Ways to increase family income. Family Law. Rules, etiquette.

2.1.2 Cycle of mathematics and natural science (fundamental) training

Electrical Engineering of the basics of electronics. Electric field. Electromagnetism. Transformers. Electrical Machines DC and AC. Electrical measurements. Supply and distribution of electrical energy. Electronic devices. Transistors. Electronic amplifiers and generators.

Melioration of soil science and agriculture. The main factors of process soil formation. Mineral soil. Specification. The response of soils. Geography of Ukraine soils and their use. Factors plant life and agriculture laws. Weeds and measures to control them. Basic concepts of rotation. Fertilizers and their use. The main methods of cultivation.

Basics of business and management activities. The essence of entrepreneurship, finance and their sources, pricing, tax bases.

Fundamentals of standardization, metrology and quality. General Information on standardization, its role in ensuring product quality. Principles and interchangeability of parts making and repairing machinery. Metrology. Techniques and methods of measurement. Rules for explanatory notes of course and diploma projects.

2.1.3. Cycle of professional and practical training

Geology and hydrogeology. Minerals, rocks and their classification. Geological processes, phenomena and their results. Water properties of rocks. Basis of groundwater dynamics. Fundamentals of Engineering Geodynamics. Hydrogeological and geotechnical studies.

Reclamation and construction machines. General information about the reclamation and construction machines. Classification, characteristics and basic parameters of machines. Power equipment. Transmissions, machine parts and navigation equipment. General information about the machine excavations and their interaction with the working of the soil. Digging - transport cars. Bucket excavators. Machines for the device channels. Machines for horizontal installation of closed drainage. Machines for repair and maintenance work on irrigation systems.

Electric and automation HMS. The basic concept of the actuator. The automatic control of electrical drives. Systems remotely. Automation of production processes in the operation of irrigation systems. The use of computer and microprocessor technology in hydrotechnical systems.

Organization repair. Repair and maintenance work on hydrotechnical systems. Technology of production and repair channels ponds, small rivers, ponds and reservoirs. Machinery and equipment for repairing irrigation systems and waterworks. Safety in the repair and maintenance work on hydrotechnical systems.

Junior Specialists training
Specialty «Organization and traffic regulation»
Training direction «Transport Technologies (according to the types of vehicles)»
Field of knowledge «Transport and Transport Infrastructure»

Volume, ECTS credits – 180

Learning / teaching period, years:

Full-time - 4 years (on the basis of secondary education);

Graduate qualification -Technician – the organizer of traffic.

Training of Junior Specialists is carried out by Separated Subdivision of NULESU (licensed amount, persons: full-time/part-time):

- Nemishayevo Agrotechnical College (50/-).

Annotation of Specialty

Training of junior experts is aimed to train highly qualified specialists who are able to solve a wide range of issues being related to the organization of traffic, ensure safety on the highways and roads of various industries and other areas of business. Technician – the organizer of traffic – combines studies of maintenance with traffic management, controls technical state of transport vehicles, analyzes the causes of accidents.

Practical Training

Students have practical training at automobile enterprises of Ukraine, transportation management, district and regional road construction companies, State Automobile Inspection.

Approximate topics of the graduation works

State attestation provides protection degree project.

Graduate's Academic Rights

Students can continue their training by the program of the Bachelor direction 6.070101 «Transport Technologies (by mode)»

Graduates' Spheres of employment

After specialized graduating the graduates are trained to perform work dealing with study of the retention and organization of traffic, to control technical condition of vehicles, to analyze the causes of accidents. Primary positions: Safety Engineer, Railroad Inspector, Inspector of Safety; Controller of technical condition of vehicles (buses), Controller of technical condition of vehicles (cars than trucks), taxis and commercial coming, Controller of technical condition of vehicles (heavy trucks with large capacity and trucks).

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Organization and Traffic Regulation»**

In specialty «Organization and Traffic Regulation»					
№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine **	3	54	1	1,5
2	Ukrainian language (for professional purposes)	4	54	1	1,5
3	Culture Studies *	6	54	1	1,5
4	Fundamentals of philosophical knowledge	6	54	1	1,5
5	Economics *	4	54	1	1,5
6	Fundamentals of Law *	6	54	1	1,5
7	Sociology	7	54	1	1,5
8	Physical Education **	7	216	4	6
9	Foreign language (for professional purposes)	4,6	243	4,5	6,75
Total for the cycle			837	15,5	23,25
1.2. Cycle of mathematics and natural science (fundamental) training*					
10	Higher Mathematics	3	108	2	3
11	Drawings	3-4	108	2	3
12	Structural materials and fundamentals of standardization	3	81	1,5	2,25
13	Life Safety	3	54	1	1,5
14	Fundamentals of Ecology*	3	54	1	1,5
15	The general course of transport	3-4	162	3	4,5
16	Computing machinery	5-6-7	135	2,5	3,75
17	Fundamentals of Technical Mechanics	4	54	1	1,5
18	Electrical engineering and electronics	3	54	1	1,5
19	Physics	5	54	1	1,5
20	Transport geography	4	81	1,5	2,25
Total for the cycle			945	17	26,25
1.3. Cycle of professional and practical training*					
21	Traffic organization	7-8	189	3,5	5,25
22	Transportation and performance properties of roads	5-6	162	3	4,5
23	Technical means of traffic	6-7	108	2	3
24	Rules and road safety	4-5-6	216	4	6
25	Technical expertise of accidents	7-8	135	2,5	3,75
26	Basics of labor protection	5	54	1	1,5
27	Labor protection in industry	6	54	1	1,5
28	Economics and planning of traffic	7,8	108	2	3
29	Road -Construction Machinery	4-5	81	1,5	2,25
30	Automatic controls of traffic	6	81	1,5	2,25
31	Legal regulation of traffic	8	81	1,5	2,25
32	Transport planning of cities	3	81	1,5	2,25
33	Fundamentals of automatic systems	6	108	2	3

Total for the cycle		1458	27	40,5
Regulatory part, total		3240	60	90
2. ELECTIVE ACADEMIC DISCIPLINES				
2.1.1. Cycle of humanitarian, social and economic training				
34	Theory and design of the car	5	54	1,5
35	Electric equipment of cars and tractors	5	54	1,5
36	Engineering and Computer Graphics	5	54	1,5
37	Car maintenance materials	5	54	1,5
38	Economics of transport	7	54	1,5
39	Insurance and bases of taxation	8	54	1,5
Total for the cycle		324	6	9
2.1.2 Cycle of professional and practical training*				
40	Fundamentals of car driving	6	81	1,5
41	Building materials	3	54	1,5
42	Fundamentals of Psychology, Transportation and Management	7-8	81	1,5
43	Technical exploitation of cars	7-8	135	2,5
44	Economics and Organization of Construction and exploitation of roads	7-8	108	2
45	Road transportation	3-4	135	2,5
46	Vehicles	7	108	2
47	Transport Law	8	54	1,5
48	Interaction modes of transport	7-8	108	2
49	Fundamentals of geodesy	3	54	1,5
50	Fundamentals of road construction	6	108	2
Total for the cycle		1026	19	28,5
Regulatory part, total		3240	60	90
Elective part, total		1350	25	37,5
Practical training		1404	26	39
Degree examination		486	9	13,5
Total, according to the field of study		6480	120	180

* Number of hours / credits identified for training on the basis of secondary education.

** Titles of cycles of disciplines and forms of state attestation – according to the requirements of branch's standards for higher education, approved in 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Culture studies», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» - see section 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Higher mathematics. Elements of the theory of matrices. The general theory of systems of linear equations. Lines in the plane. Lines in space. The curves of the second order. Functions and calculus. Boundary function. The derivative function. Basic theorems of differential calculus. Investigation of functions of several variables on the

extreme. Indefinite integral. Numerical Differential Equations, Elements of linear algebra and vector, use of derivative and integral, complex numbers.

1.3. Cycle of professional and practical training

Organization of the traffic. Problems of traffic organization. Characteristics of the traffic. Research of traffic. Practical measures of traffic organization.

Basics of labor protection. Legislation on protection of life, creating healthy, harmless and safe working conditions, general legal and organizational issues of safety in Ukraine agriculture, industrial hygiene, safety of agriculture and fire safety.

Safety in the industry. The purpose of discipline is theoretical and practical training to establish regulatory conditions. Acquiring the skills to analyze potential dangers and hazards, to develop organizational measures and technical measures to prevent accidents, injuries and illness in the workplace.

Economy and Planning of traffic. Construction. Market Investments and investment processes in construction. Construction company. Productive assets. Lease and privatization. Labor market. Pricing. The economic mechanism in the construction and its improvement. Analysis of industrial and business engineering activities in construction.

Road- building machines. The purpose of discipline is forming of the knowledge about the park of machine and tools used in the construction, repair and maintenance of roads and buildings on them, familiarity with the sphere of their application, with the main design features, applications and operating rules.

Automatic controls traffic. Objective: formation of systemic theoretical knowledge and understanding of the conceptual foundations of automation of traffic control, designing automated traffic management, technical means and modes of operation, the acquisition of practical skills in organization of their operation.

Legal regulation of traffic. Task of the discipline is the study of legal provisions and knowledge, international legal norms and principles governing the relations of the market of transport services; modern legal problems of transport activities; the acquisition of practical skills in the branch of international and national transport law.

Urban Transport Planning. Principles and methods of rational planning and reconstruction of transport networks, technologies improve freight and passenger transportation, traffic safety in modern cities, the development and implementation of economic and resource-saving techniques and technologies, reducing of the expenses on moving people and vehicles.

Fundamentals of automatic and automatic systems. Basic theory of automatic control systems, remote control and monitoring of transport processes, principles of mechanic remote control channels, typical elements of traffic automation, remote control and communication methods of encoding information.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

2.1.2 Cycle of mathematics and natural science (fundamental) training

Theory and design of automobiles and tractors. Objective: the general performance of the basic properties of automobiles and tractors. Constructive features of tractors and cars, the basic tenets of the theory tractor and car.

Electric cars and tractors. Objective: to study the technical characteristics and operational performance of electric vehicles and tractors. Automatic electrical

equipment. Microprocessor Ignition System . Anti-lock brake system . Electronic control fuel delivery . Reliability and durability, maintenance and repair.

Engineering and computer graphics. Discipline studies modeling of objects and processes, drawing technical purposes , rules and methods of graphical reproduction of technical objects with the use of computers and software standards ESKD .

Car maintenance materials . Properties of fuels, lubricants , special fluids and fluid –operational materials, their influence on the techno-economic performance equipment. Mastering the skills to identify key indicators of quality and selection of appropriate varieties and brands of fuels, lubricants, special fluids and lubricating – operational materials.

Economics of transportation. The theoretical basis and practical forms of functioning market structures and mechanisms of interaction between economic operators of the transport industry. Economic characteristics of rail, sea, river, road, air and pipeline transport, patterns of their development. Methodological framework to select optimal technical, economic and organizational decisions.

Insurance and basics of taxation. Theoretical and practical basics of insurance and tax accounting in enterprises, the procedure of calculation and payment. Study method of complete and procedure reporting.

2.1.3. Cycle of professional and practical training

Fundamentals of driving. Objective: To learn the basics of driving in the operation of its properties and movement. Subject: Presentation of examples of driving in various driving conditions.

Building materials. Learning the basics of building materials, manufacture, properties, nomenclature and efficient use of building materials and products. The use of building materials in the construction of roads and buildings.

Fundamentals of transport psychology and management. Patterns of information of human interaction with technical devices in a single system "man - machine". Reducing the adverse effects of the environment on man. Improving working conditions and productivity of workers transport.

Technical operation of vehicles. Methods and tools supporting the technical condition of the car, its units, systems and mechanisms, organization of maintenance and maintenance vehicles. Features of processes and repair at different sites repair and servicing base road.

Economics and Organization of construction and maintenance of highways. The objective of discipline is to provide a system of knowledge and skills in economics construction and maintenance of roads, construction of separate economy based on ownership, pricing construction, the definition of capital investment in the construction of highways.

Trucking. Technologies and equipment transportation process cargo and passengers. Vehicle operation, development and improvement of public transport services to cities, suburbs and rural areas, efficient use of material and human resources for road transport.

Vehicles. Types of vehicles. Characteristics, parameters and performance vehicles, their construction and operation features.

Transport Law. Laws and regulations of transport. Rights transport relations in society.

The interaction modes of transport. The objective of discipline is to study the guidelines and challenges of integrated development and interaction of different modes of transport as an integrated system, ways of interaction between different modes of transport hubs.

Basics of geodesy. Methods and means of measuring and constructing physical quantities (angles, lengths of lines), creating iconic and digital terrestrial space models and their use in solving engineering geodesic tasks in construction (size, shape, location). Formation skills and training of survey measurements and their mathematical treatment, their use in the preparation of engineering areas, engineering studies, design, construction and operation of engineering structures.

Basics of road construction. Technology of the preparatory work, technology management of construction of pavement, development of technological processes of processing, storage and getting a road- building materials.

Introduction to specialty. The purpose of discipline: students adapt to the conditions and requirements of university life as well as familiarize them with the nature, content and practical orientation chosen specialty, the basics of the theory of transport technology and transport infrastructure, traffic management.

Training of Junior Specialists

Specialty «Organization of Transportation and Management in Road transport»

Training direction «Transport Technologies (according to the types of vehicles)»

Field of knowledge «Transport and Transport Infrastructure»

Volume, ECTS credits - 180 .

Learning / teaching period, years:

Full-time – 3 (on the basis of completed secondary education)

Graduate's qualification - Technician-technologist

Training of Junior Specialists is carried out in Separated Subdivision NULESU

(licensed amount, persons: full-time/part-time):

- Nizhyn Agrotechnical Institute (30/-)

Annotation of Specialty

The graduate of "Transportation organization and management at motor transport» should have modern methods of analysis of freight and passenger traffic, have general scientific and professional competencies to develop measures of improving organization of transportation, know and apply advanced traffic management systems of dispatching traffic control, have modern methods of planning and management of motor service.

Practical Training

All kinds of educational practices are carried out in the specialized laboratories of the Institute, passenger and freight Auto-Transport Enterprise. For practical training industrial base of agrarian formations of Chernihiv region (educational and research farms and stations, agrarian holdings with developed structure of production and processing of agricultural products), leading farms in management of freight and passenger traffic are used.

Approximate topics of the graduation works

State certification involves preparation and defense of diploma projects.

Graduates' Academic Rights

Graduates of the specialty «Organization of transportation and management in road transport» may continue their study for EQL «Bachelor» in the subject area 6.070101 «Transport Technologies» (motor transport).

Graduates' Spheres of employment

Graduates can work as technicians-engineers (mechanic), motor transport dispatchers, dispatchers of international transportation, dispatchers in transportation services, inspectors of operational, technological and organizational issues, inspectors of labor protection and occupational safety, inspectors of traffic safety, technical inspectors of control the use of fuel, inspectors of motor transport, operators of dispatcher movement and loading-unloading works on motor transport.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Organization of transportation and management in road transport»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine	2	81	1,5	2,3
2	Ukrainian (professionally trained)	4	81	1,5	2,3
3	Culture studies	1	54	1	1,5
4	Economic theory	3	81	1,5	2,3
5	Fundamentals of philosophy	2	81	1,5	2,3
6	Sociology	6	54	1	1,5
7	Fundamentals of law	2	54	1	1,5
8	Physical training*	1-5	270	5	7,5
9	Foreign language (professionally trained)	1-3	216	4	6
Total for the cycle			972	18	27
1.2. Cycle of mathematics and natural science (fundamental) training					
1	Physics	1	81	1,5	2,3
2	Higher mathematics	1	162	3	4,5
3	Material science	1	108	2	3
4	Drawing	1	108	2	3
5	Transport geography	1	108	2	3
6	Electrical engineering and electronics	1-2	135	2,5	3,8
7	Fundamentals of technical mechanics	1-2	135	2,5	3,8
8	CT and Information technology	3-5	270	5	7,5
9	Automobile and maintenance materials	4	54	1	1,5
10	Life safety	6	54	1	1,5
11	Fundamentals of ecology	5	54	1	1,5
Total for the cycle			1269	23,5	35
1.3. Cycle of professional and practical training					
1	Automobiles	1-2	216	4	6
2	Specialized rolling stock	2	81	1,5	2,3
3	Organization of automobile freight transportation	2-3	216	4	6
4	Technical exploitation of a vehicle	2-3	135	2,5	3,8
5	Organization of automobile passenger transportation	3-4	216	4	6
6	Rules and road safety	3-4	270	5	7,5
7	Organization of international automobile transportation	3-4	108	2	3
8	Economics of enterprise	3-4	81	1,5	2,3
9	Organization and planning of work of enterprises	5-6	216	4	6
10	Fundamentals of labor protection	5	54	1	1,5

11	Fundamentals of management	5	81	1,5	2,3
12	Fundamentals of marketing	5	81	1,5	2,3
13	Fundamentals of customs legislation and customs - brokerage activity	5	108	2	3
14	Transport-expeditionary work	5	108	2	3
15	Transport law	6	81	1,5	2,3
16	Fundamentals of accounting and finance	6	162	3	4,5
17	Commercial work	6	54	1	1,5
18	Economic relations and foreign economic activity on the transport	5	135	2,5	3,8
19	Fundamentals of tax system and insurance business	5	108	2	3
20	Life safety in the branch	6	36	0,7	1
Total for the cycle			2547	47,2	71
Regulatory part, total			4788	88,7	133
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
2.1.1. Cycle of humanitarian, social and economic training					
1	Professional ethics	3	36	0,67	1
2	Fundamentals of record-keeping	4	54	1	1,5
3	Political studying	4	54	1	1,5
Total for the cycle			144	2,67	4
2.1.2 Cycle of mathematics and natural science (fundamental) training					
1	Interchangeability, standardization and technical measurements	3	54	1	1,5
2	Computer graphics	6	54	1	1,5
Total for the cycle			108	2	3
2.1.3. Cycle of professional and practical training*					
1	Fundamentals of automobile repair	3	36	0,67	1
2	Technical means of communication	4	54	1	1,5
3	Fundamentals of entrepreneurship	5	54	1	1,5
Total for the cycle			144	2,67	4
Chosen by University, total			396	7,3	11
Practical training			972	18	27
Degree examination*			324	6	9
Total, according to the field of study			6480	120	180

* Number of hours / credits identified for training on the basis of secondary education.

** Titles of cycles of disciplines and forms of state attestation – according to the requirements of branch's standards for higher education, approved in 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Cultural studies», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training». See section 2.2. and section 1.1 for the specialty «Jurisprudence».

1.2. Cycle of mathematics and natural science (fundamental) training

Physics. System of knowledge of the following parts is laid out in the course: Physical principles of mechanics, molecular physics and thermodynamics. Fundamentals of electrodynamics. Oscillations and waves. Optics.

Higher mathematics. System of knowledge of the following parts is laid out in the course: Elements of the theory of matrices. General theory of systems of linear equations. Lines in the plane. Lines in the space. Curves of the second order. Functions and calculus. Boundary function. The derivative function. Basic theorems of differential calculus. Investigation of functions of several variables on the extreme. Indefinite integral. Numerical differential equations. Elements of linear and vector algebra. Use of derivative and integral, complex numbers.

Material science. System of knowledge of the following parts is laid out in the course: General characteristics of metals. Production of ferrous and non-ferrous metals. Fundamentals of metallurgy. Nonmetallic construction materials. Methods of construction materials processing.

Drawing. Projection drawing. Projections, sections and cross sections. Sketches and drawings. Elements of structural connections. Assembly drawings. Detailing. Orthogonal projections on the perpendicular plane. Properties of projections of geometric features. Positional and metrical tasks. Performing graphic works on the computer.

Transport Geography. General principles of transport geography. Geography of main means of transport. Review of transport geography of foreign countries.

Electrical engineering and electronics. System of knowledge of the following parts is laid out in the course: Electric circuits of AC and DC and their transient processes. Magnetic circuits. Electrical measurements and instruments. Electrical machines and transformers. Fundamentals of electronics.

Fundamentals of engineering mechanics. System of knowledge of the following parts is laid out in the course: Conditions and general laws of motion of material bodies. Fundamentals of calculation of construction elements for strength, rigidity and stability. Fundamentals of design of machine parts and simple mechanical transmission.

CT and information technology. System of knowledge of the following parts is laid out in the course: Fundamentals of work with PC. Fundamentals of programming. Fundamentals of special software. Hardware and software for transportation management. Network technology.

Automobile and maintenance materials. System of knowledge of the following parts is laid out in the course: Fuel-lubricant materials and special liquids. Organization of rational use of fuel-lubricant materials on motor transport. Construction and repair materials.

Life safety. System of knowledge of the following parts is laid out in the course: International cooperation in environmental protection. Life safety in everyday life of production. Life safety in emergencies.

Fundamentals of Ecology. It is studied: Biosphere and transforming human activities. Organization of agricultural production on the contaminated territories. Modern problems of conservation in agricultural production. Rational use and protection of land resources, water resources and their protection. Economic factors and organism. Atmosphere protection.

1.3. Cycle of professional and practical training

Automobiles. System of knowledge of the following parts is laid out in the course: Structure of the car. Engine. Electrical equipment. Transmission. Chassis, bulk

and cabin. Control linkage. Fundamentals of automobile theory (operational features, dynamics).

Specialized rolling stock. System of knowledge of the following parts is laid out in the course: Specialized rolling stock. Main types of rolling stock. Automobiles- trains. Main types of trailers.

Organization of automobile freight transportation. System of knowledge of the following parts is laid out in the course: Fundamentals of transport process. Road conditions of rolling stock exploitation. Technical and operational indices of rolling stock work. Organization of rolling stock movement. Loading and unloading works on motor transport. Organization of freighting and commercial work. Technology of freighting in various sectors of economy. Operational management of freighting. Integrated transport system of Ukraine.

Technical exploitation of a vehicle. System of knowledge of the following parts is laid out in the course: Fundamentals of road transport maintenance. Technology of maintenance and current repairs of motor vehicles. Organization and management of production of maintenance and current repair of vehicles.

Organization of automobile passenger transportation. System of knowledge of the following parts is laid out in the course: System of passenger motor transport. Organization of bus transportation on urban and suburban routes. Organization of passenger transportation on long-distance routes. Bus stops and bus stations. Organization of passenger car traffic transportation. Dispatcher management of bus and taxi movement. Organization of passenger motor transport.

Rules and road safety. System of knowledge of the following parts is laid out in the course: Traffic Rules. Fundamentals of safe driving. Road safety. First aid to victims.

Organization of international automobile transportation. System of knowledge of the following parts is laid out in the course: International transport organizations. Organization of international automobile passenger transportation. Organization of international automobile freight transportation. Dispatcher management of passenger and freight transportation.

Economics of enterprise. System of knowledge of the following parts is laid out in the course: Fundamentals of market economy. Production facilities of enterprise. Organization of wages. Company's finance.

Organization and planning of work of enterprise. System of knowledge of the following parts is laid out in the course: Planning of production activity of Auto-Transport Enterprises. Material-technical support. Labor and wages. Financial activity of ATE. Analysis of industrial and economic activities. Economic efficiency of an enterprise. International transportation, their nature, role and conditions. Methodology of international road transport of goods and passengers.

Fundamentals of labor protection. System of knowledge of the following parts is laid out in the course: Legal and organizational issues of safety. Fundamentals of workplace sanitation. Fundamentals of occupational safety. Fire safety.

Fundamentals of management. System of knowledge of the following parts is laid out in the course: Functions of management. Methods of management. Decision making in management. Psychological aspects of management. Leading in Management.

Fundamentals of marketing. System of knowledge of the following parts is laid out in the course: Fundamentals of marketing activities. Market of enterprises and consumer markets. Means of moving goods , work, ideas and services.

Fundamentals of customs legislation and customs brokerage activity.. System of knowledge of the following parts is laid out in the course: Organization of customs in Ukraine. Order of movement across the customs border of Ukraine.

Features of tariff and non-tariff regulation and disposal of goods and objects, which are under customs control. Customs and brokerage operations.

Transport-expeditionary work. System of knowledge of the following parts is laid out in the course: Organization of transport-expeditionary work. Tariffs for carrying expeditionary operations out.

Transport law. System of knowledge of the following parts is laid out in the course: Concepts, sources and legal organization of motor transport management. System contract interaction of ATE with subjects of transportation. Legal regulation of relationships between ATY and business transportation.

Fundamentals of accounting and finance. System of knowledge of the following parts is laid out in the course: Theoretical foundations of finance and accounting. Accounting of main activities and transactions. Accounting of financial results.

Commercial work. System of knowledge of the following parts is laid out in the course: Fundamentals of commercial work on transport. Conditions and features of commercial transportation on motor transport.

Economic relations and foreign economic activity on the transport. System of knowledge of the following parts is laid out in the course: International economics and economic relations. Organizational and legal framework for foreign trade. Monetary and financial foundations of foreign trade. Transport service of foreign trade.

Fundamentals of tax system and insurance business. System of knowledge of the following parts is laid out in the course: Legal foundation of tax system. Main taxes in Ukraine. Fundamentals of insurance in Ukraine.

Labor protection in the branch. System of knowledge of the following parts is laid out in the course: Legal and organizational issues of labor protection on motor transport. Fundamentals of workplace sanitation on motor transport. Fundamentals of occupational safety. Fire safety. Safety of traffic and repair work.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

Professional Ethics. System of knowledge of the following parts is laid out in the course: Communication as science and art. Peculiarities of ethics of business communication. Business communication technology. Labor activity of a manager. Basic rules of business etiquette. Peculiarities of international communication.

Fundamentals of record keeping. System of knowledge of the following parts is laid out in the course: Professional vocabulary. Terms. Characteristics. Reference and explanatory documents. Explanatory note and memorandum. Minutes, extract from the minutes. Record and financial documents. Act, list, commercial and contract documents, administrative documents, telegrams, telephone messages.

Political studying. System of knowledge of the following parts is laid out in the course: Power as a social phenomenon. Main types of political regimes, political life, civil society and democracy. Political consciousness and political culture. Policy, national security and national interests of Ukraine. International policy and system of international relationships. Ukraine in modern geopolitical space. Basic social and political processes of modern civilization.

2.1.2 Cycle of mathematics and natural science (fundamental) training

Interchangeability, standardization and technical measurements. System of knowledge of the following parts is laid out in the course: Fundamentals of standardization, adjustments and allowances. Adjustments and allowances. Technical measurements.

Computer Graphics. System of knowledge of the following parts is laid out in the course: Information technology, algorithmic presentation, operating system commands, dialog add-in application packages, solving graphical problems with the help of electronic computing machine, getting practical skills of working on electronic computing machines.

2.1.3. Cycle of professional and practical training

Fundamentals of automobile repair. System of knowledge of the following parts is laid out in the course: General provisions. Technology of current repair of automobiles. Organization of automobile repair.

Technical means of communication. System of knowledge of the following parts is laid out in the course: Lines of communication. Telephone communication. Radio communication. Mobile Communication. Communications in the Internet.

Fundamentals of entrepreneurship. The essence of entrepreneurship Ukraine. Privatization of ownership. Development of transport entrepreneurship and business. Functioning of the market.

Junior Specialists training
Specialty «Maintenance and Repair of Cars and Engines»
Training direction «Motor Transport»
Field of knowledge «Transport and Transport Infrastructure»

Amount of credits - 180 ECTS credits .

Learning / teaching period, years:

Full-time - 3 years 10 months (on the basis of basic general secondary education) ;

Graduate qualification – Engineer (mechanic).

Training of Junior Specialists is carried out in Separated Subdivision NULESU (licensed amount, persons: full-time/part-time):

- Berezhany Agrotechnical Institute (30/-)

Annotation of Specialty

Training of junior specialists is aimed at training professionals capable to apply skills in transport branch. Training of junior specialists is focused on current and perspective directions of development of automobile equipment and high-quality service of cars and engines.

Practical Training

Teaching and research farms, stations of NULESU, service stations, private repair shops, automobile companies, automobile maintenance of motor vehicles.

Approximate topics of the graduation works

State certification includes comprehensive state examination.

Graduate's Academic Rights

Specialists can continue their education taking training program 6.070106 «Automobile Transport».

Graduates' Spheres of employment

Graduates can work in state, private, farm, commercial enterprises as mechanics, mechanics of transport repair, heads of small enterprise (transport), safety inspectors (road), masters of industrial training (driving of cars) and they can organize own business.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Maintenance and Repair of Cars and Engines»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine *	5	108	2,0	3
2	Ukrainian Language(professionally trained)	6	108	2,0	3
3	Culture *	2	54	1,0	1,5
4	Fundamentals of Law *	2	54	1,0	1,5
5	Fundamentals of Philosophical Knowledge *	8	108	2,0	3
6	Sociology *	8	54	1,	1,5
7	Economics **	2	54	1,0	1,5
8	Foreign Language (professionally trained)	5,6,7	216	4,0	6
9	Physical Training	5,6,7	180	3,3	5
Total for the cycle		13	936	17,3	26
1.2. Cycle of mathematics and natural science (fundamental) training					
1	Environmental Science *	2	54	1,0	1,5
2	Electrical Engineering and Electronics	5,6	144	2,6	4
3	Drawing	2,3,4	144	2,	4
4	Business Economics	8	108	2,0	3
5	Interchangeability and Standardization of Technical Measurements *	3,4	108	2,0	3
6	Technical Mechanics *	4,5	198	3,6	5,5
7	Physics *	4д	90	1,6	2,5
8	Higher Mathematics *	4	108	2,0	3
9	Computer Engineering	5	90	1,6	2,5
Total for the cycle		14	1260	23,3	35
1.3. Cycle of professional and practical training					
1	Cars	6	216	4,0	6
2	Electric Car	7	180	3,3	5
3	Usage of Operating Materials and Saving Energy Resources	3	108	2,0	3
4	Technical Vehicle Operation	6,7,8	216	4,0	6
5	Basic Repair Technology	6,7,8	180	3,3	5
6	Trucking	5	108	2,0	3
7	Road Rules *	6	126	2,3	3,5
8	Organization and Planning of Enterprise	6,7	108	2,0	3
9	Labor Protection	5	54	1,0	1,5
10	Safety *	6	54	1,0	1,5
11	Labor Protection	7	36	0,6	1
12	Technology of Construction Materials *	3,4	162	3,0	4,5

Total for the cycle		18	2124	39,3	59
1.4. Practical Training					
1	Metalwork		162	3,0	4,5
2	Machining		108	2,0	3
3	Dismantling		162	3,0	4,5
4	Practice in ATP and Service Station		216	4,0	6
5	Productive and technologic		486	9,0	13,5
6	Pre-diploma practice		162	3,0	4,5
7	Diploma planning		324	6,0	9
Total for the cycle			1620	30,0	45
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
2.1.1. Cycle of mathematics and natural science (fundamental) training					
1	Chemistry *	3	72	1,3	2
2	Fundamentals of Management and Marketing *	7,8	108	2,0	3
3	Computer Graphics	4	36	0,6	1
2.1.2. Cycle of professional and practical training					
1	Technical Service	7,8	126	2,3	3,5
2	Car Engines	5,5	198	3,6	5,5
3	Introduction to Specialty	1	36	0,6	1
4	Computers and Computer Technologies *	6,7,8	126	2,3	3,5
5	Management Fundamentals of Road Safety*	7	90	1,6	2,5
Exams				10,0	15
Elective part, total			792	14,6	22
Practical Training			1620	30,0	45
Degree examination					
Total, according to the field of study		45	5940	120,0	180

* The number of training hours/credits defined for training of specialists on the basis of basic secondary education

** The titles of cycles of disciplines and forms of State attestation – according the requirements of industry standards for higher education approved 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Cultural studies», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Physics. Physical principles of mechanics, electric and magnetic field, alternating current, electromagnetic waves, nature of light, spectra, photometry.

Ecology. Man and environment, ecological basis of environmental, natural resources and environment, environmental protection and rational use of natural resources in industry, environmental problems in Ukraine, Radiology.

Drawing. Standards study, graphic drawings, engineering drawings, general rules of detail drawings, drawings of general type, construction drawings .

Technical Mechanics. Statics basic laws, kinematics, dynamics, calculation. Connection of machine parts, mechanical transmission, implementation of machine parts and mechanisms.

Interchangeability, Standardization and Technical Measurements. Standardization bases, admissions and landings of smooth cylindrical surfaces, admissions and landings of the details having a difficult profile. Calculations and technical measurements.

Electrical Engineering and Electronics Circuit DC, electric circuits of alternating current. Electric Machines AC and DC. Electronic, discharge and semiconductor components. Electronic amplifiers, generators. Methods for calculating circuits.

Computer Engineering.. System and software of computers, work with operating system program, databases. Word processing, spreadsheet, spreadsheets. Superkalk, Microsoft Excel.

Higher Mathematics. Linear algebra , vector algebra and analytical geometry, integral calculation and differential equations, complex figures.

Economics of Enterprise. Enterprise in market economy conditions, its industrial base, the staff and the cost price of the done work. Economical mechanism of enterprise functioning. Applied Economics, calculation of indicators of economy and financial enterprise activity.

1.3. Cycle of professional and practical training

Cars. The car structure and its units, the structure of the engine, engine power system, the structure of the transmission and chassis.

Labor Protection. Basic laws and standards system. General issues of safety, industrial injuries and occupational diseases. Industrial hygiene, occupational health and safety, safety in the maintenance of rolling stock and PR, fire safety in the ATP, the environmental protection, the duties of officials.

Safety. Human life negative factors of natural, technological, social-political and military nature. Government measures due to human life protection. Personal protection rights. Collective protection rights. Dealing with the consequences of human exposure to radioactive, chemical and biological substances. Hazardous environmental factors and their effect on man, basic physiology of labor and regulatory requirements for the activity.

Electric cars. The system power supply. Batteries, alternators, voltage regulators. Ignition system of engine. Measuring devices. Lighting systems and alarms, auxiliary electric equipment of vehicles, onboard power grid.

Technology of Construction Materials and Material Science. Fundamentals of metallurgy, ferrous and non-ferrous metals, plastics. Foundry, metal forming. Welding, cutting and brazing, metal cutting and machine tools.

Usage of operating materials and fuel energy saving resources. Knowledge of major brands of fuel, its quality, the ability to calculate costs. Organization of rational use of fuel.

Technical operation of vehicles. Reliability and system maintenance, equipment maintenance and repair. Maintenance and TS of cab, body, mechanisms and cooling systems. Lubrication engines. Maintenance and TS systems of power motors, electric cars. Maintenance and TS of transmissions, chassis, control mechanisms. Organization of maintenance, TS, storing vehicles and spare parts, materials, design principles of production subdivisions of TSS.

Fundamentals of car repair technology. Fundamentals of automotive production, taking cars for repair, their operation and defect, acquisition, assembly and testing of vehicles and components. Handling cars after repair, restoring parts by welding, metalwork, machining, plating, hull repair parts, repair parts class rods and discs, repair parts cooling systems, lubrication, electrical equipment. Repair of frames, springs, bodies and cabs, regulation of labor, the operation processes. Designing of repair stations.

Trucking. General concepts of the transport process and trucking, their performances, operational management of rolling stock.

Traffic Rules and Safety. The Traffic Acts of Ukraine. Traffic Rules.

Organization and Planning of Enterprises. Fundamentals of planning and organization of production, planning, accounting and analysis of production costs, organization of increasing of the production economic efficiency.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.2 Cycle of mathematics and natural science (fundamental) training

Chemistry. Chemical and physical properties of the major inorganic, organic matter, the theory of the matter structure, elements of chemical thermodynamics and kinetics, solutions, basics of physical and chemical analysis of substances. The structure of materials, their physical and chemical properties, chemical interaction of materials, chemical and thermal processing of materials.

Fundamentals of entrepreneurship, management and marketing. Knowledge development of organizational and economic principles and the rational formation laws, planning of agricultural production in market conditions. The essence of marketing as a philosophy of enterprise activity at the competitive market conditions.

Computer Graphics. Information technology, algorithms, operating system commands, dialogue applications, packages of applied programs, solving of computer graphics problems using the ECM.

2.1.3. Cycle of professional and practical training

Computers and computer technology. Service and application software. Processing of graphics. Modeling in MathCAD system. Computer networks and the use of applied software.

Technical Service. The study of state standards for repair works, the main standards of vehicle maintenance, diagnostics, technical condition based on advanced technologies.

Automobile Engines. Formation of knowledge about the structure of modern automobile engines, power systems, cooling systems, electrical systems, their regulation, technical diagnostics.

Introduction to specialty. Formation of the industry knowledge theory, students' acquainting with the future profession.

Fundamentals of driving. Providing of theoretical and practical skills assessment of traffic situation and making of the right decisions in extreme road conditions.

Training of Junior Specialists
Specialty «Land Administration»
Training direction «Geodesy, Cartography and Land Management»
Field of knowledge «Geodesy and Land Management»

Volume, ECTS credits - 180.

Learning / teaching period, years:

Full-time - 4 years (on the basis of basic secondary education);

Part-time - 3 years (on the basis of secondary education).

Qualification of Graduate - Technician - Land Surveyor

Training of Junior Specialists is carried out in Separated Subdivision NULESU (licensed amount, persons: full-time/part-time):

- Boyarka College of Ecology and Natural Resources (55/55)
- Crimean Technical College of Hydromelioration and Mechanization of Agriculture (25/25)
- Mukacheve Agricultural College (25/-)

Annotation of Specialty

Training in «Land administration» is aimed at training professionals who carry out state functions for the management of land resources by regulating land relations of the state land cadastre, land management, control and monitoring of public lands to ensure the rational use and protection of land.

Practical Training

Students receive practical training in institutions: the State Agency of Land Resources of Ukraine and its structural subdivisions regions, cities, districts (State Land Committee of areas, State Land Committee of cities, districts departments of the State Land Committee), State Enterprise «Center of the State Land Cadastre» and its branches in the cities and districts, State Enterprise «Central Scientific research and Design Institute of Land Management» and its branches in cities.

Approximate topics of the graduation works

State certification involves the preparation and defense of diploma projects.

Graduate's Academic Rights

Students can continue their studies for Bachelor program in the direction of 6.080101 «Geodesy, Cartography and Land Management».

Graduates' Spheres of employment

After college graduates employed as the surveyors in village municipalities, specialists in regional and city administrations State Land Agency of Ukraine, specialists in state cadastre offices, technicians, surveyors in branches of Planning Institute of Land Management, in other companies and organizations that perform design and survey and mapping, both state and private ownership.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Land administration»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine	3	54	1	1,5
2	Ukrainian language	3	54	1	1,5
3	Cultural studies	4	54	1	1,5
4	Basics of philosophical knowledge	7	72	1,3	2
5	Economics	5	72	1,3	2
6	Sociology	8	54	1	1,5
7	Law Science	1	72	1.3	2
8	Foreign Language	4-6	162	3	4,5
9	Physical training	5-7	162	3	4,5
Total for the cycle			756	14	21
1.2. Cycle of mathematics and natural science (fundamental) training					
1	Basics of Soil Science and Geology	3	126	2,3	3,5
2	Basics of Agricultural Production	4	108	2	3
3	Basics of Land Reclamation and Landscape	6	126	2,3	3,5
4	Economics, Planning and Organization	6	126	2,3	3,5
5	Basics of Entrepreneurships and Management Activity	8	126	2,3	3,5
6	Basics of Ecology	1	54	1	1,5
7	Higher Mathematics	5	126	2,3	3,5
8	Computerization of Land Production	6	162	3	4,5
9	Life Safety	3	54	1	1,5
Total for the cycle			1008	18,7	28
1.3. Cycle of professional and practical training*					
1	Topography and Land Surveyor Drawings	3-4	180	3,3	5
2	Geodesy	3-5	432	8	12
3	Photogrammetry	5-6	216	4	6
4	Geodetic Works at Land Management	5-6	180	3,3	5
5	Basics of Labor Protection	5	54	1	1,5
6	Labor Protection in industry	6	54	1	1,5
7	Land Management	7	108	2	3
8	Land Cadastre	7-8	216	4	6
9	Land Law	3-4	216	4	6
10	Land surveyor Designing	4-7	504	9,3	14
11	State Control and Monitoring of Land	7	72	1,3	2
Total for the cycle			2232	41,3	62
Regulatory part, total			3996	74	111
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
2.1.1. Cycle of mathematics and natural science (fundamental) training					
1	Principles of Standardization,	3	72	1,3	2

	Certification and Metrology				
2	Organization of Office Work	7	72	1,3	2
Total for the cycle			144	2,7	4
2.1.2. Cycle of professional and practical training					
1	Introduction to Specialty	2	72	1,3	2
2	Basics of Cartography	7	72	1,3	2
3	History of Land Relations	3	72	1,3	2
4	Basics of Designing of Roads of Local Importance	8	90	1,7	2,5
5	Monitory Valuation of Land and Real Estate	8	126	2,3	3,5
6	Automated Land –Cadastral Informative System	8	126	2,3	3,5
Total for the cycle			558	10,3	15,5
Chosen by University, total			702	13	19,5
Elective part, total			702	13	19,5
Practical training			1512	28	42
Degree examination			270	5	7,5
Total, according to the field of study			6480	120	180

* The number of training hours/credits defined for training of specialists on the basis of basic secondary education

** The titles of cycles of disciplines and forms of State attestation – according the requirements of industry standards for higher education approved 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Cultural studies», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» and «Economics» see Section 2.2 and 1.1 specialty «Jurisprudence».

1.2. Cycle of mathematics and natural science (fundamental) training

Basics of Soil Science and Geology. The program involves the study of the foundations of the discipline of geology and mineralogy, basic laws of Soil Science, the characteristics of soil formation processes, structure and properties of the soil by increasing its fertility and protect against erosion.

Basics of Agricultural Production The purpose of discipline is to obtain knowledge about the composition of weeds, pests and diseases of crops, skills in folding structure of sown areas, cultivation, payments need to feed.

Basics of Land Reclamation and Landscape Program of discipline includes the study of organizational, economic and technical measures aimed at improving the land for agricultural use and the creation of a sustainable territorial structure of agricultural landscapes.

Economics, Planning and Organization. Discipline is studied with the purpose of receipt of theoretical knowledge and acquisition of practical skills on questions the effective use of production resources, rational organization of labor, development of conception of integral approach, to activity of enterprise in the conditions of market competition.

Basics of Entrepreneurships and Management Activity. Discipline gives the future specialists land surveyors basic knowledge of business, management and marketing.

Basics of Ecology. The purpose of discipline is the study of regularities social interaction with the environment for rational nature management, providing environmental and economic knowledge, development of skills with environmental orientation, effective implementation of environmental measures.

Higher Mathematics. Number of sets. Fundamentals of linear algebra. Vectors on the plane and in space. Analytic geometry. Differential calculus of the function with one variable. Differential calculus of functions of several variables. Integral calculus. Differential Equations.

Computerization of Land Production. The objective of discipline is to develop knowledge and practical skills in computer use of modern information and communication technology of professional activity.

Life Safety. Tasks of discipline: mastering a set of general cultural and professional competencies for life safety solutions for professional tasks related to guaranteeing the preservation of life and health personnel in hazardous conditions and emergencies.

1.3. Cycle of professional and practical training

Topography and Land Surveyor Drawings. The purpose of discipline is to provide students with theoretical knowledge and practical skills of drafting and execution of graphical documentation of Land Management.

Geodesy. General information about surveying. Images of the Earth's surface on plans and maps. The orientation of the lines. Theodolite shooting. Defining areas. Leveling. Topographic shooting. Basics of photo-topographical shooting. Surveying work while streamlining forest plantations.

Photogrammetry. Basics of photography, linear perspective, methods Aerial Photography and space shooting. Photogrammetric instruments, photogrammetric products. Skills of manufacturing of planning and cartographic material.

Basics of labor protection. Legal and organizational problems of labor protection. Fundamentals of industrial hygiene. Principles of safety. Fire safety. Safety measures in the workplace.

Labor Protection in industry. Task of discipline is formation of skills and competencies for providing effective management of occupational safety and working conditions, professional unity with mandatory compliance with safety in the industry.

Land Management. Patterns of land management techniques and management mechanisms. Legal provision. Land Management, land registry, land management computerization of production.

Land Cadastre. Organization and management of the state land cadastre, analysis and evaluation of existing land use, organization of complex and rational land use.

Land Law. The purpose of discipline is to examine the system of laws and regulations that govern property rights, assessment activities and the process of determining the value of the property.

Land surveyor Designing. Theoretical Foundations of Land Management. Territorial Land Management. Inter-farm land use of agricultural land ownership and land use. Development of projects of separated Land Management. Regional specificity of Land Management. Organization and planning land operations.

State control and monitoring of land. The system of bodies exercising state control over land use and protection. The rights and functions of the state of land use and protection. The system for monitoring land.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. *Cycle of mathematical and natural science (fundamental) training*

Principles of Standardization, Certification and Metrology. The purpose of discipline is to familiarize with the state system of standardization in general, industry standards, departmental regulations and company standards - in particular, students gain knowledge about the implementation of and compliance of standards relating to the conduct of work on the land.

Organization of Office Work. Learn rules for creating, processing and use of organizational, administrative, information retrieval, personnel documents, organize and control the execution of workflow automation, assembly and formation nomenclature Affairs, prepare documents for storage.

2.1.2. *Cycle of professional and practical training*

Introduction to specialty. The objective of discipline is to familiarize students with the system of education in higher education, foundations of future profession, providing general advice on the organization of the educational process (lectures, laboratory and practical classes, independent work).

Basics of Cartography. Elements of the design, preparation, execution agricultural maps using computer technology, drafting various types of land resource maps. Mathematical Foundations of maps in a given cartographic projection, techniques of cartographic generalization. Means of cartographic production. Theory and practice of using maps in land management.

History of Land Relations. Discipline is exploring ways of land relations in various stages of social development.

Basics of Designing of Roads of Local Importance. Designing roads. Tracing and splitting pike and elements of circular curves on the ground, drawing longitudinal road profile and design them in longitudinal and transverse profiles. Calculation of the volume of excavation. Culverts.

Monitory Valuation of Land and Real Estate. The purpose of discipline - the acquisition of knowledge about the types of monetary valuation of land, creating a knowledge base for the monetary value of land, the factors that affect the value of the land.

Automated Land-Cadastral Informative System. Applications that are used in land surveying work. The advantages of modern computer technology over traditional. Applications: Earth, Geodetic Information System Gis 5.2, Autodesk Land Desktop, GeoniCS, MapInfo, Access, Digitals, Gis Geoproekt, Invent-Grand.

Junior Specialists training
Specialty «Industrial floriculture»
Training direction «Agronomy»
Field of knowledge «Agriculture and Forestry»

Amount, ECTS credits - 150

Learning / teaching period, years:

Full-time – 3 years 6 months (on the basis of basic secondary education)

Part-time – 2 years 6 months (on the basis of secondary education)

Qualification of Graduate – Specialist in Industrial Floriculture

Training of Junior Specialists is carried out in Separated Subdivision NULESU (licensed amount, persons: full-time/part-time):

- Boyarka College of Ecology and Natural Resources (25/25)

Annotation of Specialty

Main tasks of the specialty are: training of specialists for conducting of complex of works connecting with providing of the urban environment with flower products keeping the strict rules in sort, quarantine business, and also able to take into consideration modern economic changes in the branch.

Practical Training

Students receive practical training in Yalta SRC of Biology and Ecology of Subtropical Plants and Landscape NULES of Ukraine, corporations «Ukrzelenbud», ME «Kyivzelenbud», Company «Teremky».

Approximate topics of the graduation works

State certification involves compiling of comprehensive examination in the specialty.

Graduate's Academic Rights

Students can continue their studies for Bachelor program in the direction of 6.130101 «Agronomy».

Graduates' Spheres of employment

After graduating college specialists in industrial floriculture can be employed at municipal enterprises for maintaining of green plantations in regional centers of Ukraine, dendro parks, nurseries of the decorative plants, garden centers, other organizations and establishments, which have greenhouse complexes and grow flower products for providing of the urban environment.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Industrial floriculture»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training*					
1	History of Ukraine	2	108	2	3
2	Ukrainian language(professionally trained)	3	54	1	1,5
3	Cultural studies	1	54	1	1,5
4	Foreign Language	5-6	108	2	3
5	Basics of philosophical knowledge	7	54	1	1,5
6	Sociology	7	54	1	1,5
7	Economics	4	90	1,7	2,5
8	Law Science	4	90	1,7	2,5
9	Physical training	5-6	108	2	3
Total for the cycle			720	13,3	20
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Higher mathematics	5	126	2,3	3,5
2	Drawings and graphic literacy	3-4	126	2,3	3,5
3	Botany	3-4	180	3,3	5,0
4	Ecology and Nature using	3	126	2,3	3,5
5	Life Safety	5	54	1	1,5
6	Automated data processing	7	54	1	1,5
7	Basics of labor protection	5	54	1	1,5
8	Mechanization and Automation of works	4	126	2,3	3,5
Total for the cycle			846	15,7	23,5
1.3. Cycle of professional and practical training*					
1	Agro chemistry	5,6	234	4,3	6,5
2	Arable farming and Basics of soil science	3	180	3,3	5,0
3	Floriculture	4,5	288	5,3	8
4	Dendrology	4	162	3,0	4,5
5	Nurseries of decorative plants	5,6	126	2,3	3,5
6	Plant protection	6,7	180	3,3	5,0
7	Economics of Enterprise	7	162	3,0	4,5
8	Selection and seeding	5,6	144	2,7	4,0
9	Industrial floriculture	6,7	324	6,0	9,0
10	Phyto design	7	162	3,0	4,5
11	Labor Protection in industry	6	54	1	1,5
12	Organization and Planning of the production	7	54	1	1,5
Total for the cycle			2070	38,3	57,5
Regulatory part, total			3636	67,3	101
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
2.1.1. Cycle of humanitarian, social and economic training					
1	Ethics and Esthetics	4	54	1	1,5
Total for the cycle			54	1	1,5
2.1.2 Cycle of mathematics and natural science (fundamental) training					

1	General Chemistry	3	162	3,0	4,5
2	Informatics and Computerization	5	126	2,3	3,5
3	Meteorology	3	90	1,7	2,5
Total for the cycle			378	7,0	10,5
2.1.3. Cycle of professional and practical training					
1	Introduction to specialty	1	72	1,3	2,0
2	Fruit and vegetable growing	7	54	1	1,5
3	Ornamental lawns	5	126	2,3	3,5
Total for the cycle			252	4,6	7,0
Chosen by University, total			684	12,7	19,0
Elective part, total			684	12,7	19,0
Practical training			1080	20	30
Total, according to the field of study			5400	100	150

* The number of training hours/credits defined for training of specialists on the basis of basic secondary education

** The titles of cycles of disciplines and forms of State attestation – according the requirements of industry standards for higher education approved 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Cultural studies», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» and «Economics» see Section 2.2 and 1.1 specialty «Law science».

1.2. Cycle of mathematics and natural science (fundamental) training

Higher mathematics. Number of sets. Fundamentals of linear algebra. Vectors on the plane and in space. Differential calculus of the function with one variable. Differential calculus of functions of several variables. Integral calculus. Differential Equations.

Drawings and graphic literacy. As a result of the course the students acquire professional skills of industrial floriculture experts, learn the history and theory of pictorial literacy, means of resolving of artistic and imaginative tasks, able to creatively and professionally paint any picture, create color tone by mixing the primary colors, apply the stroke technique.

Botany. Exploring the diversity of external and internal structure of plants, their life, spreading on Earth, the interaction with the environment, the possibility of full utilization of plant by man and their protection.

Ecology and Nature Using. Learning discipline involves the formation of ideas about the interaction and interrelationship of all components in the natural, social and technological areas, of strategy and tactics conservation and stable development of life on Earth.

Life Safety. The purpose of discipline is student acquisition of competences, knowledge and skills for professional specialty, taking into account the risk of industrial accidents and natural hazards that can cause emergency situations and lead to adverse effects on the objects of management, as well as the formation of students responsibility for personal and collective security.

Automated processing of information. The study of modern technologies of automated information processing. Operating systems and applications for text processing, numeric and graphic information, preparation of presentation materials. Mastering the information technology.

Basics of labor protection. Legal and organizational problems of labor protection. Safety management in the enterprise. Fundamentals of industrial hygiene. Principles of safety. Fire safety. Safety measures in the workplace.

Mechanization and automation works. Mechanization. Structure of tractors and agricultural machines, the foundation exploitation of machine and tractor fleet in the household, preparing of vehicles for operation and maintenance units.

1.3. Cycle of professional and practical training

Agro-chemistry. Chemical composition and plant nutrition. Agrochemical properties of soil. Chemical reclamation of soils. Classification of fertilizers and their use. The system of fertilizing crops and agrochemical service of agricultural production. The theoretical power values of nutrients, properties and use of fertilizers and agrochemical parameters of soil and plants.

Arable farming and Basics of soil science. The structure, formation and composition of the crust formation, composition and properties of the soil, the patterns of geographical location and the basic principles of soil classification Ukraine. The ability to farm in agricultural reform.

Floriculture. The study of ecological characteristics and decorative qualities of annual and perennial flowering plants both open and protected ground, potted plants, farming their content, methods of reproduction, cultivation and use in landscaping and floristry.

Dendrology. Species richness of woody plants, the ratio of the major species to various environmental factors. Range of promising tree species for ornamental planting Ukraine.

Nurseries of decorative plants. Doing business of seed, advanced agricultural technology and technology of cultivation of ornamental plants for the needs of green building and landscape architecture.

Protection of plants. Protection of industrial greenery, application of specific control methods in different environments, technology of their applications and objects to which they apply. Advanced experience in businesses, operating instructions and guidance.

Economics of enterprise. Enterprise in the modern economic system. Manpower. Productive assets and intangible resources. Planning system. Organization of production and maintenance. Products. Costs. The effectiveness of the enterprise.

Selection and seed production. Recent advances in plant breeding and seed production of ornamental crops, new varieties and methods of maintaining varietal qualities of seeds. Patterns of heredity and variation in plants.

Industrial floriculture. Status and prospects of commercial floriculture. Botany and biological features of modern and decorative range, the technology of industrial greenhouse cultivation.

Phyto design. Ecological characteristics of plants and their ornamental and aesthetic qualities. Plant community and hygienic properties.

Labor Production in the industry. Purpose of the discipline is the formation of future professionals skills and competencies to ensure effective management of occupational safety and improving working conditions, taking into account scientific and technological progress and international experience, as well as awareness of the indissoluble unity of successful professional activities must comply with all the safety requirements work in a particular area.

Organization and planning of production. Task of discipline is to provide knowledge on the structure of the work associated with the cultivation, care and sale of various types of plants that are relevant in the market.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

Ethics and Esthetics. Moral and aesthetic values, beliefs and motives of behavior, self-improvement, ability to navigate in the world of human relations and artistic life.

2.1.2 Cycle of mathematics and natural science (fundamental) training

General Chemistry Chemical and physical properties of the major inorganic and organic substances, the basics of the theory of the structure of matter, elements of chemical thermodynamics and kinetics, theory of solvents, data on patterns of organic synthesis, basic physical and chemical analysis of substances.

Informatics and Computerization. Theory of science. The use of modern information and communication technologies in teaching and learning and professional activities.

Meteorology. Global patterns of atmospheric processes and phenomena, global atmospheric processes and patterns of distribution and the weather changes around the globe, methods of prediction, patterns of formation of climate and its fluctuations on the Earth and in different geographical areas.

2.1.3. Cycle of professional and practical training

Introduction to specialty. Task of the discipline is to form understanding of the specialty and future profession in providing the adaptation for freshmen to the learning environment in educational establishment.

Fruit and vegetable growing Vegetables and fruits, their biochemical composition, the value in human nutrition. Growing vegetables in a rotation with floral ornamental plants and organization of the garden.

Ornamental lawns. Technology of cultivation and maintenance of high-quality lawns in urban environments and suburbs.

Junior Specialists training
Specialty «Organization and technology of farming»
Training direction «Agronomy»
Field of knowledge «Agriculture and forestry»

Amount, ECTS credits – 180

Learning / teaching period, years:

Full-time - 4 years (on the basis of basic secondary education);

Part-time - 3 years (on the basis of secondary education).

Graduate qualification – Specialist in organization and farming.

Training of Junior Specialists is carried out in Separated Subdivision NULESU (licensed amount, persons: full-time/part-time):

- Zalizhchyky Agricultural College named after Y.Khraplyvy (25/25)
- Crimea Agroindustrial College (50/30)
- Mukacheve Agricultural College (25/25)

Annotation of Specialty

Teaching of the junior specialist is aimed at training professionals able to use adaptive technologies for growing crops, to ensure their economic, economic and environmental efficiency. Young specialists training is focused on current and future directions of development of the crop, fruit, livestock, agrochemical of the modern methods of soil survey and the measures directed on the rational use and restoration of soil fertility.

Practical Training

Students receive practical training in the Separated Subdivision of the National University of Life and Environmental Sciences of Ukraine «educational and production sector of the college» Farm «MAKoSAD», Agrarian Holding «Mriya», advanced agricultural farms of different ownership.

Approximate topics of the graduation works

State certification involves passing two state examinations: Technology of Livestock and comprehensive examination in organizing technology and management of crop production.

Graduate's Academic Rights

Students can continue their training program for bachelors in the direction 6.090101 «Agronomy».

Graduates' Spheres of employment

After graduation according to the direction of «Agronomy» the graduates are ready to work in the field of economy according to the State Classificatory 003 2010 agriculture and forestry, crops, growing of cereals and industrial crops, vegetables, ornamental gardening and growing of seedling, growing of fruit, berry, crop for the production of beverages and spices, providing services in the areas of crop growing and livestock breeding, improvement of landscape. A specialist can perform professional work, determined in the State Classificatory 003 2010 and can take the following initial positions: Agronomist of the department (work team, agricultural division, farm shop, work shop) , Specialist in organization.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Organization and technology of farming»**

№	The name of the course, practice	Semest er	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine	1	81	1,5	2,25
2	Ukrainian language (professionally trained)	2	54	1,0	1,5
3	Cultural Studies	1	54	1,0	1,5
4	Fundamentals of philosophical knowledge	2	81	1,5	2,25
5	Economic Theory	2	81	1,5	2,25
6	Sociology	5	54	1,0	1,5
7	Fundamentals of Jurisprudence	1	54	1,0	1,5
8	Foreign language (professionally trained)	1,2,3,4	216	4,0	6
9	Physical training	1,2,3,4	216	4,0	6
Total for the cycle			891	16,5	24,750
1.2. Cycle of mathematics and natural science (fundamental) training					
1	Botany with the basics of Plant Physiology	1	108	2,0	3
2	Safety of vital functions	2	54	1,0	1,5
3	Higher mathematics	1	54	1,0	1,5
4	Fundamentals of Ecology	1	81	1,5	2,25
5	Agriculture and soil science	1,2	108	2,0	3,0
6	Agro-chemistry	1,2	118	2,5	3,27
7	Fundamentals of animal husbandry and bee keeping	2	81	1,5	2,25
8	Fundamental of Management	5	81	1,5	2,25
9	Economic of Agriculture	3	81	1,5	2,25
10	Study of Constructions	4	81	1,5	2,25
11	Fundamentals of electrification and automation of agricultural production	3	81	1,5	2,25
12	Office work	5	81	1,5	2,25
13	Fundamentals of Standardization and Certification	3	81	1,5	2,25
Total for the cycle			1143	21,13	31,750
1.3. Cycle of professional and practical training					
1	Labor protection	4	54	1,0	1,5
2	Fundamentals of Entrepreneurship and Agribusiness	6	81	1,5	2,25
3	Accounting and finance	6	54	1,0	1,5
4	Rules of Traffic and traffic safety	2	162	3,0	4,5
5	Technologies in the fields of Animal Husbandry	4,5	162	3,0	4,5
6	Technologies in the fields of Crop Growing	5,6	162	3,0	4,5

7	Tractors and Cars	2	135	2,5	3,75
8	Agricultural machinery and their use	2	135	2,5	3,75
9	Agricultural Product Provision and Storage Technologies with Processing Basics	5,6	135	2,5	3,75
10	Computerization of Agricultural Production	5	54	1,0	1,5
11	Fundamentals of Veterinary and zoo hygiene	4	81	1,5	2,25
12	Organization and planning of farm	5,6	135	2,5	3,75
13	Teaching Practice in Botany	2	54	1,0	1,5
14	Teaching Practice in Farming	2	54	1,0	1,5
15	Teaching Practice in Agro-chemistry	2	54	1,0	1,5
16	Teaching Practice in Crop Growing Production Technology	5,6	162	3,0	4,5
17	Teaching Practice in Animal Husbandry production Technology	4,5	108	2,0	3,0
18	Teaching Practice in Agricultural Product Provision and Storage Technologies with Processing Basics	6	54	1,0	1,5
19	Teaching Practice in Organization and Planning of Farming	6	54	1,0	1,5
20	Training practice in labor profession (tractor driver)	2	270	5,0	7,5
21	Training practice in labor profession (veterinary science operator)	4	108	2,0	3,0
22	Technology Practice	2,3,4,5	810	15,0	22,5
23	Pre-diploma practice	6	216	4,0	6,0
Total for the cycle			3294	61	91,50
Regulatory part, total			5328	99	148,50
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
2.1.1. Cycle of humanitarian, social and economic training					
1	Family home culture and home economics	1	54	1,0	1,5
2	Legal basis of entrepreneurial activity	5	81	1,5	2,25
2.1.2 Cycle of mathematics and natural science (fundamental) training					
1	Cooperation in Agriculture	3	54	1,0	1,5
2.1.3. Cycle of professional and practical training					
1	Technology of Fruit and Berry Crops Growing Plant Material	3	81	1,5	2,25
2	Technology of Growing of Vegetable Crops Growing Plant Material	3	81	1,5	2,25
3	Fruit Growing	4,5	108	2,0	3,0
4	Technology of Vegetable Crops Growing in the Field Conditions	4,5	108	2,0	3,0
5	Technology of Vegetable Crops Growing in the Greenhouses	4	81	1,5	2,25
6	Plant Protection	4	108	2,0	3,0
7	Agro-meteorology	1	54	1,0	1,5

8	Melioration with the basics of Geodesy	6	54	1,0	1,5
9	Introduction to the Specialty	1	54	1,0	1,5
10	Seed Science with the basics of selection	6	108	2,0	3,0
Chosen by University, total			1044	19	28,5
Elective part, total			1044	19	28,5
Practical training			1944	36,0	54,0
Degree examination			108	2,0	3,0
Total, according to the field of study			6480	120	180

* The number of training hours/credits defined for training of specialists on the basis of basic secondary education

** The titles of cycles of disciplines and forms of State attestation – according the requirements of industry standards for higher education approved 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Cultural studying», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Botany with the basics of Plant Physiology. Examines morphology, anatomy, biology and taxonomy of plants, patterns of development. Certain plants and their systematic groups, structure, origin, variety, distribution. Reproduction of plants. Lower plants. Higher plants. Elements of plant geography.

Safety of vital functions. Negative factors in man's life of natural, caused by technological activities of people, socio-political and military character. State measures are on defense of life of man. Facilities of individual defense of man. Collective facilities of defense of man. Liquidation of consequences of influence on the man of chemical and biological radioactive matters. Dangerous factors of environment, their effect operating on a man, bases of labor physiology and normative requirements to the operational conditions. Methods of identification of harmful and dangerous factors of the technical systems. Facilities of protecting from their operating on a man and natural environment in normal and emergency situations. There are organizational, legal and socio-economic knowledge in area of safety of vital functions.

Higher mathematics (professional aspiration). Trigonometric functions. Complex numbers. Elements of linear algebra. Elements of vector algebra. Analytic geometry. Systems of linear inequalities and linear programming. Differential calculus of functions of one variable. Differential calculus of functions of several variables. Integral calculus. Differential equations. Rows. Elements of the theory of probability and mathematical statistics.

Fundamentals of Ecology. Environmental problems of the day, environmental problems of Ukraine and solutions, basic laws of Ukraine on protection of the environment. Basic principles of environmental management, sources of pollution of the biosphere, environmental regulations, environmental measures, the concept of food safety and raw materials. Environmental knowledge about the consequences of

economic activity, understanding of the nature of manifestation and how to prevent negative phenomena.

Agriculture and soil science. Scheme of soil, properties, classification, geography of soils. Terms of plant life, their regulation, measures for soil cultivation, crop rotation, farming systems, principles of research.

Agro-chemistry. Chemical composition and plant nutrition. Agrochemical properties of soil. Chemical melioration of soils. Classification of fertilizers and their use. The system of fertilizing crops and agrochemical service of agricultural production. The theory of nourishment, role of biogenic elements, properties and use of fertilizers and agrochemical parameters of soil and plants.

Fundamentals of animal husbandry and bee keeping. Physiology with the basics of anatomy. Breeding, maintenance and feeding of farm animals. Biology, bee keeping, use and importance in agriculture.

Fundamentals of Management. The essence of management, agricultural management features, using them to improve the efficiency of agricultural enterprises. Optimal solutions. The style of management and quality. The strategy of economic development.

Economic of Agriculture. Agrarian Policy of Ukraine. Inputs. Land. Manpower. Productivity. Intensification, specialization and concentration of agricultural production. Price and pricing. Economic efficiency.

Study of Construction. Classification of materials used in construction, their composition and structure. The dependence of the properties of the composition and structure. Principle matters of production technology of major building materials, industry applications. Corrosion of materials and tools to enhance their durability. Technical and economic efficiency of materials.

Fundamentals of electrification and automation of agricultural production. Electricity of agriculture. Equipment for control and protection of electric drives. Electrical and automation machines for feeding, milking, ventilation, heating and cooling.

Office work. Basic requirements for the preparation and documentation; the legislative documents: resolutions and orders; organizational documents: instructions; reference information, official documents; efficient storage and transmission of documents to the archive.

Fundamentals of Standardization and Certification. Basic principles and objects of standardization. Categories of normative documents on standardization and types of standards. Metrological assurance of product quality. Quality management and certification of goods.

1.3. Cycle professional and practical training

Labor protection. Work environment and its impact on people. Workplace conditions their classification and valuation. Production harm, human protection methods from its negative impact. Analysis and prevention of occupational diseases and injuries. Principles of safety. Legal and standard regulation of labor protection. Public health and labor protection management in Ukraine. Organization of labor protection in workplace conditions. Economic aspects of labor protection.

Fundamentals of Entrepreneurship and Agribusiness. Organization and management process, conditions and efficient operation of the market behavior of producers and consumers.

Accounting and finance. Organization of accounting. Accounting for fixed assets, cash payments, credit transactions, inventory, cost of production, labor and its payment realization. Analysis of activity. Reporting.

Rules of Traffic and traffic safety. Procedure of traffic, term, responsibilities of driver, traffic signs, speed of overtaking. Stop. Traffic control signals, regulated and unregulated crossroads passing, knowledge to obtain a driver's license.

Technology in the field of Animal Husbandry. Systems of production and organization processes of milk production, recording and evaluation of milk production of cows, the principles of selection work with dairy cattle. Mechanized livestock production technologies. Rationale and quality control. Organization of the mechanized processes at enterprise.

Technologies in the Crop Growing. Morphology and biology of crops, basic of intensive technologies of crops cultivation, basic of seed, programming crops harvest.

Tractors and Cars. Theory and design of modern tractors and cars, the rules of operation and maintenance of main and auxiliary assembly units. Regulating operations. To carry out repairing of machines.

Agricultural machinery and their use. The construction, working parts, Start-up and basic technical and operational performance of the basic models of agricultural and land-reclamation equipment. Technical operation of the machinery park, its logistics. Operational and technological characteristics of the agricultural machines. The components of the process inspection and diagnostics, use the diagnostic units and individual assets maintenance and diagnostics. Organization of engineering and technical services in the performance of this type of work.

Agricultural Products Provision and Storage Technology with Processing Bases. Introduction. Chemical composition and quality of fruits and vegetables. Storage of fruits and vegetables. Basic methods of storage. Canning fruits and vegetables. Technology of processing fruit and vegetable products.

Computerization of Agricultural Production. The construction, principle of personal computer, operating system commands, dialog superstructure, word processing, graphics, spreadsheet, database concepts, solving agronomy. economy.

Fundamentals of Veterinary and zoo hygiene. The necessary theoretical and practical skills in organizing zoo hygienic and veterinary preventive measures on farms.

Organization and planning of the farm. The organization and use of the means of production. Material and technical supply, regulation and wages. Planning for crop production and livestock.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

Family home culture and home economics. Rational use of family resources and equal rights in the distribution among all members of the family, traditional leading of Ukrainian people farming the formation of skills and abilities of rational housekeeping management, planning the family budget and economical use, creation of material and spiritual well-being of the family, contributing the harmonious development of children in the family.

Legal basic of entrepreneurial activity. Study of the legal foundations of entrepreneurship is mastering of the theoretical foundations, its organizational and legal norms, kinds of regulations for state registration, temporary prohibition and permanent limitations of its implementation. The main objective of the legal foundations of entrepreneurship is to outline the contents of the main features and principles of business activities.

2.1.2 Cycle of mathematics and natural science (fundamental) training

Cooperation in Agriculture. To acquaint students with the traditions of cooperation, the legal basis for the formation of the cooperative movement in the world and Ukraine. To understand the advantages of cooperative relationship in the formation of rural infrastructure and food market. Study of the principles of the international cooperative movement, creating of rural service cooperatives and credit unions, participating in the administration of cooperative institutions, kinds of cooperative management.

2.1.3. Cycle of professional and practical training

Technology of Fruit and Berry Crops Growing Plant Material. Biological and morphological characteristics, methods of propagation of fruit and berry plants. Structure of fruit nurseries. Growing of fruit and berry plants.

Technology of Growing of Vegetable Crops Growing Plant Material. Reproduction of vegetables. Preparation of seed. Types of greenhouses. Seedling method of cultivation of vegetable crops.

Fruit Growing. Types of gardens, planting, tillage, forming and trimming, fertilizing and watering. Gathering of fruit. Berry and walnut, grapes.

Technology of Vegetable Crops Growing in the Field Conditions. Economic importance of vegetables, their origin and biological characteristics. Location-based and promising varieties. Technology of cultivation in open field. Seed. Economic efficiency of cultivation.

Technology of Vegetable Crops Growing in the Greenhouses. Economic importance of vegetables in a closed soil, zoned and promising varieties, biological characteristics, place of rotation. Terms of cultivation and harvesting. Cost-effectiveness.

Plant Protection. External of structure pests, structure and function of the external and internal organs. Principles of taxonomy of insects and mites and their classification. Ecology of insects and the effect of external factors on their development. Basic information about plant diseases. Plant Immunity. Fundamentals of general entomology and plant pathology. Plant Immunity. Methods of protection against pests and diseases of field, vegetable, fruit and berry crops. General information about pests.

Agro-meteorology. Agro-meteorological factors and conditions, their impact on the development of plants and animals. Atmosphere, its composition, structure and basic properties. Agro-meteorological forecasts, agro-meteorology of agricultural production.

Melioration with the basics of Geodesy. Melioration of waterlogged lands and swamps. Water regime. Irrigation. General questions of geodesy, mapping, kinds of surveys. Fundamentals of Agro-meteorology.

Introduction to the Specialty. International experience in agricultural production and its development in Ukraine. Scientific and technological progress in agriculture. Higher agricultural education.

Junior Specialists training
Specialty «Production and processing of plant products»
Training direction «Agronomy»
Field of knowledge «Agriculture and forestry»

Amount, ECTS credits – 211

Learning / teaching period, years:

Full-time – 3 years10 months (on the basis of basic secondary education);

Part-time - 3 years10 months (on the basis of secondary education).

Qualification of the graduate – Agro-technologist.

Training of Junior Specialists is carried out in Separated Subdivision NULESU (licensed amount, persons: full-time/part-time):

- Zalishchyky Agricultural College named after Y.Khraplyvy (25/25)
- Nemishaevo Agrotechnical College (50/-)
- Crimean Agroindustrial College (75/50)
- Bobrovytsia College of Economics and Management named after O.Mainova (50/50)
- Prybrezhne Agricultural College (50/50)
- Mukacheve Agricultural College (25/25)

Annotation of Specialty

The development of the society determines the need for continuous production of environmentally friendly crop products. Production of these products can only be achieved by highly qualified specialists who have scientific and practical knowledge of the production and processing of crops, horticulture, market-gardening and viticulture.

Practical Training

Educational and research farms and stations of NULESU, agricultural holdings, agricultural farms of different ownership, farms, basic entities for growing crop production, vegetable, fruit, greenhouse complexes, agricultural refineries, companies for growing and processing of grapes, enterprises of agricultural service.

Approximate topics of the graduation works

State certification involves passing of the state examination in professional subjects.

Graduate's Academic Rights

Students can continue their training program for bachelors in the direction 6.090101 «Agriculture»

Graduates' Spheres of employment

After graduation, graduates get qualification of engineer in agronomy and they can be employed as specialists in agricultural farms of different ownership and are able to perform professional work, a list of which is filed in accordance with the classification of professions DK 003-95 and can take under DK 003-95 following primary positions: agronomist, agronomist of the department (brigade, agricultural station, farm, shop).

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Production and processing of plant products»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine	2	54	1	1,5
2	Ukrainian language (professionally trained)	3	54	1	1,5
3	Cultural studies	1	54	1	1,5
4	Fundamentals of philosophical knowledge	2	54	1	1,5
5	Economic theory	3-4	54	1	1,5
6	Sociology	2	54	1	1,5
7	Basics of Law	2	54	1	1,5
8	Foreign language ((professionally trained)	1-3	216	4	6
9	Physical Training	1-6	216	4	6
10	Political studying	5-6	54	1	1,5
Total for the cycle			864	16	24
1.2. Cycle of mathematics and natural science (fundamental) training					
1	Botany	1	108	2	3
2	Physiology with the basics of microbiology	3	54	1	1,5
3	Agriculture	1-2	108	2	3
4	Pedology	1	54	1	1,5
5	Agro-chemistry	1	108	2	3
6	Agro-meteorology	1	54	1	1,5
7	Safety of Vital Functions	2	54	1	1,5
8	Basics of Ecology	2	54	1	1,5
9	Computerization of Agricultural Production	1-5	108	2	3
10	Economics of Agricultural Production	4	54	1	1,5
11	Basics of management	6	54	1	1,5
12	Higher Mathematics	2	54	1	1,5
Total for the cycle			864	16	24
1.3. Cycle of professional and practical training					
1	Mechanization and Automation of Agricultural Production	1-4	108	2	3
2	Plant protection	3	54	1	1,5
3	Seeds with the basics of breeding and genetics	4-5	54	1	1,5
4	Market-gardening	3-4	54	1	1,5
5	Technology of crop production	4-5	108	2	3
6	Technology of processing and storage of agricultural products	6	54	1	1,5
7	Organization and planning of agricultural units activity	5-6	54	1	1,5

8	Basics of labor protection	3	54	1	1,5
9	Principles of accounting and finance	5	54	1	1,5
10	Essentials of Entrepreneurship and Marketing	5	54	1	1,5
11	Occupational Safety and Health in the field	5	54	1	1,5
12	Olericulture	3	27	0,5	0,7
Total for the cycle			729	13,5	20,25
Regulatory part, total			2457	45,5	68,25
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
2.1.1. Cycle of humanitarian, social and economic training					
1	Ethics and Psychology of Family Life	2	54	1	1,5
2	Religion Studies	6	54	1	1,5
2.1.2 Cycle of mathematics and natural science (fundamental) training					
1	Agricultural melioration with the basics of geodesy	2	54	1	1,5
2	Basics of livestock and beekeeping	2	54	1	1,5
3	Basics of research	6	54	1	1,5
2.1.3 Cycle of professional and practical training					
1	Market-gardening	4-6	128	2,4	3,6
2	Olericulture	4-6	142	2,6	3,9
3	Viticulture	3-6	162	3	4,5
4	Grassland	4	54	1	1,5
5	Technology of grapes processing	5	54	1	1,5
6	Mechanization and Automation of Agricultural Production	4-6	81	1,5	2,25
7	Traffic regulations	1-2	108	2	3
Chosen by University, total			999	18,5	27,75
2.2. Disciplines chosen by students					
2.2.1. Cycle of humanitarian, social and economic training					
1	Foreign language (professionally trained)	1-4	108	2	3
Chosen by students, total			108	2	3
Elective part, total			1107	20,5	30,75
Practical Training			2133	39,5	59,25
Degree examination			108	2	3
Total, according to the field of study			5805	107,5	161,25

* The number of training hours/credits defined for training of specialists on the basis of basic secondary education

** The titles of cycles of disciplines and forms of State attestation – according the requirements of industry standards for higher education approved 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Cultural studies», «Foreign language (professionally trained)»,

«Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

Political studying. Object, subject and methods of political science and its conceptual and categorical apparatus. Global and national political science school, concepts and directions. Political phenomena and values. Political regimes, systems, leadership, conflict, culture. Democracy, consensus, and civil society. Political parties, civil society organizations and movement. The essence and function of the state in the political system of the society.

1.2. Cycle of mathematics and natural science (fundamental) training

Botany. Morphology, anatomy, biology and taxonomy of plants, patterns of development. Definition of individual plants and their taxonomic groups, structure, origin, variety, distribution. Elements of plant geography, propagation of lower and higher plants.

Physiology of the basics of microbiology. Patterns of plant life in the ontogeny of the organism. Metabolism and energy in the plant organism, photosynthesis, respiration, root plant nutrition. Methods for increasing the use of solar power plants and nutrients from the soil. The role of microorganisms in soil fertility and plant nutrition. Methods of application of bacterial fertilizers, feeding by microbes.

Pedology. The main factors of soil formation process. Mineral soil. The purpose of discipline is to examine the soil, genesis, classification, geography and agricultural use of soils. Specification. The response of soils. Geography of Ukraine soils and their use.

Agriculture. Factors of plant life and agriculture laws. Weeds and measures to combat them. Basic concepts of rotation. Fertilizers and their use. The main methods of cultivation.

Agro-chemistry. Chemical composition and plants nutrition, agrochemical soil properties, chemical melioration of soils. Classification of fertilizers and their use; fertilization of crops and agrochemical service of agricultural production; theoretical propositions of power, values of nutrients, properties and use of fertilizers, agrochemical parameters of soil and plants.

Agro-meteorology. Essentials of meteorology, agro-climatology according to the practical activity of agricultural specialists, the impact of meteorological factors on the objects and processes of agricultural production, plant productivity, product quality and cost. Agro-meteorological forecasts.

Safety of Vital Functions. Negative factors in human life of natural, technological, socio-political and military nature. Government measures to protect human life. Personal protection means. Collective protection means. Dealing with the consequences of human exposure to radioactive, chemical and biological substances. Hazardous environmental factors and their effect on humans, basic physiology of labor and regulatory requirements for the activity. Methods for the identification of harmful and dangerous factors of technical systems. Protection from their impact on people and the environment under normal and emergency situations. Institutional, legal and socio-economic knowledge in the field of life safety.

Basics of Ecology. Basic Law of Ukraine on Environmental Protection. Basic principles of environmental management, sources of pollution of the biosphere, environmental regulations, environmental measures, the concept of food safety and raw materials. Environmental knowledge about the consequences of economic activity, the nature of manifestation and how to prevent the negative phenomena.

Computerization of agricultural production. Discipline introduces students to the structure of computers, computer-aided design, programming languages.

Economics of agricultural production. The aim of the discipline is mastering the laws of the emergence and development of agriculture, increasing production.

Principles of Management. Theoretical Foundations of Management. The evolution of management thought, strategy and tactics of modern management functions and management style, decision theory, psychology, ethics and business relationships to ensure effective operation of the management of business activities. Motivation. Organization of control. Ethics Manager. Organization and planning of manager's activity.

Higher mathematics. Complex numbers. Linear Algebra. Vector algebra and analytic geometry. Differential and integral calculus, differential equations.

1.3. Cycle professional and practical training

Mechanization and Automation of Agricultural Production. Study purpose and main technical and economic indicators of domestic and foreign technology, the overall structure and operation of machines and electrical installations, process of working machines adjustments, methods of identifying and troubleshooting of machines; rules of rational use of machine units, storage of agricultural machinery in different seasons, legislation and rules for safety and the environment.

Plant Protection. General information about pests greenery. Features of pests external structure, structure and function of the external and internal organs. Principles of taxonomy of insects and mites, their classification. Ecology of insects and the effect of external factors on their development. Basic information about plant diseases. Plant Immunity. Fundamentals of general entomology and plant pathology. Abatement of pests and diseases of field, vegetable, fruit and berry crops.

Seeds with the basics of breeding and genetics. Recent advances in plant breeding and seed production, breeding methods and selection process, the creation of new varieties and methods of maintaining varietal qualities of seeds. Testing and zoning. Patterns of heredity and variation in plants.

Market-gardening. The discipline involves the examination of biological and physiological bases of fruit, modern production technologies and production of planting material of fruit and berries. Integrated protection, fertilizer system, obtaining of high yields of fruits and berries, conservation and improvement of soil fertility in garden agro coenosis.

Technology of crop production. General characteristics of crops. Biological and morphological features. Regularities of formation of the crop. Solving environmental problems in crop production. Environmental and economic principles of field crops placement. Agro-Technological Factors of technology. Farming systems and principles of crop rotation. Intensive cultivation of agricultural cultures. The state standards for the quality of agricultural products.

Technology of processing and storage of agricultural products. Students learn the basic requirements and storage of main types of crop production, measures to combat loss of products, general issues of conservation and recycling products, methods for determining the quality and implementation of chemical- process control of production.

Organization and planning of agricultural units activity. There is studying of the problems of the agricultural sector, forms of agricultural enterprises, agricultural market infrastructure, principles of cooperatives, forms of work organization, principles and methods of agricultural enterprises planning, organizing of land area, organization and planning of production, organization of storage, processing and sales.

Basics of labor protection. Work environment and its impact on people. Conditions in the workplace, their classification and valuation. Production harm, methods to protect human of its negative impact. Analysis and prevention of

occupational diseases and injuries. Principles of safety. Legal regulation of safety. Public health and safety management in Ukraine. The organization of the workplace. Economic aspects of health and safety.

Principles of accounting and finance. General principles of accounting by national standards, typical specialized forms of records, the basic techniques of documenting business transactions, terms of fixed and current assets, accounting of funds in the cash business, payment arrangements between the organizations for the acquisition of inventories, accounting of calculations for remuneration and payments to payroll, subject of finance, loan and their role, paying state and local taxes and fees.

Essentials of Entrepreneurship and Marketing. Organization and management process, the conditions of effective market behavior of producers and consumers. The essence of marketing guidelines and use of marketing activities. Aims, objectives and functions of marketing. Marketing environment of the enterprise. Methods of forming supply and demand. The essence of the conditions and methods of study. The basic principles of working with buyers. Features of the organization of marketing at the company. System to monitor the implementation of marketing activities.

Occupational Safety and Health in the field. General issues of safety, investigations and records of accidents, injuries analysis, fundamentals of industrial hygiene, fire safety, safety in production processes green of economy. Legislation aimed at ensuring the health and safety of personnel at the field and office work.

Olericulture. Technology of the major vegetable crops in open field and in greenhouses. Basics of sort studies, biological and morphological features of plants. Environmental protection, safety, fire prevention, hygiene and personal care.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

Ethics and psychology of family life. Discipline helps students to get general information about psychology, psychological state of a person, moral content of communication. Socio-psychological mechanism of formation of group norms.

Religion Studies. Milestones of religion and religious studies, religious systems, famous theologians, religious scholars, the meaning of the scriptures. Identifying religious and theological texts from certain beliefs, norms of religious morality.

2.1.2 Cycle of mathematics and natural science (fundamental) training

Agricultural melioration with the basics of geodesy. Types, methods and modes of irrigation of crops, construction and operation of irrigation systems, irrigation methods and technology, fighting salinity.

Basics of livestock and beekeeping. Anatomy and physiology of reproduction, feeding, housing of farm animals, breeding bees.

Basics of research. The purpose of discipline is to study planning and conducting of field experiments, methods of growing experiment, processing the results of experiments.

2.1.3. Cycle of professional and practical training

Market-gardening. Status, problems, prospects and ways to step up gardening. Botanical composition and grouping of fruit and berry plants, their location in Ukraine, in the district, region. Morphological characteristics, production and biological characteristics of fruit, berries, nuts, ornamental plants. Patterns of growth and fruiting. The role of environmental factors in plant life. Principles of plant breeding. The structure

and purpose of nurseries and cultivation technology on virus-free planting material basis. Zoned assortment of fruit, berry, nut crops. Modern types of intensive plantations and technology of laying. Rational Technology harvesting, processing and sales of marketable fruit, bases of sort studies, ornamental horticulture.

Olericulture. Economic importance of field. Modern progressive forms of work organization in vegetable production. Economic efficiency of growing vegetables. Creation a pipe flow of vegetable production. Botanical characteristics and biological characteristics of vegetables. Tillage systems and fertilizers for vegetable crops. The list of recognized varieties and their economic evaluation. Industrial production and intensive technology of cultivation of vegetable crops in open field or in greenhouses. Requirements of state standards for product quality.

Viticulture. General structure of the vine, the basic terms in viticulture. Characterization and display of the most common forms for industrial vine vineyards, queen vaccination and invaccination vines in uncovered and covered viticulture. Quality of basic work to care for the soil and shrubs in the vineyard. Methods grape breeding, mechanization of labor-intensive work, particularly the organization of the collection of hardware and table grapes. Ampelological name and key morphological features of zoned wine and table grapes.

Grassland. Intensive cultivation of fodder crops technology, advanced technology procurement and storage of food.

Technology of grapes processing. Grapes as raw materials for processing and the production of wine products. Microbiological and biochemical basis of winemaking. Classification and chemical content of wines, the technology of their production. Indicators of quality products, especially wine and culture of drinking beverages, methods for determining quality. Organoleptic analysis of wines. Improving quality of grapes and performance against its loss during storage.

Mechanization and Automation of Agricultural Production. The purpose of discipline is to teach students to understand the structure of tractors and agricultural machines. Learn to prepare for work and operating farm machinery units.

Traffic Regulations. Fundamentals of motor law. Procedure of traffic, deadlines, driver responsibilities, traffic signs, speed overtaking. Short stop, stop. Traffic control signals, regulated and unregulated fares intersections, knowledge to obtain a driver's license.

2.2. Disciplines chosen by students

2.2.1. Cycle of humanitarian, social and economic training

Foreign language (for professional purposes). Thorough study of discipline improves students' skills, abilities and knowledge of a foreign language in the process of communication with other countries on various issues related to the life, culture, traditions, promoting comprehensive development of the individual student and his socialization in foreign language society.

Junior Specialists training
Specialty «Production and processing of livestock products»
Training direction « Technology of production and processing of livestock products »
Field of knowledge «Agriculture and Forestry»

Amount, ECTS credits 124,5

Learning / teaching period, years:

Full-time – 4 years (based on secondary education)

Part-time – 3 years (based on secondary education)

Qualification of graduates – technician of production and processing of livestock products

Training of Junior Specialists is carried out in Separated Subdivision of NULESU (licensed amount, persons: full-time/ by correspondence):

- Nemishaevo Agrotechnical College (50/-)
- Bobrovytsia College of Economics and Management named after O.Mainova (50/50)
- Prybrezhne Agricultural College (25/25)

Annotation of Specialty

While training future specialists get deep knowledge of theoretical and practical courses in sphere of production and processing of livestock products. Training of specialists is based on modern and perspective trends of development in animal breeding on introducing modern technologies process into animal breeding. Organization of educational process is aimed at training an expert, who has an ability to apply adaptive technology of production and processing of livestock products and to supply their economical, energetic and ecological efficiency.

Practical Training

Research Stations and Educational and Research Farms of NULESU, Southern branch of NULESU «Crimean Agro technical University», Separated subdivision of NULESU State Enterprise «Educational and Research Poultry Breeding Plant named after Frunze», enterprises of agricultural sector, plants of processing industry, dairy factories, and agricultural enterprises of various kinds of property.

Approximate topics of graduation thesis

Governmental certification means passing a state examination on special disciplines.

Graduate's Academic Rights

Graduates can continue their education in accordance with curricula of training bachelors, elements of which can be found in educational plans of junior specialists of the second year of studying 6.090102 «Technology of production of livestock products».

Graduates' Spheres of employment

Graduates with diploma of junior specialists get qualification «Engineer in technology of production and processing of livestock products» and can get a job at an enterprise in sphere of processing of agro-industrial complex in accordance with the chosen specialty and at agricultural enterprises of different kinds of property in accordance with the needs of the state in specialists and made inquiries by enterprises which are bases for practical training of students, who can do work in accordance with the qualification achieved after training.

**Curriculum of training specialists of EQL «Junior Specialist»
in specialty «Production and processing of livestock products»**

№	The name of the course, practice	Semest er	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine	3	54	1	1,5
2	Ukrainian (professionally–oriented)	3	54	1	1,5
3	Study of Culture	4	54	1	1,5
4	Fundamentals of Philosophy	4	54	1	1,5
5	Basic principles of Economic Theory	6	81	1,5	2,25
6	Basic principles of Law	8	54	1	1,5
7	Sociology	7	54	1	1,5
8	Foreign Language (professionally-oriented)	6	108	2	3
9	Physical training	5,7	108	2	3
	Total for the cycle	9	621		17,25
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Higher Mathematics	3	81	1,5	2,25
2	Basic principles of genetics and selection of livestock	3	135	2,5	3,75
3	Computer Science	4	108	2	3
4	Livestock Breeding	4	135	2,5	3,75
5	Livestock Anatomy and Physiology	4	216	4	6
6	Labor Protection	5	81	1,5	2,25
7	Safety of Vital Activity	5	54	1	1,5
8	Fundamentals of Ecology	8	54	1	1,5
9	Inorganic chemistry	3	81	1,5	
10	Microbiology	4	162	3	4,5
	Total for the cycle	10	1107	20,5	28,5
1.3. Cycle of professional and practical training*					
1	Fodder technology with Basic principles of Fodder production	4	108	2	3
2	Mechanization of livestock products production process	4	108	2	3
3	Livestock Feeding	4	189	3,5	5,25
4	Hygiene with basic principles of Veterinary Science	5	135	2,5	3,75
5	Technology of reproduction of farm animals	6	216	4	6
6	Technology of Milk and Beef Processing	7	270	5	7,5
7	Technology of Hog Breeding products	6	189	3,5	5,25
8	Technology of Poultry farming products	8	108	2	3
9	Horse Breeding	7	54	1	1,5
10	Standardization of livestock products	8	54	1	1,5
11	Economics of livestock products	7	54	1	1,5

	production				
12	Organization and planning of agricultural enterprises activity	8	135	2,5	3,75
13	Management and Marketing	8	54	1	1,5
14	Basic principles of Business Accounting	7	54	1	1,5
15	Technology of Workshops Equipping	6	108	2	3
16	Technology of Livestock Products Processing and Manufacture	8	216	4	6
17	Basic Principles of Specialty	1	54	1	1,5
	Total for the cycle	17	2106	39	58,5
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University*					
2.1.1. Cycle of professional and practical training*					
1	Fundamentals of Family Education	7	54	1	1,5
2	Veterinary and Medical Examination	8	54	1	1,5
3	Technology of Sheep Breeding	5	81	1,5	2,25
4	Technology of Apiculture	8	81	1,5	2,25
5	Technology of Rabbit Breeding	8	54	1	1,5
6	Technology of Fish Farming	5	54	1	1,5
	Chosen by University, total	6	378	7	10,5
	Elective part, total		378	7	10,5
	Total, according to the field of study		4482	78	124,5

* The number of training hours/credits is defined for preparation of specialists on the basis of basic secondary education

** The names of cycles of disciplines and forms of State attestation – according to the requirements of industry standards for higher education approved in 2009, EQC and OPP specialty.

Subjects of the curriculum annotations

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally-oriented)», «History of Ukraine», «Study of Culture», «Foreign language (professionally-oriented)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Basic principles of livestock genetics and selection – cytological and molecular basic principles of heredity; laws of heredity in conditions of gamogenesis; forms of heredity and changeability; using immunogenetics in Animal Husbandry;

Computer Science – theory of computer science; computer technology; operating systems; computer systems and networks; computer network «Internet»; systems of data processing; systems of tabular data processing; systems of managing of data bases; technology of economic data processing;

Livestock Breeding – methods of livestock valuation and selection; methods of their breeding, organization of pedigree process in agriculture; structure of herd; studying of breed and its structure; constitution, exterior and interior of livestock.

Livestock Anatomy and Physiology – constitution, topography, and functions of organs and organisms of animals; their comparative anatomical, and age-specific

features, physiological constants of different kinds of poultry; physiological processes which take place in their organisms and influence of external environment upon them; general physiological and biological terms.

Basic principles of Labor Protection – Law of Ukraine «About Labor Protection»; industrial sanitary; organization of work and advanced experience; examination, analysis, accounting and reporting, improvement of labor conditions; fire safety; first medical aid; organization of labor protection.

Safety of Vital Activity – negative factors of natural, man-caused, social and political, military character and their influence upon human life; state methods of prevention; means of individual and collective humans' prevention; liquidation of negative results caused by radioactive, chemical and biological substances upon mankind; perilous factors of environment, their influence upon mankind; basic principles of labor physiology and normative requirements of labor protection; identification of injurious factors of technical systems, protection means from their influence upon man and natural environment in natural and emergency situations; organizational, legal and social and economic knowledge of human vital functions.

Fundamentals of Ecology – modern ecological problems; ecological problems of Ukraine and their solution; fundamentals of legislation of Ukraine about environment protection; the main principles of efficient managing natural resources; pollution of biosphere; ecological standards, measures of nature protection; terms of food and raw materials; ecological knowledge of industrial activities and their prevention.

Inorganic Chemistry – basic terms and laws of composing electronic schemes of atoms of main elements and side groups; using periodic law and system by D. I. Mendeleyev; characterizing chemical peculiarities of special elements.

Microbiology – constitution of microorganisms; principles of their growing and reproduction; interacting between them; their influence upon production; technical methods of their prevention; principles of organization of sanitary and hygienic control at the process of manufacturing animal products; the main sanitary norms and rules for enterprises of beef and milk production; rules of personal hygiene; the order of disinfection.

1.3. Cycle of professional and practical training

Fodder technology with basic principles of feed manufacturing – fodder crops; their significance, chemical composition, classification; technological and biological classification of fodder crops; technology of growing, stocking and keeping them, land improvement; means of creation cultural pastures and their rational using; composing schemes of green production line; organization of fodder crops production at enterprises in accordance with modern technologies.

Mechanization of process of animal products production – the main technological processes and systems of machines for complex mechanization of fodder crops and animal production; systems of using machinery and equipment at farms and secondary enterprises; rules of labor protection and fire safety; designation, structure, technological schemes of functioning, regulation mechanisms and technical and economical characteristics of machinery and equipment.

Livestock Feeding – chemical composition and nutritiousness of the main groups of fodder and value of basic groups of forage and their influence on animals' health; productivity and quality of products; technology of stocking, storage and preparation of forage for livestock feeding; valuation of quality of forage; norms of livestock feeding; methods of control of valuable and balanced livestock feeding; prophylaxis of forage poisonings; feeding of sick livestock; economic efficiency of valuable feeding.

Hygiene with basic principles of Veterinary Science – hygienic requirements of air environment, water, feeding; requirements of organization of stall and pasture for livestock; zoo hygienic measures of stock-raising; basic principles of veterinary science; economic losses which are caused by contagious and non-contagious diseases of livestock; prophylaxis of diseases and rendering first medical aid.

Technology of livestock reproduction – anatomy and physiology of the sexual system of females and males; methods of getting sperm of sires; dilution, keeping and transporting of sperm; accident prevention during exploitation of cryogenic equipment; methods of artificial insemination of females; increasing the level of their impregnation; fundamentals of transplantation of embryos; physiology and pathology of pregnancy; parturition, diagnostics of pregnancy; physiology and illnesses of suckling gland; reasons of females' sterility and methods of their liquidation.

Technology of Milk and Beef Processing – technology of milk and beef processing at any enterprise;

Technology of Hog Breeding products – the main breeds of pigs and their biological features; fodder and norms of feeding of different groups of pigs; rearing animal husbandry; methods of valuation of pigs productivity; sampling and rearing of animal husbandry; composition of a plan of selection and pedigree project; methods of pigs breeding.

Technology of Poultry farming products – the main directions of development of poultry farming; crossing and hybridization; pedigree; characteristics of cross breeding; methods of breeding; eggs properties; poultry farming; standards of poultry meat; technical conditions of eggs keeping; machines and equipment for poultry farming.

Technology of Sheep breeding products – the main breeds of sheep and their biological features and productivity; the main stems, norms of feeding and watering different groups of sheep composition of a plan of selection and pedigree project; methods of sheep breeding.

Horse breeding – biological characteristics of horses; their rearing, keeping, feeding, reproduction; rules of testing pedigree horses at hippodromes and their participation in horse-riding competitions; fundamentals of management and marketing of horse breeding;

Standardization of Animal Products – the main points, functions, goals, methodological principles of State system of standardization of animal products; structure of standards; industrial standards, forms and methods of management of quality of animal products; control methods; methods of control and management of quality of animal products.

Economics of Manufacture of Animal Products – The main terms of economics; subjects and objects of market relations, regulatory mechanisms of market economy; characteristics of highly developed market economy; kinds of markets and market infrastructure; kinds of funds; ways and means of improving and rational using of land, material and technical, monetary resources; intensifications of ecology in agriculture; activities of specialization of production and cost price of production; ways and factors of increasing efficiency of agriculture.

Organization and planning of activity of agricultural enterprises – tasks and the main directions of Agrarian Policy of Ukraine under the conditions of market relations; organizational forms of farm enterprises; means of production and their realization in livestock sector; forms of organization of labor and its improvement in livestock sector; remuneration of labor in live-stock sector under the conditions of market relations; realization of basic production processes of cattle breeding, pig breeding, sheep breeding, poultry farming; realization of stocking and manufacturing animal products.

Management and Marketing – modern methods, functions and organization of management; the main types of organizational structures; methods of development and grounds of decisions; process of communications; production management; management of personnel; methods of forming of demand and supply; sales opportunities.

Basic principles of Business Accounting – general principles of organization of business accounting in accordance with national standards; typical and specialized forms of primary registration documents, order of their drafting and putting them into execution; generalities of account of the main and reverse counting, of payment of labor, of prime cost, of financial result of entrepreneurial activity; method of analysis of entrepreneurial economy and proper problem-solving.

Technology of Workshops Equipping – setting, structure, principle of operation, methods of fitting, requirements of workshops equipping, safety engineering, influence of disrepair of equipment on production.

Technology of Livestock Products Processing and Manufacture – industrial technology of livestock products processing and manufacture, animal breeds and their efficiency, experience of leading enterprises not taking into consideration their forms of property, the main problems of branch.

2. Elective academic disciplines

2.1. Disciplines chosen by University

Veterinary and Medical Examination – categories of livestock for slaughter; methods of transportation of animals; meat-processing enterprises and slaughterhouses; sanitary requirements; veterinarian and medical estimation of quality of slaughtered products; methods of canning and technology of food production; delivery; veterinarian and medical examination of food products of animal and vegetable origin.

Fundamentals of Family Education – family resources; equal rights in distributing between all members of family; traditional administering; forming of abilities and skills of rational housekeeping; planning family budget and its economical spending; creation of financial and spiritual prosperity of family and harmonious upbringing.

Technology of Sheep Breeding – the main breeds of sheep; biological characteristics and productivity; fodder, norms of feeding and watering different groups of sheep; composition of a plan of selection and pedigree project; methods of sheep breeding.

Technology of Apiculture – modern technologies of beekeeping; a role of bees in accordance with pollination of entomophilous crops; biology of melliferous bees; mechanization and equipment of beekeeping; honey bee colony; rules of beekeeping during a year.

Technology of Rabbit Breeding – biological characteristics of rabbits; technologies of rabbit breeding; their breeding and sampling; rabbits breeds and their characteristics; fundamentals of breeding features; rearing, feeding; composition of a plan of selection and pedigree project;

Technology of Fish Farming – biological characteristics, general information of pond fishery; production processes; fishery under untraditional conditions; transporting of live fish.

Junior Specialists training
Specialty «Forestry»
Training direction «Forestry, park and gardening management»
Field of knowledge «Agriculture and forestry»

Amount of hours, credits ECTS – 180

Learning / teaching period, years:

Full-time – 4 years (on the base of basic secondary education)

Part-time – 3 years (on the base on general secondary education)

Qualification of graduates – forestry technician

Training of Junior Specialists is carried out in Separated Subdivision NULESU (licensed amount, persons: full-time/ by correspondence):

- Boyarka College of Ecology and Natural Resources (30/30)

Annotation of Specialty

The main objectives of specialty are training of specialists to conduct complex of forestry work related to reforestation, afforestation, preparation and execution logging in forest stands and skills of organization and management of production.

Practical Training

Students have practical training in the state forestry enterprises of Kyiv region (Separated Subdivision NULESU «Boyarka forest research station»; SE Ivankiv forestry; SE Fastiv forestry; SE Makariv forestry), Zhytomyr region (SE Korostyshiv forestry), Rivne region (SE Sarny forestry, SE Dubrovytcya forestry), Volyn region (SE Lutck forestry); Yalta ESD of biology and ecology of subtropical plants landscaping NULES of Ukraine.

Approximate topics of graduation works

State certification involves compiling of comprehensive examination in specialty

Graduate's Academic Rights

Students can continue their studies for Bachelor program in the direction of 6.130101 «Agronomy»

Graduates' Spheres of employment

After qualification technique forestry graduates can work at forestry enterprises of the State forestry Agency (state forestry, forest melioration station, hunting management enterprises).

**Curriculum of training specialists of EQL «Junior Specialist»
in specialty «Forestry»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training *					
1	History of Ukraine	2	54	1	1,5
2	Ukrainian (professionally–oriented)	5	54	1	1,5
3	Study of Culture	2	54	1	1,5
4	Physical training	5-7	180	3,3	5
5	Fundamentals of Philosophy	6	126	2,3	3,5
6	English (professionally–oriented)	5,6	126	2,3	3,5
7	Basic principles of Law	1	54	1	1,5
8	Sociology	7	54	1	1,5
9	Economic theory	3	126	2,3	3,5
Total for the cycle			828	15,3	23
1.2. Cycle of mathematics and natural science (fundamental) training*					
1	Fundamentals of Ecology	3	54	1	1,5
2	Safety of Vital Activity	3	54	1	1,5
3	Botany	3,4	216	4	6
4	Soil science	5	180	3,3	5
5	Basics of drawing	3	126	2,3	3,5
6	Geodesy	5,6	180	3,3	5
7	Basics of higher mathematics	6	126	2,3	3,5
8	IT and computer technique	3	126	2,3	3,5
The total number of cycle			1062	19,7	29,5
1.3. Cycle of professional and practical training *					
1	Forest Protection	7,8	180	3,3	5
2	Economics, organization and planning of forestry	7-8	180	3,3	5
3	Forestry	5-7	234	4,3	6,5
4	Forest Plants and Forest reclamation	4-6	288	5,3	8
5	Mechanization of Forest Farm	4	234	4,3	6,5
6	Forest Taxation and Forest Management	5-8	288	5,3	8
7	Forest Use	7-8	126	2,3	3,5
8	Wood research and Forest commodity research	4	126	2,3	3,5
9	Dendrology	3-4	216	4	6
10	Basics of Labor Protection	5	54	1	1,5
11	Labor Protection in industry	6	54	1	1,5
The total number of cycle			1980	36,7	55
Regulatory part, total			3870	71,7	107,5
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
2.1.1. Cycle of humanitarian, social and economic training					
1	General chemistry	3	126	2,3	3,5
2	Analytical chemistry	4	72	1,3	2

Total for the cycle			198	3,7	5,5
2.1.2. Cycle of professional and practical training					
1	Introduction to the specialty	1	72	1,3	2
2	Physics	6	180	3,3	5
3	Basics of Entrepreneurships	7,8	126	2,3	3,5
4	Non-timber forest Resources	7	72	1,3	2
5	Landscaping	5	54	1	1,5
6	Meteorology	8	54	1	1,5
7	Equipment of wood processing production	8	126	2,3	3,5
8	Nature Protection	7	126	2,3	3,5
9	IT technology at forestry	8	126	2,3	3,5
10	Hunting	8	126	2,3	3,5
Total for the cycle			1062	19,7	29,5
Elective part, total			1260	23,3	35
Practical training			1260	23,3	35
Degree examination			1350	25	37,5
Total, according to the field of study			6480	120	180

* The number of training hours/credits defined for preparation of specialists on the basis of basic secondary education

** The names of cycles of disciplines and forms of State attestation – according to the requirements of industry standards for higher education approved in 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1. Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Study of Culture», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Basic principles of Law», «Sociology», «Physical training» and «Economic theory» see paragraph 2.2. and p. 1.1. specialty «Jurisprudence».

1.2. Cycle of mathematics and natural science (fundamental) training

Fundamentals of Ecology. The purpose of discipline is the studying of regularities of social interaction with the environment for rational nature management, providing environmental and economic knowledge, development of skills with environmental orientation, effective implementation of environmental measures.

Safety of Vital Activity. The purpose of discipline is student's acquisition of competences, knowledge and skills for professional specialty, taking into account the risk of industrial accidents and natural hazards that can cause emergency situations and lead to adverse effects on the objects of management, as well as the formation of student's responsibility for personal and collective security.

Botany. Regularities of plant composition and life, the diversity of the vegetable kingdom, the importance of plants in structure of forest biogeocenosis and as the most important component of the biosphere.

Soil science. Basic laws of Soil Science, characteristics of soil formation processes, structure and properties of the soil by increasing its fertility and protection against erosion. Rational use of nature resources.

Basics of drawing. The task of the discipline is to study basics of topographical and technical drawing, reading and performing of topographical and technical drawing according to state standards.

Geodesy. General information about geodesy. Images of the Earth's surface on plans and maps. The orientation of the lines. Theodolite shooting. Defining areas. Leveling. Topographic shooting. Basics of photo-topographical shooting. Surveying work while streamlining forest plantations.

Basics of higher mathematics. Functions and calculations. Number of sets. Use of derivative and integral. Differential Equations. Raws. Elements of mathematical statistics.

IT and computer technique. Subjects and basic points of IT. Classification of personal computers. Software. Archivation. Computer viruses. Operation system Windows XP. Services and standards programs. System of management of database Microsoft Access. Computers nets. Net Internet.

1.3. Cycle of professional and practical training

Forest Protection. Study of pests and diseases of forest plants from the complex of morphologic features. Acquisition with forest plantations

Economics, organization and planning of forest farm. Study of theoretical basics and practical skills in the problems of rational use of economic regularities of market economy, development of forest farms, conducting of production in departments for providing maximum output of products of high quality with the least cost.

Forestry. Information about nature of forest. Forests ecology, restoration and formation of forests, forests typology. Cuttings of main use. Other cuttings, related to forestry. Thinnings. Sanitarian cuttings. Other kinds of forest care

Forest Plants and Forest reclamation. Technology of stockpiling and processing of forest seeding raw. Determination of sown qualities of forest seeding forest selection and seeding. Forest nurseries and organization of their territories. Formation of forest plants. Care of forest plants.

Mechanization of Forest Farm. Main knowledge about mechanization of productive processes and machines. Tractors and machines. Technological machines. Automation of productive processes.

Forest Taxation and Forest Management. Valuation of tree trunk. Forestry-Taxation signs of plantations. Inventory of growth trees. Valuation of logging fund. The object of forest management. Accounting for forests and methods of forest management.

Forest Use. Kinds of forest use. Cultivation of forest cutting. Wood stockpiling. Secondary use.

Science about wood and forestry commodity. Composition, properties and defects of wood, which form custom qualities of forest materials, products from roots and bark of the trees. Basics of standardization of forest goods and quality of woody materials, merchandising methods of quality control.

Dendrology. Species diversity of woody plants, the ratio of major species to various environmental factors. Range of promising tree species for ornamental planting in Ukraine. Types of areas. Life forms and cycles. Phylogenetic system. Dendro-flora of Ukraine. Plant introduction. Forest forms and associations.

Basics of Labor Protection. Work environment and its impact on people. Conditions in the workplace, their classification and estimation. Production harm, protection methods of its negative impact. Analysis and prevention of occupational diseases and injuries. Basics of safety. Legal and regulation of safety. Public health and

safety management in Ukraine. Organization of the workplace. Economic aspects of health and safety.

Labor Protection in industry. Purpose of the discipline is the formation in future professionals skills and competencies to ensure effective management of occupational safety and improving working conditions, taking into account scientific and technological progress and international experience, as well as awareness of the indissoluble unity of successful professional activities must comply with all the safety requirements of work in a particular area.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

General Chemistry. Basic concepts and laws of chemistry. The structure of the atom. Chemical bond. Major classes of inorganic compounds. Solutions. Oxidation-reduction reactions. Elements of the seventh and sixth groups. Elements of the fifth and fourth groups. Metal elements. Chemistry of carbon. Hydrocarbons. Oxygen containing organic matter. Nitrogen containing organic matter.

Analytical Chemistry. Theoretical foundations of analytical chemistry. Analysis and synthesis. Quantitative and qualitative analysis. Chemical methods of analysis. Physical methods of analysis. Metrological characteristics of different methods of analysis.

2.1.2 Cycle of mathematics and natural science (fundamental) training

Introduction to specialty. The structure of higher education in Ukraine. The educational process in higher education institutions. Normative documents. Psychological foundations of learning in higher education. Modern methods of searching for scientific and technical information. Independent work. Technology of job search.

Physics. Laws of translational and rotational motion, thermodynamic processes, continuous and alternating current, radioactive decay, the properties of electric and magnetic fields, the structure of the atom and the properties of its nucleus, elementary particle.

Basics of Entrepreneurships. Fundamentals of Entrepreneurship. Principles of Management and Marketing.

Non-wood forest Resources. Harnessing the power of forest grasslands, increase of their productivity and quality. Harvesting of forest berries, fruits, nuts, mushrooms and other food processing plants and food.

Landscaping. Types of landscaping and principles of composition. Design of landscaping. Park construction. Features of landscaping villages. Principles of selection of ornamental plants for gardens and gardening projects. Economics and organization of green construction.

Meteorology. The discipline studies general laws of atmospheric processes and phenomena of global atmospheric processes and patterns of distribution and changes in weather around the globe, as well as methods of prediction of the formation of climate and its fluctuations on the Earth and in different geographical areas.

Equipment of wood processing production. General classification and direction of woodworking equipment. Construction machines. Machines for processing of surfaces.

Nature protection. This discipline includes information about fundamental, theoretical, global and resource-sectoral environmental issues, strategies, tactics and methods used at the local, national and global level.

IT technology at forestry. Information Technology. Basic concepts and definitions. Calculating among MS Excel. Using MS Access. GIS system, their variety and purpose

Hunting. Hunting grounds. Biology, ecology and ethology of hunting birds. Biology, ecology and ethology of hunting animals. Hunting resources. Methods of keeping game animals. Optimization of populations of hunting animals. Hunting weapons, equipment, and traps. Types and methods of hunting. Initial processing of taken venison, preparation and examination of trophies. Hunting dog breeding. Protection of wildlife.

Junior Specialists training
Specialty «Green construction and horticulture»
Training direction «Forestry, park and gardening management»
Field of knowledge «Agriculture and Forestry»

Amount, ECTS credits – 150

Learning / teaching period, years:

Full-time – 3 years 6 months (on the basis of basic general secondary education)

Part-time – 2 years 6 months (on the basis of full general secondary education)

Qualification of graduates – specialist in Horticulture

Training of Junior Specialists is carried out in Separated Subdivisions of NULESU (licensed amount, persons: full-time/part-time):

- Berezhany Agrotechnical Institute (35/-)
- Boyarka College of Ecology and Natural Resources (25/25)
- Bakhchisaray College of Construction, Architecture and Design (25/-)

Annotation of Specialty

Training of Junior Specialists is aimed at training of highly qualified specialists who are able to solve a wide range of problems related to the organization and carrying out of landscape construction and management, development of design projects, planning and planting of green construction objects.

Practical Training

Students have practical training at the state forestry organizations, farm forestry companies, departmental forestry, plant utilities, landscaping enterprises, public and private nurseries, the State reserves, parks and arboretums, private firms of landscape design, state administration, management of land resources.

Approximate topics of the graduation works

1. Project of landscaping of kindergarten.
2. The use of roses planting, technology of its cultivation.
3. The project of gardening offers and landscaping of administrative building.
4. Floral area design.
5. Proposals for gardening and landscaping hostel.
6. The project of the use of deciduous trees and shrubs in the reconstruction of landscape park groupings.

Graduate's Academic Rights

Graduates can continue their studies by the program of Bachelor's training in direction 6.090103 Forestry and Horticulture.

Graduates' Spheres of employment

After graduating the junior specialists can be employed in public services, forestry and agricultural enterprises, hold primary positions of master, specialist in Landscape Architecture, engineering, designer.

**Curriculum of training specialists of EQL «Junior Specialist»
in specialty «Green construction and horticulture»**

№	The name of the course, practice	Semest er	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	Fundamentals of Philosophy	5	108	2,0	3,0
2	Study of Culture	2	54	1,0	1,5
3	Ukrainian (professionally-oriented)	6	54	1,0	1,5
4	History of Ukraine	5	54	1,0	1,5
5	Sociology	7	54	1,0	1,5
6	Economic theory	4	54	1,0	1,5
7	Fundamentals of Law	2	54	1,0	1,5
8	Foreign language (professionally-oriented)	5-7	216	4	6
9	Physical training	5-6	270	5	7,5
10	Safety of Vital Activity	4	54	1,0	1,5
Total for the cycle			972	18	27
1.2. Cycle of mathematics and natural science (fundamental) training					
1	Drawings and graphic charter	2-3	135	2,5	3,8
2	Botany	3	135	2,5	3,8
3	Economic Geography	3	108	2,0	3,0
4	Ecology and Environmental Sciences	2	54	1,0	1,5
5	Mathematics	4	108	2,0	3,0
6	Computers and computer technology	4	108	2,0	3,0
7	Fundamentals of labor protection	5	54	1,0	1,5
Total for the cycle			702	13	19,5
1.3. Cycle of professional and practical training					
1	Economics of enterprise	5	108	2,0	3,0
2	Pedology with the basics of farming	3-4	108	2,0	3,0
3	Dendrology	4	162	3,0	4,5
4	Floriculture	5-6	144	2,6	4
5	Nurseries of ornamental crops	6	108	2,0	3,0
6	Plant protection	5	108	2,0	3,0
7	Work mechanization	5	108	2,0	3,0
8	Landscape architecture	6	90	1,6	2,5
9	Landscape design	7	108	2,0	3,0
10	Design of green construction	6-7	162	3,0	4,5
11	Work organization in horticulture construction	6-7	162	3,0	4,5
12	Labor protection	7	54	1,0	1,5
Total for the cycle			1422	26,3	39,5
Regulatory part, total			3096	57,3	86
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
2.1.1. Cycle of mathematics and natural science (fundamental) training					
1	Introduction to specialty	1	54	1,0	1,5
2	Standardization	6	54	1,0	1,5
3	Meteorology	6	54	1,0	1,5

4	Fundamental reserve studies	7	72	1,3	2,0
2.1.2. Cycle of professional and practical training					
1	Automated data processing	6	72	1,3	2,0
2	Decorative lawns	5	54	1,0	1,5
3	Recreational forestry	5	108	2,0	3,0
Chosen by University, total			468	8,6	13
Elective part, total			3564	66	99
Practical training			1081	20	30
Degree examination			324	6	9
Total, according to the field of study			4969	92	138

* Number of hours / credits is identified for professionals training on the basis of basic secondary education.

** Names of cycles of subjects and forms of state exams - in accordance with higher education standards, approved in 2012, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1. Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally oriented)», «History of Ukraine», «Study of Culture», «Foreign language (professionally oriented)», «Fundamentals of Philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

Safety of Vital Activity. Discipline creates knowledge about common patterns of occurrence and development of hazards and emergencies, their properties, the possible impact on human life and health. Safety in emergencies. Organization and management of Safety.

1.2. Cycle of mathematics and natural science (fundamental) training

Drawings and graphic charter. The discipline studies the basics of composing and reading of drawings, their registration in accordance with the standards. The concept of linear perspective, drawing mastery techniques, landscape and architectural sketches, drawing of geometric figures, natural tree drawing, ornamental plaster figure, plaster figure of face.

Botany. Examines morphology, anatomy, biology and systematic of plants, patterns of their development. Certain plants and their systematic groups, structure, origin, variety, distribution. Reproduction of plants. Lower plants. Higher plants. Elements of plant geography.

Economic Geography. Introduction to geodesy, surveying the design objects of green construction and landscape management, project objects during moving of green construction and landscape management into nature.

Ecology and Environmental Sciences. Common problems of nature protection: nature and society, the impact of human activity on nature, nature protection in Ukraine, ecological basis of its protection. Protection and sustainable use of basic natural resources: protection of air, water, soil and minerals, plants and animals. Nature protection as a complex of state, public and international events.

Higher Mathematics (professionally oriented). Elements of matrix theory, general theory of systems of linear equations. Lines on the plane. Lines in space. The curves of the second order. Boundaries of function. The derivative function. Basic theorems of differential calculus. Investigation of functions of several variables. Indefinite integral. Numerical series and their convergence. Power series.

Computers and computer technology. Basic theory of Computer science. Computer technology Operating system. Computer networks and telecommunications. Computer network "Internet". Word processing systems. Systems for processing tabular data. Database Management Systems. Technologies of statistical information processing.

Fundamentals of labor protection. Work environment and its impact on people. Conditions at the workplace, their classification and estimation. Production harm, human protection methods of its negative impact. Analysis and prevention of occupational diseases and injuries. Principles of safety. Legal and normative regulation of safety. Public health and safety management in Ukraine. Organization of the workplace.

1.3. Cycle of professional and practical training

Economics of Enterprise. Enterprise in modern economic system. Personnel. Capital assets and intangible resources. Investments and working capital. Control, forecasting and activity planning. Production and industrial infrastructure. Production, quality and competitiveness. Productivity, motivation and payment. Operating costs and pricing. Financial and economic results and efficiency of activity.

Pedology with the basics of farming. The main factors of plant life, the concept of soil fertility and methods of controlling of basic soil modes. Features of soil as a natural body.

Dendrology. Type, intraspecific systematic units, types of areas. Life forms and cycles. Phylogenetic system. Dendro flora of Ukraine. Introduction of plants. Forest forms and associations. Ecology of plants.

Floriculture. Biological basis of floriculture, general farming means of ornamental herbaceous plants, greenhouse organization, greenhouse farming, ornamental plants of opened ground and potted crops, crop rotation, crop storage and seed production.

Nurseries of ornamental crops. Discipline studies types, purpose, location and organization of growing ornamental crops. Basic security measures of soil fertility. Tree seeds and shrub species procurement, quality and preparation for planting. Reproduction of tree and shrub species by seeds and vegetatively. Growing seedlings of tree and shrub species, agronomic and technological means: growing of grafted ornamental and architectural forms, digging, packing and transportation.

Protection of plants. General information about green plants pests. Features of external structure of pests, structure and function of the external and internal organs. Principles of systematic of insects and mites and their classification. Ecology of insects and the effect of external factors on their development. Basic information about plant diseases. Plant Immunity. Fundamentals of general entomology and plant pathology. Pests control methods and diseases of field, vegetable, fruit and berry crops.

Work Mechanization. Transaction of mechanized operations in Horticulture. The main types of machines and mechanisms used in landscape gardening and landscape construction for the care of green areas in nurseries and specialized farms.

Landscape Architecture. The development of landscape architecture at different historical stages. Landscape ornaments, landscape geoplastics, landscape design. Composite patterns, principles and concepts of the landscape architecture objects formation.

Landscaping. Theoretical foundations of object environment with the use of artificial and natural elements. The history of landscape design. Fixed landscaping. Graphic language and design facilities of landscaping. Floral design and phytodesign of the territory.

Design of green construction. The discipline studies general design issues. Technology of design, project documentation. Methods for calculating and constructing facilities of green construction.

Organization of work in landscape gardening and construction sector. Basic concepts of design documentation to transfer the project into nature. Preparatory work and landscaping and engineering facility. Agro technical work in construction and maintenance of landscaping by design elements. Maintenance, reconstruction and restoration of garden and park facilities. Accounting and preservation of green plants.

Safety in the industry. Discipline studies the issue of labor in agriculture and forestry, investigation and registration of accidents, injuries analysis, fundamentals of industrial hygiene, fire safety, and safety in production processes of green economy.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of mathematics and natural science (fundamental) training

Introduction to specialty. The course aim is to acquaint students with the basics of landscape machinery sector profession, its role in society, creative approach to this goal.

Standardization. The discipline studies the normative documentation of the design of parks, gardens, work in landscaping.

Meteorology. The atmosphere and its properties, solar radiation and radiation balance, temperature control of soil and air. Water in the atmosphere and soil. Wind, weather and its forecast. Climate and its implications for horticulture. Agro meteorological observation.

Fundamental reserve studies. Research and theoretical principles of reserves. Organization of reserves in Ukraine. Principles of protected areas. National legal and regulatory basis for nature protection, sustainable environmental management.

2.1.2. Cycle of professional and practical training

Automated data processing. The discipline studies the principles of automated processing database of ecological environment condition and computer modeling.

Ornamental lawns. The main types of lawn grass seed features. Farming practices of care and lawn creation. Theoretical basis of lawn grass introduction. Classification and agro biological characteristics of lawn grass. The rules and time limits for the main types of organic and mineral fertilizers, seeding rates of lawn grass.

Recreational forestry. The economic value of forests, logging classification, organization and their conduct technology. Features of forestry in forest green areas. Forest stands and recreational digression. Sustainability of forest species to recreational exposure. Forming, head, health and landscape cuttings.

Junior Specialists training
Specialty «Fishery and aquaculture»
Training direction «Water bioresources and aquaculture»
Field of knowledge «Fish breeding and Aquaculture»

Amount, credits ECTS – 120

Learning / teaching period, years:

Full-time – 2 years 10 months (on the basis of secondary education)

Graduate qualification – technician-pisciculturist

Training of Junior Specialists is carried out in Separated Subdivision of NULESU (licensed amount, persons: full-time/by correspondence):

- Nemishaevo Agro technical College (50/-)

Annotation of Specialty

Junior specialists training is aimed at getting deep theoretical knowledge and practical skills on special ichthyology, fish breeding processes, fish diseases, methods of hydro chemical analysis, basics of geodesic researches of water objects, application of nature protective legislation in the field of fish breeding.

Practical Training

Ltd. «Osetr», SE «Irkliiv fishpond», the state enterprise of research farm «Nyvka» of Fish breeding Institute, PE «Zdvyzh», training and Technology Center in aquaculture State Committee «Ukraine», LLC «Khutir na okolytsi», PE «Yosypenko»; pond farm of the College and NNVL of fish breeding of NULES of Ukraine and so on.

Graduate's Academic Rights

Graduates can continue training by Bachelor program on the training direction 6.090201 «Water bioresources and aqua culture».

Graduates' Spheres of employment

Specialist in this specialty is trained to work in the following sectors and types of economic activities (DK 009:2010 approved and put into effect by order of State Consumers standard of Ukraine from 11.10.2010 № 457):

Agriculture, forestry and fish breeding, fish breeding, fishing, marine fishing, freshwater fishing, fish farming (aquaculture), marine fish farming, freshwater fish farming (aquaculture).

A specialist can perform professional work specified under the classification of occupations DK-003: 2010 (valid from 01.11.2010r.) The following classification groups and professional titles of work are: pisciculturist, pisciculturist skilled worker, pisciculturist technician, technologist pisciculturist, State Inspector of fish protection, technician (technologist, technician) in aquaculture production also can take primary positions: ichthyologist, hydro biologist, ichthyopathologist, head of fish breeding farms, head of the pond farm, head of fish reception center.

**Curriculum of training specialists of EQL «Junior Specialist»
in specialty «Fishery and aquaculture»**

№	The name of the course, practice	Semest er	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training **					
1	Fundamentals of Philosophy		54	1	1,5
2	Study of Culture		54	1	1,5
3	Physical training		216	4	6
4	Ukrainian (professionally-oriented)		108	2	3
5	Foreign language (professionally-oriented)		216	4	6
6	Fundamentals of Law		54	1	1,5
7	History of Ukraine		54	1	1,5
8	Sociology		54	1	1,5
9	Economic theory		54	1	1,5
Total for the cycle			864	16	22
1.2. Cycle of mathematics and natural science (fundamental) training**					
1	Computer technologies and programming		81	1,5	2,25
2	Basics of applied mathematics		54	1	1,5
3	Inorganic chemistry		54	1	1,5
4	Analytic chemistry		54	1	1,5
5	Organic chemistry		108	2	3
6	Hydro botany		54	1	1,5
7	Zoology (invertebrates and chordates)		81	1,5	2,25
8	Hydrobiology		135	2,5	3,75
9	Biophysics		54	1	1,5
10	Hydrology and meteorology		54	1	1,5
11	Fundamentals of Ecology		54	1	1,5
12	Safety of Vital Activity		54	1	1,5
Total for the cycle			837	15,5	23,25
1.3. Cycle of professional and practical training**					
1	Introduction to the specialty *		81	1,5	2,25
2	Ichthyology (common and special)		162	3	4,5
3	Fish breeding		216	4	6
4	Ichthyopathology		81	1,5	2,25
5	Hydrochemistry		54	1	1,5
6	Fish farming hydro machinery with fundamentals of geodesy		135	2,5	3,75
7	Fish protection fundamentals and Fish farming Regulations		108	2	3
8	Technical means in Aquaculture		54	1	1,5
9	Economics and organization of fish breeding enterprises		108	2	3
10	Management and Marketing in Fish		81	1,5	2,25

	Breeding				
11	Water microbiology, sanitation and hygiene in fish breeding		81	1,5	2,25
12	Labor protection		54	1	1,5
13	Labor protection on the specialty		54	1	1,5
14	Educational practice:				
15	- Hydro biology		108	2	3
	- For getting working profession		162	3	4,5
	- solving production situational tasks		54	1	1,5
	Technological practice		324	6	9
	Pre-diploma practice		216	4	6
Total for the cycle			2133	39,5	59,25
Regulatory part, total			3834	71	106,5
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
2.1.1. Cycle of humanitarian, social and economic training**					
1	Family and Home culture and Home Economics		54	1	1,5
2.1.2. Cycle of professional and practical training **					
1	Accounting on fish breeding enterprises		54	1	1,5
3	Fundamentals of standardization of aquaculture production		54	1	1,5
4	Mechanization in fish breeding and fishery equipment		81	1,5	2,25
Total by the University election			243	4,5	6,75
Total by the elective component			243	4,5	6,75
Practical training			864	16	24
State certification			243	4,5	6,75
Total by the training direction*			4320	80	120

* Number of hours / credits is identified for training on the basis of secondary education.

** Names of the disciplines cycles and forms of state certification – according to the requirements of industry standards for higher education, approved in 2013, EQC and OPP.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1. Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally-oriented)», «History of Ukraine», «Study of Culture», «Foreign language (professionally-oriented)», «Fundamentals of Philosophy», «Fundamentals of Law», «Sociology», «Physical training» and «Economic theory», see chapter 2.2 and 1.1 of the specialty «Jurisprudence».

1.2. Cycle of mathematics and natural science (fundamental) training

Computer technologies and programming. Basic knowledge of the fundamentals of computer science, modern computer technologies, safety rules when working with electronic computers, computer programming of today, the prospects of development of information systems and technologies.

Basics of applied mathematics. Basic concepts and definitions, mathematical statistics and mathematical programming, forming a mathematical framework to formalize the problems of economics and management, mathematical methods for solving problems.

Inorganic chemistry. Properties, structure, methods of preparation and application of chemical elements and their compounds, theoretical foundations of inorganic chemistry, mechanisms of chemical processes that occur in nature, chemical experiment as a basis for environment and water management.

Analytical chemistry. The structure of the environment objects, presence of polluting substances and toxins in water and air, physical and chemical methods of analysis, analysis of natural and waste water, air, and also with the elements of control the water processing.

Organic chemistry. Theoretical foundations of organic chemistry, classification of organic compounds, methods of gaining the physical and chemical properties of organic compounds, basic laws of chemical reactions, structural and electronic formulas of compounds and their basic properties; solving chemical problems, chemical transformations, synthesis of chemical compounds.

Hydro botany. Principles of classification and characterization of aquatic plants phyto diversity, formation and growth, dynamics and distribution by biomorphs in Ukraine, protection of aquatic plants and their communities, tools for the study aquatic plants and hydro botanic research, production of medicines and analysis at the cellular, tissue, organs, and organism levels, study of formation of water bio resources in Ukraine.

Zoology (invertebrates and chordates). Studies the morphology and anatomy of animals, their physiology and ecology, taxonomy and geographic distribution, location and role of animals in ecosystems and agrocenoses

Hydrobiology. General laws of formation the hydro biocenoses, adaptation aquatic organisms to the environment, the role of individual groups of aquatic organisms in the formation of biological productivity and water quality, methods of hydro biological research.

Biophysics fundamentals. Fundamentals of physics and biophysics, studies of physical and physical-chemical phenomena in biological objects, the fundamental processes that form the basis of wildlife.

Hydrology and meteorology. Physical and chemical properties of water within the Earth's hydrosphere, phenomena and processes that occur in them, the circulation of water in nature and the impact of human activities, hydrological regime in the processes of aquatic organisms life, techniques of regime management of water organisms and water regime of territories; the composition and structure of the atmosphere and its heat regime, electric fields, optical and acoustic phenomena, patterns of circulation of air masses in the atmosphere, water exchange between the atmosphere and hydrosphere.

Fundamentals of Ecology. Theories, methods and technologies of predicting environmental impacts of human activities, building models of their development, assessing the risk and justification of measures aimed at preserving the ecological balance and improve the environmental situation, theoretical foundations of environmental management and environmental protection, methods of environmental studies and organizing environment protection activities, methodology and methods of environmental monitoring and ecological risk calculations.

Safety of Vital Activity. Discipline forms knowledge about common patterns of occurrence and development of danger and emergencies, their properties, the possible impact on human life and health. Safety of Vital Activity in emergency conditions. Organization and management of Safety of Vital Activity.

1.3. Cycle of professional and practical training

Introduction to the specialty. Introduces students to the content of future professional work, prepares them for the most complete mastering the disciplines of natural-scientific, professional and practical training cycles, as well as the acquisition of knowledge and skills during their educational and technological practices.

Ichthyology (common and special). Origin, evolution, geographic distribution and formation of ichthyofauna, structural features and functions, diversity, lifestyle and practical value of fish and agnathans.

Fish breeding. The purpose of discipline is to lay the foundation of professional knowledge and skills in the biological characteristics of valuable commercial fish species due to their artificial reproduction, acclimatization, fisheries reclamation, designing breeding and spawning-breeding farms, studying the biological basis of sexual cycle management of commercial fish, obtaining mature gametes, fertilization and incubation of roe, receiving and growing up fish larvae, growing young fish, intensification of breeding processes, acclimatization of aquatic organisms, fish farming melioration.

Ichthyopathology. Studies of the diseases of fish of different nature, the factors that contribute to their appearance, general pathology, epizootiology, parasitology and immune protection mechanisms of the fish body, modern diagnostic techniques, basic veterinary and sanitary measures which are used in fish breeding.

Hydrochemistry. Chemical composition of natural waters and artificial water bodies, the cycle of chemical elements in water, patterns of temporal and spatial changes in the chemical composition of water under the influence of biotic and anthropogenic factors and chemical processes that shape the quality of water.

Fish farming hydro machinery with fundamentals of geodesy. Fish breeding enterprises, the structure of fish breeding enterprises, design and construction of hydraulic structures, water supply in the production, economics of enterprises.

Fish protection fundamentals and Fish farming Regulations. Studies a set of directions of aquatic resources protection, including fish and their habitat environment, legislative and regulatory framework and the use of fish resources, methods for determining violations in this area and ways to address the use of fish resources.

Technical means in Aquaculture. Technological equipment of reproductive aquaculture systems provides the study of the general description of equipment types for fish farming, technological modes of operation of the equipment, ability to calculate the amount of equipment required for specific production problems.

Economics and organization of fish breeding enterprises. Development peculiarities and problems of accounting of fish breeding enterprises of Ukraine, characteristics and problems of accounting on fish farms, methodological aspects and methods of accounting in fish breeding, accounting of biological assets, cost accounting and costing aquaculture products, classification of production costs, accounting of fixed and current assets, rent, depreciation, inventory, accounting of funds, accounting work and its remuneration, the main forms of financial statements.

Management and Marketing in Fish Breeding. Management of planning processes, production and use of aquaculture products, the basic principles of comprehensive study of the market, including supply and demand, requirements for production, import, use, packaging, labeling, transportation, aquaculture products, principles of quality assurance and safety of aquaculture products.

Water microbiology, sanitation and hygiene in fish breeding. Studies the role of microorganisms in the processes of formation of pond water quality and integrated industrial fishing, aquatic feed and with purpose to use microbial bio indicators of pollution of aquatic ecosystems with pathogenic micro flora and assessment of their

sanitation status. Students also acquire hygienic and veterinary-sanitary requirements to environmental factors, the ecosystem of rivers and ponds, feed, soil, air and hygiene regulations and requirements for growing aquaculture facilities

Labor protection. Discipline provides the formation of knowledge about the legal and organizational issues of safety, physiology fundamentals, occupational hygiene and industrial sanitation, ways and means of protecting people from harmful and dangerous production factors, the ability to create measures for rational use and conservation reserves of financial and material resources necessary to solve issues of health and safety at work.

2. Elective academic disciplines

2.1. Disciplines chosen by University

2.1.1. Cycle of humanitarian, social and economic training

Family and Home culture and Home Economics. Family and marriage, history and development of the family in Ukraine, general characteristics of marriage and family situation, socio-biological problems of the family, moral and psychological relationship of the couple, rules of taking meals, and gender consciousness of husband and wife, gender roles, economic issues and economic and legal relations in the family.

2.1.2. Cycle of professional and practical training

Accounting on fish breeding enterprises. System of accounting, forms, accounting, reporting and rule of double entry accounting as a basic rule. Accounting as a management function. Audit.

Mechanization in fish breeding and fishery equipment. Modern technology, mechanization and automation of production of aquaculture products, methods of effective use in fish enterprises, principles of technologies building for aquaculture products, general structure and working process of mechanization means, technological processes in fish breeding, skills to justify the choice of specific production conditions, economic evaluation stages of analysis of the current situation, the development of new design decisions. The most common fishing gear, necessary materials for their production, technology of fishing and construction gear, main types and design features of industrial vehicles

Fundamentals of standardization of aquaculture products. Involves the study of international and national standardization system of aquaculture products and processes of production, responsibility of enterprises and officials for violations of the standards.

Junior Specialists training

Specialty «Mounting, maintenance and repair of electrical equipment in agroindustrial complex»

Training direction «Power engineering and electrotechnical systems in agroindustrial complex»

Field of knowledge «Technology and energy of agricultural production»

Amount of ECTS credits - 180

Learning / teaching period, years:

Full-time - 3 years 10 months (on the basis of basic secondary education)

Part-time - 2 years 10 months (on the basis of complete secondary education)

Qualification of graduate - Technician Electrician

Training of Junior Specialists is carried out in Separated Subdivision of NULESU (licensed amount, persons: full-time/ by correspondence):

- Berezhany Agrotechnical Institute (50/50)
- Nizhyn Agrotechnical Institute (50/50)
- Nemishaevo Agrotechnical College (75/ 75)
- Prybrezhne Agricultural College (30 /30)

Annotation of Specialty

Training of junior specialists is aimed at training professionals able to organize workflow at an enterprise or in a separate section, to design electro technical and electro technological systems, installation, maintenance, adjust, repair and exploitation of electrical and automation systems used in crop production, animal husbandry, poultry farming, processing and storage of agricultural production products .

Practical Training

Training and research farms and stations of NULESU, agricultural holdings, farms, businesses, production and supply, installation and repair company.

Approximate topics of graduation works

State certification involves preparation and defense of diploma projects.

Graduate's Academic Rights

Graduates can continue their studies for EQL «Bachelor» in the field of study 6.10101 «Power and electrical systems in agriculture».

Graduates' Spheres of employment

Graduates can work in public, private, farm, commercial enterprises at such positions as: technician-electrician, deputy head of electrician, electrical manager, electrician mechanic, senior electrical technician on the rights of power engineering specialist, Inspector of energy distribution, REN manager, electrician fitter and owner their own business.

**Curriculum of training the specialists of EQL «Junior Specialist»
in specialty «Mounting, maintenance and repair of electrical equipment in agro
industrial complex»**

№	The name of the course, practice	Semester	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	Ukrainian (professionally-oriented)	6	108,0	2,0	3,0
2	Study of Culture	2	54,0	1,0	1,5
3	Fundamentals of Philosophy	8	108,0	2,0	3,0
4	Economics	2	54,0	1,0	1,5
5	Sociology	8	54,0	1,0	1,5
6	Fundamentals of Law	2	54,0	1,0	1,5
7	History of Ukraine	5	108,0	2,0	3,0
8	Physical training	5,6,7	216,0	4,0	6,0
9	Foreign language (professionally-oriented)	5,6,7	216,0	4,0	6,0
Total for the cycle		13	972,0	18,0	27,0
1.2. Cycle of mathematics and natural science (fundamental) training					
1	Higher Mathematics	4	108	2,4	3
2	Computers and computer technology	6,7	108	2,0	3
3	Theoretical Foundations of Electrical Engineering	3,4	180	3,3	5
4	Basics of Automation	5	108	2,0	3
5	Basics of Business Management and Marketing	7,8	90	1,6	2,5
6	Safety of Vital Activity	6	54	1,0	1,5
7	Environmental Science	2	54	1,0	1,5
8	Engineering and Computer Graphics	2,3	108	2,0	3
9	Engineering Mechanics	4	126	2,3	3,5
10	Basics of heat and hydraulics	5	54	1,0	1,5
11	Basics of electronics and micro circuitry	4,5	162	3,0	4,5
Total for the cycle		16,00	1314,0	24,3	36,5
1.3. Cycle of professional and practical training					
1	Structural and electro technical materials	3,4	144	2,6	4
2	Technology of production, storage and processing of products	8	108	2,0	3
3	Electrical Installation	4,5,6	162	3,0	4,5
4	Instrumentation and Metrology	5	162	3,0	4,5
5	Electrical machinery and devices	5,6	162	3,0	4,5
6	Electricity in agriculture	6,7	108	2,0	3
7	Economy and Agriculture organization of agricultural energy service	8	108	2,0	3
8	Maintenance and repair of electrical and automation	7,8	180	3,3	5
9	Machinery and equipment in agriculture	7	90	1,6	2,5
10	Electric of agricultural machinery	5,6	162	3,0	4,5
11	Electric lighting and exposure	6,7	126	2,3	3,5
12	Electro technology	7	108	2,0	3

13	Fundamentals of occupational safety	7	54	1,0	1,5
14	Automation of technological processes and systems	7	180	3,3	5
15	Introduction to the specialty	1	54	1,0	1,5
16	Occupational Health	7	36	0,6	1
17	Fundamentals of Energy	8	90	1,6	2,5
Total for the cycle		18	2034,0	37,6	56,5
1.4. Practical training					
1	Introductory training		54	1,0	1,5
2	Electro metalwork		162	3,0	4,5
3	Manual		54	1,0	1,5
4	Welding		54	1,0	1,5
5	Electrical installation		270	5,0	7,5
6	Technical repair and electrical equipment and automation		216	4,0	6
7	Settlement of industrial and situational tasks		54	1,0	1,5
8	Production and technological practice		324	6,0	9
9	Pre-graduation Practice		162	3,0	4,5
10	Diploma planning		270	5,0	7,5
Total for the cycle		0,00	1620,0	30,0	45,0
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
2.1.1. Cycle of mathematics and natural science (fundamental) training					
1	Physics	4	90	1,6	2,5
2	Chemistry	3	72	1,3	2
Total for the cycle		2,0	162,0	3,0	4,50
Examinations				10,0	15,0
Elective part, total			162,0	3,0	4,50
Practical training			1620,0	30,0	45,0
Total, according to the field of study		47	6480,0	120,0	180,0

* The number of training hours/credits is defined for preparation of specialists on the basis of basic secondary education

** The names of cycles of disciplines and forms of State attestation – according the requirements of industry standards for higher education approved in 2009, EQC and OPP specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1. Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally-oriented)», «History of Ukraine», «Study of Culture», «Foreign language (professionally-oriented)», «Fundamentals of Philosophy», «Fundamentals of Law», «Sociology», «Physical training» and «Economic theory» see section 2.2. and Section 1.1 of the specialty «Jurisprudence».

1.2. Cycle of mathematics and natural science (fundamental) training

Higher mathematics. Fundamental knowledge of the branches of mathematics: linear algebra, vector algebra and analytic geometry, integral calculus and differential equations, complex numbers.

Safety of Vital Activity. Gives knowledge to safeguard human health under adverse environmental factors of residence and work, studies the nature and

characteristics of negative factors specific to the medium of everyday human activities, practical skills to prevent and protect people from their influence.

Computers and computer technology. Structure and principle of operation of a computer. Operating system. Table processors. Group programs Microsoft Office. Computer networks and telecommunications. Use of computer technology in the workplace. Computer network «Internet». Systems for processing tabular data. Database Management Systems.

Ecology. Man and environment, ecological basis of environmental, natural resources and environment, environmental protection and rational use of natural resources in industrial, environmental problems in Ukraine and Radiology.

Fundamentals of Entrepreneurship, Management and Marketing. Develops knowledge of organizational and economic principles and laws of rational construction, planning, c/d, production in market conditions, the nature of marketing as a philosophy of business in a competitive market.

Fundamentals of heat and hydraulics. Boiler systems in agriculture, heat generators, heating and hot water, dry c/d production, refrigeration, thermal radiation, its maintenance and repair.

Fundamentals of automation. Basic theory of automatic control elements and automation systems, sensors, actuators, controllers, control objects and their properties.

Engineering and computer graphics. Discipline studies modeling of objects and processes, drawing technical purposes, rules and methods of graphical reproduction of technical objects with the use of computers and software.

Theoretical Foundations of Electrical Engineering. Studies the properties of electric and magnetic fields, physical processes in DC, single-phase and three-phase alternating current methods for calculating electric and magnetic circuits.

Fundamentals of electronics and micro circuitry. Physical basis of electronic and semiconductor devices. Electronic and semiconductor devices. IC. Basics of analog electronics. Switching devices.

Engineering Mechanics. Basic laws of statics, kinematics, dynamics, calculation, connection machine parts, mechanical gears, kinematic analysis of mechanisms.

1.3. Cycle of professional and practical training

Occupational Health. Basic laws and standards system. General issues of safety, industrial injuries and occupational diseases. Industrial hygiene, occupational health and safety and fire safety electrical dangers of ATP, the environment, and duties of officials.

Introduction to the specialty. Formation of the theory of knowledge of the industry to familiarize students with future profession.

Structural and electrical materials. Structure and properties of metals and alloys, powder materials, their properties and applications in electrical engineering.

Electric agricultural machines. Theoretical approaches, static, mechanical and electromechanical properties of DC motors and AC, methods of their choice for different modes, ways to reduce energy losses, starting and speed control, equipment control and protection of motors, methods of selecting machines and units according to the technological requirements.

Technology of production. Storage and processing of agricultural products. Production structure of the industry (production, selection and technology), engineering technological methods of production and processing of agricultural products. Effective use of premises and equipment of mechanization and automation of production process.

Installation of electrical equipment. General issues installing electrical equipment, tools, machinery and equipment industrialization of electric installation work,

execution of the main types of electrical work, method validation rules, the implementation of the work.

Electricity in agriculture. Common problems of production, transmission and distribution of electricity, construction machinery, equipment and materials used in cable and overhead lines, transformer substations and diesel backup power supply.

Process of automation and motor control systems. Technological processes, automatic control systems, installation for a given operation, troubleshooting, basic elements of the automation of manufacturing processes.

Electro technology. Scientific and technical basis of agricultural Electro technology. Engineering methods for solving problems of management. Principles of conversion of electrical energy into heat, how electrical heating, electro-choice method of calculation settings.

Electrical machinery and apparatus. Introduction to DC motors and AC capacitors, transformers, their structure and principle of operation. Circuits and connection of windings of transformers. Determination of capacity and efficiency of electrical machines classification.

Economy and Agriculture Organization of agricultural energy service. Mastering knowledge for efficient maintenance of agricultural enterprises of different ownership and control management of production potential of economic calculation in agricultural energy service.

Electrical lighting and exposure. Studying electrical sources of optical light, basic values and units exposure settings for exposure of plants in greenhouse, ultraviolet rays, infrared radiation installations of lighting and its placement and settlement.

Machinery and equipment in agriculture. The study of the mechanisms and processes of water supply, feeding, feeder, milking cows and primary processing of milk, manure, washing and shearing sheep, ventilation and heating facilities, livestock farms, technology content and feeding of farm animals.

Instrumentation and Metrology. Metrology, principles, methods and means of measurement and error of measurement of electrical quantities. Structure of instrumentation and auxiliary measurement converting.

Maintenance and repair of electrical equipment and automation. Study of repair and maintenance of electrical equipment and automation in agriculture, exploitation of distribution equipment, power transformers, launcher, protective, regulating equipment, electric motors, backup power stations , internal wiring and repair, testing electrical equipment and automation , feasibility study in power and scheduling maintenance and repair of electrical equipment.

Fundamentals of energy. The use of alternative renewable energy sources, and methods of saving energy and compensation.

Safety in the industry. The study of basic laws and standards in the field of electrification and automation of production. General issues of safety, industrial injuries and occupational diseases. Industrial hygiene, occupational health and safety, environmental protection and duties of officials.

2. Elective academic disciplines

2.1.1. Cycle of mathematics and natural science (fundamental) training

Physics. Physical principles of mechanics, electric and magnetic field, alternating current, electromagnetic waves, nature of light, spectra, photometry.

Chemistry. Chemical and physical properties of the major inorganic and organic substances, elements of chemical thermodynamics and kinetics, solutions, basic physical and chemical analysis of substances. The structure of materials, their physical and chemical properties, chemical interaction of materials, chemical and thermal processing of materials.

Junior Specialists training
Specialty «Exploitation and repair of machinery and equipment for
agroindustrial production»
Training direction «Processes, machines and equipment of agricultural
production»
Field of knowledge «Technology and energy of agricultural production»

Amount, ECTS credits - 180.

Learning / teaching period, years:

Full-time 4 years (on the basis of the secondary education);

Part-time - 3 years (on the basis of the full secondary education).

Graduate qualification: Mechanical Technician of agricultural production.

The training of Junior Specialists is carried out at Separated Subdivisions of NULES of Ukraine (licensed amount, persons: full-time/part-time):

- Berezhan Agrotechnical Institute (50/50)
- Nizyn Agrotechnical Institute (75/30)
- Nemishayevo Agrotechnical College (125/75).
- Prybrezhne Agricultural College (75/40)
- Crimean Technical College of Hydromelioration and Mechanization of Agriculture (50/50)

Annotation of Specialty

The training is aimed at forming knowledge and professional skills in a new generation of processes, machines and equipment of crop production and livestock breeding, Biotechnology, manufacturing industry based on modern educational standards, adapted to the requirements of the world's best educational programs for the public and private sectors of Ukraine.

Practical Training

Teaching and research farms and stations at Separated Subdivisions of NULES of Ukraine, agricultural holdings, farms, automobile maintenance enterprises producing technological systems of machinery and equipment for agriculture, food processing industry and other organizations and institutions that have a high level of mechanization of production processes and use the newest technology.

The approximate topics of the graduation works

The state certification involves the preparation and defense of diploma projects.

Graduates' Academic Rights

The students can continue their training for the Bachelor degree program, the signs of which are laid in the curriculum of Junior Specialist programs: 6.10102 «Processes, machines and equipment of agricultural production».

Graduates' spheres of employment

After training the graduates are prepared for the administrative and managerial production and technical activities related to the exploitation, maintenance, repair and storage of agricultural machinery and equipment and can take the following primary positions: The head of the yard (machine), The administrator of an agricultural site, The head of a workshop, Master, Master of the maintenance and repair of machinery, Mechanic, Mechanic at a motor garage, Mechanic of production, Mechanic at a station, Mechanic at a workshop, Technician of mechanization of labor-intensive processes, Inspector for safety.

**The curriculum of training of the specialists for the EQL «Junior Specialist»
Specialty «Exploitation and repair of machinery and equipment for agroindustrial
production»**

№	The course title, practice	Semester	Hours	Amount	
				Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine	3	54	1,0	1,5
2	Ukrainian language (for professional purposes)	5	54	1,0	1,5
3	Culture Studies	4	54	1,0	1,5
4	Fundamentals of Law	4	54	1,0	1,5
5	Fundamentals of philosophical knowledge	8	81	1,5	2,25
6	Economics	4	54	1,0	1,5
7	Sociology	8	54	1,0	1,5
8	Foreign language (for professional purposes)	5,6	216	4,0	6,0
9	Physical Education	5-7	297	5,5	8,25
Total for the cycle			918	17	25,5
1.2. Cycle of mathematical and natural-scientific training					
1	Higher Mathematics	5	108	2	3
2	Fundamentals of Descriptive Geometry	3-4	189	3,5	5,25
3	Technical mechanics	3-4	216	4	6
4	Electrical Engineering from the basics of automation	3	135	2,5	3,75
5	Materials, science and technology of construction materials	3	162	3	4,5
6	Interchangeability, standardization and technical measurement	4	81	1,5	2,25
7	Fundamentals of heat engineering and hydraulics	5	81	1,5	2,25
8	Fundamentals of ecology	2	54	1	1,5
9	Life Safety	3	54	1	1,5
Total for the cycle			1080	20	30
1.3. Cycle of professional and practical training					
1	Technology of agricultural production:				
	Fundamentals of Agronomy	8	81	1,5	2,25
	Fundamentals of livestock farming	7	54	1	1,5
2	Tractors and Cars	4-5	189	3,5	5,25
3	Fuel, lubricants and other maintenance materials	4	54	1	1,5
4	Agricultural Machinery	5-6	189	3,5	5,25
5	Machines and equipment for livestock farming	5-6	108	2	3
6	Machines and equipment for processing of agricultural products	8	54	1	1,5

7	Fundamentals of labor protection	5	54	1	1,5
8	Operation of machines	6-8	189	3,5	5,25
9	Technical service in agriculture	6-7	108	2	3
10	Repair of machinery and equipment	6-7	135	2,5	3,75
11	Traffic Rules	5-6	135	2,5	3,75
12	Fundamentals of driving and traffic safety	5-6	81	1,5	2,25
13	Economics and organization of agriculture	7-8	216	4	6
14	Computers and Computer Technology	5-6	81	1,5	2,25
15	Basics of technical work	7	54	1	1,5
16	Electricity and automation of agricultural machinery	8	54	1	1,5
17	Labour protection in agriculture	6	54	1	1,5
Total for the cycle			1890	35	52,5
Regulatory part, total			3888	72	108
Practical training			1836	34	51
Degree examination			324	6	9
Examination sessions			432	8	12
Total, according to the field of study			6480	120	180

The number of hours / credits identified for training on the basis of secondary education. The names cycles of disciplines and forms of state attestation – according to the requirements of the standards for higher education in agriculture, approved in 2009, EQC and OPP of the specialty.

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (for professional purposes)», «History of Ukraine», «Culturology», «Foreign language (for professional purposes)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» and «Economic theory» see in the sections 2.2. and 1.1 of the specialty «Law».

1.2. Cycle of mathematical and natural-scientific training

Higher Mathematics. Trigonometrical functions. Complex numbers. Elements of the linear algebra and vectors. Analytical geometry. Systems of linear equations and linear programming. Differential calculus of functions of one and several variables. Integral calculus. Differential Equations. Series. Elements of the probability theory and mathematical statistics.

Fundamentals of Descriptive Geometry and Engineering Graphics. Discipline studies modeling of objects and processes, drawing technical purposes. The rules and methods of graphical reproduction of technical objects with the use of computers and software. Analysis and synthesis of various forms of the spatial graphic models, depicted in the form of drawings.

Technical mechanics. Basic concepts and axioms of statics. Kinematics of rigid body motion. Work and power. The dynamics of the system. Mechanics of materials and structures: tensile and compression, geometric properties of plane sections, torsion, bending, theory of strength, stability compression rods. Machine parts: general

information about the transfer, friction transmission, gears, screw-nut transmission, worm gear, belt drive, chain transmission shafts and axles, bearings, couplings, pins and spline connections, threaded connections.

Electrical Engineering with basics of automation. The study of processes taking place in electrical circuits DC and AC currents and the principles of the basic properties of electrical machinery and apparatus, electrical appliances, semiconductor devices and their use in simple analog systems, basic of automation.

Materials science and technology of construction of materials. The purpose of the discipline is: learning the properties of materials depending on the composition and type of treatment, methods of strengthening for the effective use of the technology, as well as creating materials with predetermined properties.

Interchangeability, standardization and technical measurements. Basic principles of interchangeability, standardization, metrology and quality management. Normative documents. Control methods.

Fundamentals of heat engineering and hydraulics. Students study: physical properties of liquids, hydrostatic pressure, the movement of liquids, heat exchange processes, the laws of thermodynamics. They carry out the hydraulic calculation of pipelines.

Fundamentals of Ecology. Ecology and modern agriculture. Ecological agriculture and livestock concentration problems. Environmental impact assessment, monitoring and forecasting. Environmental law, legislative support. Environmental issues of the day, Ukraine's economic problems. Principles of the Law of Ukraine on Environmental Protection. Environmental management.

Life Safety. The negative factors of natural, technological, socio-political and military character in human life. The government measures to protect human life. Personal protection rights. Collective protection rights. Liquidation of consequences of human exposure to radioactive, chemical and biological substances. Dangerous environmental factors and their effect on humans, basic physiology of labor and normative requirements for the activity. Methods of the identification of harmful and dangerous factors of technical systems, their effects on humans and the environment in normal and emergency situations. Institutional, legal and socio-economic knowledge in the field of life safety.

1.3. Cycle of professional and practical training

Fundamentals of Agronomy. Structure, diversity, distribution of plants, their vital functions as to the environmental factors, the study of origin, composition and soil properties, rational use and ways to improve the soil. Control of pests, plant diseases and weeds. The organization of agrochemical service in agriculture. Progressive technologies of growing agricultural crops.

Fundamentals of livestock. Features of the structure, farm animals' physiological functions, feeding, breeding and maintenance.

Tractors and cars. Studying the theory and construction of modern tractors and cars, the rules of exploitation and service of the main and auxiliary assembly units. The regulating of the operation. The rectifying of the typical problems.

Fuel, lubricants and maintenance materials. The main properties of fuels and lubricants, their effective use in internal combustion engines. Means of reducing fuel, lubricants and coolants. The ways of protecting the environment from the harmful effects of these substances.

Agricultural machines. Studying the structure and regulation of the working and auxiliary machinery and implements for soil cultivation, sowing and planting crops, care, fertilizing, harvesting grain and vegetable crops, production and forage, the performing of the reclamation work.

Machines and equipment for animal husbandry. Structure, principles of operation, adjustment, installation, rules of machine operation and equipment for water supply used at livestock farms, preparation and distribution of feed, removal of manure, milking cows, primary processing of milk, shearing of sheep, harvesting and processing of eggs.

Machines and equipment for processing of agricultural products. The mechanical equipment, thermal equipment for processing and preserving of agricultural products, equipment for processing of crops and animal products.

Fundamentals of labor protection. The legislation on occupational safety and creating healthy, harmless and safe labor conditions, the study of general legal and organizational issues of labor in the agricultural sector of Ukraine, industrial hygiene, safety of agriculture and fire security.

Exploitation of machines and equipment. Completing the machine-tractor units, using machines in the mechanized production processes, planning of the work, organization and control of the machine and tractor fleet.

Technical service in agriculture. Objective: to provide students with the necessary theoretical and practical knowledge of the scientific bases of technical service of agricultural machinery and its main components: service and maintenance of agricultural machinery, its effective use.

Repair of machinery and equipment. Theoretical foundations of repair of machinery, general machinery repair process, restoring of worn parts, repairing assembly units and equipment, their break-assembly and testing.

Traffic Rules. Traffic rules, the Law of Ukraine «About traffic», causes of accidents and ways to prevent them, first aid to victims of the traffic accidents, legal principles and liability for traffic violations.

Fundamentals of driving and road safety. In studying the discipline, the students are introduced to: the general structure of the cars and engines, their systems and mechanisms, transmission, chassis, control, mechanisms, maintenance, safety.

Economics and organization of agricultural production. The main task of the discipline is to provide students with knowledge of agricultural economics and ways to improve the agricultural sector.

Computers and computer equipment. Structure and principles of operation of computer system software. The application of the PC in agricultural production. The overall structure of computers, operating systems, software shell, text and word processors, spreadsheets and computer communications systems. The use of computers in agricultural production.

Basics of technical creativity. Features and organization of research and creative work, the main methods of artistic research, basics of patent science, invention methods, legal aspects of intellectual property rights, privileges, rights and liability of inventors and innovators.

Electrification and automation of agricultural machinery. Power supply in agriculture, equipment control and protection of motors, electrical and automatic milking, ventilation, heating and refrigeration units.

Safety in the industry. Creating standard working conditions in all areas of the application of mechanization of agricultural production. Analysis of the potential dangers and hazards, the development of institutional arrangements and choice of means to prevent accidents, injuries and illness at the workplace.

Junior Specialists training
Specialty «Veterinary medicine»
Training direction «Veterinary medicine»
Field of knowledge «Veterinary»

Amount, ECTS credits - 159

Learning / teaching period, years:

Full-time. – 4 years. (on the basis of the basic general secondary education).

Graduate qualification – Surgeon's Assistant of Veterinary medicine

Training of Junior Specialists is carried out in Separated Subdivisions of NULES of Ukraine (licensed amount, persons: full-time/part-time):

- Nemishayevo Agrotechnical College - (125/-)
- Prybrezhne Agricultural College - (50/-)
- Mukacheve Agricultural College - (75/-)

Annotation of Specialty

Training of junior specialists is aimed at the preparation of professionals capable in veterinary work, preventive and curative activities, based on the latest advances in veterinary science and practice in order to achieve the planned results.

Practical Training

Educational-experimental farms of NULES of Ukraine, educational industrial clinics, a network of the State veterinary service, veterinary pharmacies and private livestock farms.

Approximate topics of the graduation works

The State Attestation involves the passing of a complex qualifying examination.

Academic Rights of Graduates

Students can continue their studies in the training program for bachelors 6.110101 «Veterinary medicine».

Graduates' Spheres of employment

After graduating with a degree in Veterinary Medicine the graduates are ready to work as: senior veterinary assistant; Veterinary assistant; operator of the artificial insemination of farm animals and poultry; Laboratory Assistant; the head of the veterinary pharmacy; Head of Department in accordance with the received qualification.

**Curriculum of training the specialists of EQL «Junior Specialist»
in Specialty «Veterinary medicine»**

№	The course title, practice	Semest er	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	History of Ukraine	3	54	1	1.5
2	Ukrainian language (for professional purposes)	3	54	1	1.5
3	Culturology	3	54	1	1.5
4	Fundamentals of Philosophy	4	54	1	1.5
5	Fundamentals of Law	4	54	1	1.5
6	Economic Theory	4	54	1	1.5
7	Sociology	7	54	1	1.5
8	Foreign language (for professional purposes)	5,6	216	4	6
9	Physical Education	3-7,	216	4	6
Total for the cycle			810	15	22,5
1.2. Cycle of mathematics and natural-scientific training*					
1	Higher Mathematics	4	81	1,5	2.25
2	Anatomy and Physiology of Farm Animals	2,3	216	4	6
3	Latin language	2	54	1	1.5
4	Pharmacology	2,3	135	2,5	3.75
5	Management and marketing in Veterinary medicine	7,8	54	1	1.5
6	Personal and Social safety	4	54	1	1.5
7	Fundamentals of Ecology	4	54	1	1.5
8	Principles of Labor Safety	5	54	1	1.5
9	Computerization of Agricultural Production	7,8	81	1,5	2.35
Total for the cycle			783	16	20,5
1.3. Cycle of professional and practical training*					
1	Internal Non-Infectious Diseases	3-8	216	4	6
2	Epizootology with Microbiology	3-8	216	4	6
3	Surgery of Veterinary Medicine	3-5	162	3	4.5
4	Parasitology and Invasive Diseases of farm Animals	5-7	135	2,5	3.75
5	Obstetrics, Gynecology, Artificial Insemination of Farm Animals	5-7	162	3	4.5
6	Pathological Physiology and Pathological Anatomy of Animals	4,5	135	2,5	3.75
7	Animal Husbandry, Zoohygiene and Veterinary Sanitary	4,5,6	135	2,5	3.75
8	Veterinary-sanitary Examination with Fundamentals of Animal Produce Processing	7,8	81	1,5	2.25
9	Organization of Veterinary Work	7,8	81	1,5	2.25
	Total for the cycle		1323	25	36,8

1.4. Practical Training					
1	Educational Training	3-8	1242	23	34.5
2	Technological Training	7	432	8	12
3	Pregraduation Practice	8	324	6	9
Total for the cycle			1998	25	36,8
Regulatory part, total			4914	81	116,6
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by University					
1	Introduction into the Specialty*(technologies)	2	54	1	1.5
2	Feeding of Farm Animals	3	108	2	3
3	Agricultural Economy	6	54	1	1.5
4	Fundamentals of Standardization	8	72	1,3	2
5	Agricultural Radioecology	8	54	1	1.5
6	History of Veterinary Medicine	5	54	1	1.5
7	Labor Safety in Industry.	8	36	0,7	1
8	Examination session		378	6,75	10,5
Total for the cycle			810	22,05	22,5
Elective part, total					
Degree examination			2		
Total, according to the field of study			5724	106	159

* The number of training hours/credits defined for the preparation of specialists on the basis of Junior secondary education

** The names of cycles of disciplines and forms of State attestation – according to the requirements of industry standards for higher education approved in 2013, EQC and OPP specialty.

Subject annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Culturology», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

1.2. Cycle of mathematics and natural science (fundamental) training

Higher Mathematics (Profession-Oriented). Basic trigonometric formulas, graphics and properties of trigonometric functions. Matrices, determinants and their properties, Cramer's formula. Various forms of complex numbers. Basic concepts of vector algebra and analytical geometry. Limits of functions. Basic rules and formulas of the differential calculus. Application of the derivative for the investigation of functions. Indefinite and definite integral. Differential equations. Basic concepts and definitions of a numerical series. Basic concepts of combinatorial analysis. Basic concepts of mathematical statistics.

Anatomy and Physiology of Farm Animals. The structure of the body of animals. The structure and features of individual bodies of different animal species, their position in the body and physiological processes.

Latin Language. Phonetics, morphology of the main sections. Word. Syntax elements are required for a proper understanding and application of Latin veterinary terminology in practical activity. In the process of studying the Latin language the

students should correctly read and write veterinary terms, be able to use a dictionary, to translate simple phrases from Latin into Ukrainian and vice versa, internalize 250-300 Latin words in the necessary grammatical forms.

Pharmacology. The study of the effects of drugs on the healthy (riboksin) and ill (pharmacotherapy) organisms, as well as on infectious pathogens and invasive diseases. The students study the pharmacodynamics in laboratory and at home, particularly, on small animals.

Management and Marketing in Veterinary Medicine. The concept and entity of the management. Decision-making management. The planning in an organization. The organization as a function of management. Motivation. Managerial control. Leadership.

Personal and Social Safety. Negative factors in the human life of natural, technological, socio-political and military origin. State measures for the protection of human life. The means of individual protection. The collective means of protection. The elimination of the consequences of the radioactive, chemical and biological substances' impact on humans. Dangerous factors of the environment and their effects on human physiology. Fundamentals of labor and regulatory requirements to the conditions of the activity. Methods of identification of harmful and hazardous factors in technical systems. Means of protection against their impact on man and the environment in normal and emergency situations. Organizational, legal and socio-economic knowledge in the field of safety.

Fundamentals of Ecology. Scientific principles of rational nature management and environmental protection. The development of productive forces and the anthropogenic impact on the environment. Ecological and economic problems of natural resources' use. Environmental management and legal protection of the environment. Ecological monitoring. System of environmental information. Economic and social effectiveness of the implementation of environmental measures. Planning of rational nature management and environmental protection. Ecological expertise and problems of its organization. Ecological education of the population.

Principles of Labor Safety. The Production environment and its impact on man. Working conditions in production, their classification and rationing. The practical harm and methods of protection of people from its negative impact. The analysis and prevention of occupational diseases and occupational injuries. The basics of safety. Legal and normative regulation of labour protection. The state administration of the labour safety of Ukraine. The organization of labor in production. The economic aspects of OSH.

Computerization of Agricultural Production. Theoretical foundations of computer science. Computer technician. Operating systems. Computer networks and telecommunications. Computer network "Internet". Text processing systems. The system of tablespace data processing. Database management system. The technology of processing of economic information.

1.3. Cycle of professional and practical training

Internal Non-Infectious diseases. Plan and methods of clinical laboratory research of animals, the sequence and methods of research of separate organs and systems, general prevention; the basic techniques and methods of therapeutic techniques, basic internal diseases, methods of their treatment and prevention.

Epizootiology with Microbiology. Rules for dealing with pathological material cultures and microorganisms. The main groups of microorganisms, their classification. Physiology and variability. Infections and immunity. Epizootic process. Measures to protect farms from the contagious diseases. Methods of sanitation. Rules for the use, storage, transportation and rejection of biologics. The order of capture, preservation, packaging and dispatch of the pathological material. Major infectious diseases.

Surgery of Veterinary Medicine. Types of surgery. Procedures for conducting surgical operations. Surgical equipment.

Parasitology and Invasive Diseases of Farm Animals. Biological basis of Parasitology, General information about invasive diseases, economic loss from parasitic diseases, basics of morphology and physiology activators, organization of general and specific measures concerning the prevention of invasive diseases in agricultural and industrial animals.

Obstetrics, Gynecology, Artificial Insemination of Farm Animals. Physiology, pathology of the reproductive processes, insemination of animals, insemination, pregnancy, childbirth and the postpartum, the transplant of embryos, forecasting of the reproductive features of cows, keeping young animals, breast cancer, as well as the prevention of infertility. Teaching material necessary to study the anatomy, physiology, zoohygiene, surgery, internal non-infection diseases and other disciplines of veterinary medicine. The material should be taught according to the law of Ukraine "About Veterinary Medicine" and other legislative acts.

Pathological Physiology and pathological Anatomy of Animals. The doctrine of the General regularities of the development and essence of pathological processes in correlation with the functional and structural changes in the body of the sick animals as well as acquiring skills in a posthumous one diagnosis of disease by autopsy of corpses of dead animals and the issuance of the relevant documents.

Animal Husbandry, Zoohygiene and Veterinary Sanitary. The discipline is supposed to study the breeding, feeding and use of farm animals, veterinary-sanitary and preventive measures for modern technologies of production of animal products.

Veterinary-Sanitary Examination with Fundamentals of Animal Produce Processing. The rules of veterinary sanitary examination and sanitary assessment of food products of animal and vegetable origin, as well as the technical raw materials of animal origin. The discipline is taught after the study of normal and pathological anatomy, pharmacology, Epizootology with microbiology, surgery, obstetrics, parasitology, internal non-infectious diseases. The program material should be taught, according to the law of Ukraine «About veterinary medicine» and other legislative acts.

Organization of Veterinary Work. Tasks of Veterinary Work, "The law of Ukraine about the Veterinary Medicine." The legislation on veterinary medicine and articles of veterinary medicine. The main provisions of the self-supporting in veterinary offices. Material-technical provision of veterinary services. Veterinary records, statements and Veterinary Administration.

2. Elective academic disciplines

2.1. Disciplines chosen by the University

Introduction to the Specialty (Technologies). Getting acquaintance with the basic directions of veterinary medicine activity, production processes of veterinary specialists, the basic concepts of veterinary medicine, history of its development in Ukraine.

Feeding of Farm Animals. Studies the nutritive value and chemical composition of major groups of feeds and their influence on animal health, the productivity and quality of the products; the technology of harvesting, storage and preparation of forages to feeding; evaluation of forages; features of the regulation of feeding different types of animals; methods of testing of a full and balanced feeding of various kinds of animals; prevention of poisoning, feeding sick animals, the economic efficiency of a full feeding.

Economy of Agriculture. The role of enterprise in the modern system of management. The staff of the enterprise. Capital, productive assets and intangible resources. Investment and working capital. Regulation, forecasting and planning

activities. Organization of production and production infrastructure. Production, quality and competitiveness of products. Performance, motivation and remuneration. Current costs and pricing. Financial and economic performance and efficiency.

Fundamentals of Standardization. Functions, objectives and methodological foundations of the State system of standardization of agricultural products, the structure of the standards and the forms and methods of quality management of livestock products, methods of control and quality management of agricultural production.

Agricultural Radioecology. The main tasks of agricultural radioecology, peculiarities of radioactivity, its main characteristics; the task and the significance of dosimetry and radiometry methods; the dose of radiation and the units of its measurement; structure and principles of operation of dosimetric and radiometric instruments; the impact of ionizing radiation on the body; the migration of radionuclides in agricultural production; measures of animal protection from radiation damage; principles of radiation safety; permissible levels of exposure to persons of various categories; measures of protection and hygiene at work with radioactive substances.

History of Veterinary Medicine. Studies the general regularities of development of human society and the establishment of veterinary medicine. The main task of the discipline is to show the common patterns of the development and the establishment of veterinary medicine on the background of the historical changes of socio-economic formations.

Labor Safety in Industry. Providing guarantees of preservation of health and working capacity of employees in the industry, due to effective management of labor safety, formation of responsible officials and specialists for the collective and individual security.

Junior Specialists training
Specialty «Tourist service»
Training direction «Tourism»
Field of knowledge «Sphere of Service»

Amount of ECTS credits – 146

Learning / teaching period, years:

Full-time – 3 years 6 months (on the basis of the junior general secondary education).

Part-time – 2 years 6 months (on the basis of full secondary education)

Graduate qualification – Specialist in Tourist Service.

The training of Junior Specialists is carried out in Separated Subdivision of NULES of Ukraine (licensed amount, persons: full-time/part-time):

- Mukacheve Agricultural College - (25/25)

Annotation of Specialty

The training of junior specialists is aimed at the preparation of a new generation of highly educated skilled professionals in tourist industry that meet current needs and are capable to create a new original tourist product, to organize tourist-related recreational activities in rural areas, to develop a network of regional routes in the Transcarpathian region, conduct research work on current issues.

Practical Training

The students have their practical training in the educational and tourist complex of the College, travel agencies, hotel and restaurant complexes, hotel complexes of different ownership forms.

Approximate topics of graduation works

State Attestation involves the passing of the Complex State Examination

Graduates' Academic Rights

The students can continue their studies for training program of junior specialist in 6.140103 «Tourism».

Graduates' Spheres of employment

A tourist service specialist can work at the enterprises of different ownership forms on the following positions: head of a production unit in a restaurant, hotel, campground; Assistant Manager of domestic tourism; Assistant Manager of international tourism; Agent of the organization of tourism; Head of tourist group; Administrator of the hotel; Operator of the automated calculation in hotels; Operator of the reference service; Organizer of trips (excursions); a guide.

**Curriculum of training of the specialists of EQL «Junior Specialist»
in Specialty «Tourist service»**

№	The course title, practice	Semest er	Amount		
			Hours	Credits	
				National	ECTS
1. REGULATORY ACADEMIC DISCIPLINES					
1.1. Cycle of humanitarian, social and economic training					
1	Ukrainian Language (for professional purposes)	3	54	1,0	1,5
2	Economic Theory	3	54	1,0	1,5
3	Fundamentals of Philosophy	6	54	1,0	1,5
4	Sociology	5	54	1,0	1,5
5	Culturology	1	54	1,0	1,5
6	Foreign Language (for professional purposes)	5-6,7	270	5,0	7,5
7	Physical Education	3-4,5-6	216	4,0	6,0
8	History of Ukraine	2	54	1,0	1,5
9	Fundamentals of Law	3	54	1,0	1,5
10	Ethics and Aesthetics	6	54	1,0	1,5
Total for the cycle			918	17,0	25,5
1.2. Cycle of mathematics and natural science (fundamental) training					
1	Higher Mathematics	4	108	2,0	3,0
2	Informatics and Computer Engineering	4	162	3,0	4,5
3	Economy of Enterprise	6	54	1,0	1,5
4	Fundamentals of Management	7	108	2,0	3,0
5	Fundamentals of Marketing	7	54	1,0	1,5
6	Personal and Social Safety	1	54	1,0	1,5
7	Accounting	7	54	1,0	1,5
8	Fundamentals of Ecology	1	54	1,0	1,5
9	Fundamentals of Psychology	7	54	1,0	1,5
Total for the cycle			702	13,0	19,5
1.3. Cycle of professional and practical training					
1	Technology and Organization of Tourism Activity	4	270	5,0	6,0
2	Tourism Area Studies	6	108	2,0	3,0
3	Organization of Transport Service	7	54	1,0	1,5
4	Organization of Excursion Service	5	81	1,5	2,25
5	Geography of Tourism of Ukraine	3-4	108	2,0	3,0
6	Informative Systems and Technologies in Tourism	5-6	108	2,0	3,0
7	Legal Regulation of Tourism Activity	5	54	1,0	1,5
	Foreign Language	3-4, 5-6, 7	540	10	15
8	Professional Etiquette	5	54	1,0	1,5
9	Organization of Tourist Service in Hotels	4	54	1,0	1,5
10	Organization of Tourist Catering	3	54	1,0	1,5
11	History of Tourism	4	54	1,0	1,5

12	Fundamentals of Museum Studies	7	54	1,0	1,5
13	Price Formation in Tourism	7	54	1,0	1,5
14	Safety in Tourism	6	54	1,0	1,5
Total for the cycle			1701	31,5	45,75
2. ELECTIVE ACADEMIC DISCIPLINES					
2.1. Disciplines chosen by the University					
2.1.1. Cycle of humanitarian, social and economic training					
1	Ethnography and Folklore of Ukraine	5	54	1,0	1,5
2.1.2 Cycle of mathematics and natural science (fundamental) training					
1	Statistics	5	54	1,0	1,5
2	Fundamentals of Enterprising	6	54	1,0	1,5
2.1.3. Cycle of professional and practical training					
1	Insurance in Tourism	6	54	1,0	1,5
2	Fundamentals of Area Studies	3	54	1,0	1,5
3	Principles of Labor Safety	5	54	1,0	1,5
4	Organization of rural (ecological) tourism	6	54	1,0	1,5
5	Organization of Animation Services	6	54	1,0	1,5
6	Advertising in Tourism	4	54	1,0	1,5
7	Labor Safety in Industry	7	36	0,7	1,0
8	Organization of Cruise Tourism	7	54	1,0	1,5
9	Records Management in Tourism Activity	7	54	1,0	1,5
Elective part, total			630	10,7	17,5
Practical training			864	16	24
Total, according to the field of study			5246	97	146

* The number of training hours/credits defined for preparation of specialists on the basis of basic secondary education.

** The names of cycles of disciplines and forms of State attestation – according the requirements of industry standards for higher education approved 2013, EQC and OPP specialty

Subjects annotations of the curriculum

1. Regulatory academic disciplines

1.1 Cycle of humanitarian, social and economic training

Annotations of the disciplines: «Ukrainian (professionally trained)», «History of Ukraine», «Culturology», «Foreign language (professionally trained)», «Fundamentals of philosophy», «Fundamentals of Law», «Sociology», «Physical training» see section 2.2.

Ethics and Aesthetics. An integrative course combining basic theoretical positions of two philosophical sciences: ethics and aesthetics, considering their role and place in the structure of human consciousness. The discipline performs two functions: ethical and aesthetic education of students and the formation of high moral qualities and the ability to interpret and evaluate a variety of the world and works of art phenomena correctly.

1.2. Cycle of mathematics and natural science (fundamental) training

Higher Mathematics. Elements of the theory of matrices. General theory of systems of linear equations. Lines on the plane. Lines in space. Second order curves. Limits of functions. The derivative of the function. Basic theorems of differential

calculus. Study of function of many variables on the extremum. Indefinite integral. Numeric sequences, their convergence. Power series.

Informatics and Computer engineering. Theoretical basis of computer science. Computer technique. Operation systems. Computer networks and telecommunication systems. The computer network «Internet». Text processing systems. The table space data processing system. The database management system. The technology of economic information processing.

Economics of Enterprise. Enterprise in the modern system of management. The staff of the enterprise. Capital, productive assets and intangible resources. Investment and working capital. Regulation, forecasting and planning activities. Organization of production and production infrastructure. Production, quality and competitiveness of products. Performance, motivation and remuneration. Current costs and pricing. Financial and economic results and efficiency.

Fundamentals of Management. Theoretical principles of management: the evolution of management thought. Strategy and tactics of modern management. The manager's school, management style, decision-making theory, psychology and ethics of business relations, ensuring effective activity. Management of economic activities. Motivation of labor. The organization of control. Manager's ethics. Organization and planning of the manager's work.

Fundamentals of Marketing. The economic essence of market. The structure of the trade market. The essence and principles of marketing. Mechanism of pricing. The study and formation of demand. The study of market conditions. Competition. Advertisement.

Personal and Social Safety. Negative factors in human life of natural, technological, socio-political and military origin. State measures for the protection of human life. Means of individual protection. Collective means of protection. The elimination of the consequences of the radioactive, chemical and biological substances' impact on humans. Dangerous factors of the environment and their effects on human physiology. The basis of labor and regulatory requirements to the conditions of the activity. Methods of identification of harmful and hazardous factors of technical systems. Ways of protection from their impact on man and the environment in normal and emergency situations. Organizational, legal and socio-economic knowledge in the area of security.

Accounting. Accounting, the essence and Foundation of the organization. Accounting balance. Accounts accounting and double entry. Initial observation, documentation and inventory. Accounting chart. The forms of accounting. Accounting business processes. Basics of accounting statements.

Fundamentals of Ecology. Scientific principles of rational nature management and environmental protection. The development of productive forces and the anthropogenic impact on the environment. Ecological and economic problems of the use of natural resources. Nature protection management and legal protection of the environment. Ecological monitoring. The system of environmental information. Economic and social effectiveness of the implementation of environmental measures. Planning of rational nature management and environmental protection. Ecological expertise and the problems of its organization. Ecological education of the population.

Fundamentals of Psychology. General information about psychology, psychological state of a person, the ethical content of the communication. Socio-psychological mechanism of the formation of group norms. The psychology of manager organizational activity.

1.3. Cycle of professional and practical training

Technology and Organization of Tourism Activity. Basic concepts and provisions of the tourist activity. The main technological processes of tourist activity. Technology of forming tours, the technological process of the tourism product. Travel formalities. Insurance in tourism. Support and maintenance of technological processes of tourism. The technology documentary and the process of consumption of tourist services. Theoretical basics of security in the tourism industry.

Tourism Area Studies. The subject, the object and the task of the tourism studies. Organizational forms and types of tourism. Tourist regions in the world, specific features.

Organization of Transport Services. Basics of transport service in tourism. Organization of tourist service during the transportation on various types of vehicles (air, rail, water and road transport).

Organization of Excursion Service. The basics of excursion science and organization of excursion activity. The legal regulation of the excursion activity. The essence and classification of preparation of new excursions. Methodical techniques for conducting tours. The technique of conducting tours. Features of different excursion types. Differentiated approach to the excursion service.

Geography of Tourism of Ukraine. Geography of tourism of Ukraine as a scientific discipline. National features of the geographical area organization of the tourist complex of Ukraine. Organizational forms and types of internal tourism. Regional peculiarities of the geographical area organization of the tourist complex of Ukraine.

Information systems and technologies in tourism. The concept of information technology. The basic directions of development of information technologies in tourism. The hardware and the software of the information technologies in tourism. Means of communication and the communication tools of office equipment in the sphere of tourism. Information technologies in tourism on the basis of Microsoft Office, database, database management system. Information searching systems for tourist organizations. Local area networks and communication systems in tourism. Information security in computer networks of enterprises in the sphere of tourism. The strategy development and the implementation of information systems in tourism. Information system management. Package Management of travel agencies, systems of automation of the hotel business management.

Legal Regulation of Tourism Activity. The State policy and State regulation in the sphere of tourism. Legislative and Governmental regulations in the sphere of tourism. Organization of tourist activity. Licensing, rights and responsibilities of the subjects of tourism activities. Civil duties and contracts in the tourism activities. The legal status of international tourism. International regulations, the procedure for registration of Ukrainian citizens' departure abroad. Legal regulation of the organization and implementation of tourist travel. The control of the activities in the field of tourism.

Foreign Language. The study of the second foreign language is forming the necessary communicative skills in the area of the students' future profession and the conditions of communication in oral and written form. The objective of the course is the obtaining of practical skills in business foreign language in different kinds of speech activity within the scope of the subject due to professional needs; mastering the newest professional information using foreign sources.

Professional Etiquette. Communication as a social phenomenon. Engineering communication, ethical principles for the communication of a manager. Functions of communication. Nonverbal communication. The art of the correct thinking and talking, the ability to listen. Industrial conflict. Office etiquette. Moral principles and fundamentals. A daily etiquette, business clothes. Formal and informal relationships with colleagues and subordinates. peculiarities of international communication.

Organization of Tourist Service in Hotels. History of the world and Ukraine's hotel business. The main features of the industry of classification of tourist accommodation facilities. The enterprises' hospitality principles. Regulatory activities at the company. A complex tour service. Services in the hotel industry. The order of reservation of seats and rooms in hotels and tourist complexes. Organization of reception and service of tourists in hotels and tourist complexes. Safety in hotels and tourist complexes.

Organization of Tourist Catering. Organization of Tourist catering. Organization of providing food services in tourism. Meeting visitors and their service. Menus and price lists. The technique of setting and service. The main features of service for the participants in symposia and conferences. The organization of foreign tourists' catering. Types of banquets and their features. Organization of levee and festive evenings. Tourist service. Tourists catering.

History of Tourism. Introduction, the main features of travel and tourism in our country. The development of tourism in Ukraine. The current situation in the development of the tourism industry.

Fundamentals of Museum Studies. Theoretical basis of museum studies. The evolution of museums. Topics and profiles. Organization of the museum work. Commercial activities of the museums. Organization of mutual cooperation with museums, tourist firms. Cultural heritage. The Museum treasures of Ukraine. Museums of the world.

Price Formation in Tourism. The economic essence of prices in the market economy. Structure and types of prices. Pricing in the field of tourism. State regulation of prices in the field of tourism. Costs of the enterprise. Methods of pricing in the field of tourism, the pricing policy in the field of tourism. Pricing strategy in the field of tourism. The formation of tariffs for services in the hotel industry. The main features of pricing in the global market.

Safety in Tourism. Safety in the tourism industry. The rights, duties and freedoms in the field of life safety in tourism. Safety and security in tourism, types and forms of insurance in tourism.

2. Elective academic disciplines

2.1. Disciplines chosen by the University

2.1.1. Cycle of humanitarian, social and economic training

Ethnography and folklore of Ukraine. The study of the philosophical and theoretical basics of the science of Ukrainian ethnos as a distinctive ethno-cultural and historical-political phenomenon. Synthesis and systematization of knowledge with the tangential to the studies of sciences: philosophy, history, aesthetics, culture, folklore, ethnography, etc.

2.1.2 Cycle of mathematics and natural science (fundamental) training

Statistics. Statistical observation. Summing and grouping of statistical data. Absolute and relative values. Mean value. Time series, indexes. Graphic image. Statistics of production. Statistics of goods and services. Statistical costs. Statistics of production efficiency.

Principles of Entrepreneurial Activity. Economic essence, peculiarities of organization and development of entrepreneurship. Economic and legal principles of entrepreneurship. Organizational basics of entrepreneurship. Organizational forms of entrepreneurship. Formation of the management structures of the company. Financial services and ensuring the functioning of enterprises in tourist business. State regulation of entrepreneurial activity. Competition and analysis of its impact on the business activity.

2.1.3. Cycle of professional and practical training

Insurance in Tourism. The basics of the insurance business. Types of insurance applied in the tourism activity. The insurance market. The basics of the financial activity of insurance companies.

Basics of Area Studies. Tourist cartography. Methodological means of tourist area studies. Fortresses, castles, convents and monasteries as local tourist facilities. Resorts in Ukraine. Museums as objects of the ethnographical tourist activity. Principles of ethnography. Tourist zoning. Tourist resources of the Western Ukraine.

Principles of Labor Safety. The production environment and its effect on man. The conditions at work, their classification and rationing. The occupational injuries and methods of protection of humans from them. The analysis and prevention of occupational diseases and occupational injuries. The basics of safety. The legal regulation of labour protection. State administration of a labour safety of Ukraine. The organization of labor at work. Economic aspects of labor safety.

Organization of Rural (ecological) Tourism. Organization of rural (ecological) tourism. Rural green tourism: its history and current status.

Organization of Animation Services. The concept of animation tourist activity. Socio-economic and socio-psychological factors of forming and expanding the interest and the increase of demand for the services of animation. Main types of animation services. Sport animation, entertainment animation, business, animation, animation of leisure for tourists in hotels and tourist complexes. Organization of leisure at restaurant business establishments. The specificity of the individual animation types, and kinds of tourism.

Advertising in Tourism. Advertising – an effective instrument of marketing policy communications. Substantiation of the advertising activities in tourism. The history of the beginning and development of advertising. The psychological bases of advertising. Advertising appeal. Promotional activities Advertising legislation. The legal justification for promotional activities in tourism.

Labor Safety in Industry. Modern methods of investigation and analysis of the risks, dangers and hazards in the workplace and production facilities; the definition of professional and industrial risks, threats in the workplace, investigation of accidents, accidents and occupational diseases; the causes of accidents; organizational and technical ways to improve the safety at work; the prevention of accidents and occupational diseases at work.

Organization of Cruise Tourism. Transport maintenance as part of the cruise tourism. Market of cruise tourism. Geography of cruise tourism. Regulatory framework and safety of cruise tourism. Features of cruise tourism. Organization of tourist service; the program of tourists' stay during a cruise travel.

Records management in Tourism. Basic requirements for drafting and design of documentation; statute, rules, keyboard of printing machines. Administrative documents: resolutions, orders, resolutions and orders; organizational documents: statutes, regulations, instructions; information and business documentation; organization of document circulation; control over the execution of documents; the efficient storage and transmission of documents to the archive.