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**Федеральное государственное автономное образовательное учреждение  
высшего образования «Российский университет дружбы народов»**

**Аграрно-технологический институт**

(наименование основного учебного подразделения (ОУП) – разработчика ОП ВО)

Утверждена на заседании Ученого  
совета РУДН протокол № 1  
от «24» января 2011 г.

Открыта приказом ректора РУДН  
№ 353  
от «20» апреля 2011 г.

**ОСНОВНАЯ ПРОФЕССИОНАЛЬНАЯ ОБРАЗОВАТЕЛЬНАЯ ПРОГРАММА  
ВЫСШЕГО ОБРАЗОВАНИЯ (ОП ВО)**

Направление подготовки/специальность:

**35.04.04 Агрономия**

(код и наименование направления подготовки/специальности)

Направленность (профиль/специализация):

**Интегрированная защита растений**

(наименование ОП ВО)

Образовательная программа разработана в соответствии с требованиями:  
**ОС ВО РУДН**, утвержденного приказом ректора №371 от «21» мая 2021 г.

Уровень образования:

**магистратура**

(бакалавриат/специалитет/магистратура/ординатура – вписать нужное)

Квалификация выпускника:

**магистр**

(квалификация выпускника в соответствии с приказом Минобрнауки России от 12.09.2013 г. №1061)

Срок получения образования по ОП ВО:

**2 года**

(очная форма обучения)

(очно-заочная форма  
обучения)

(заочная форма  
обучения)

Сведения об особенностях реализации программы: программа реализуется на английском языке

СОГЛАСОВАНО:


Руководитель ОП ВО  
**Пакина Е.Н.**

Председатель МССН  
**Пакина Е.Н.**

Руководитель ОУП  
**Довлетярова Э.А.**



(подпись)



(подпись)



(подпись)

«\_\_» \_\_\_\_\_ 20\_\_ г.

«\_\_» \_\_\_\_\_ 20\_\_ г.

«\_\_» \_\_\_\_\_ 20\_\_ г.

2022 г.

**Federal State Autonomous Educational Institution of Higher Education "Peoples'  
Friendship University of Russia"**

**Agrarian Technological Institute**

(name of the main educational unit (OUP) - the developer of the EP HE)

Approved at the meeting of the Scientist  
University

Council of RUDN University Protocol No. \_\_\_  
from "\_\_\_" \_\_\_\_\_ 20\_\_

Opened by order of the Rector of RUDN

No. \_\_\_\_\_  
from "\_\_\_" \_\_\_\_\_ 20\_\_

**BASIC PROFESSIONAL EDUCATIONAL PROGRAM OF HIGHER EDUCATION (EP HE)**

Direction of training / specialty:

**34.04.04 Agronomy**

(code and name of the direction of training / specialty)

Orientation (profile/specialization):

**Integrated crop protection**

(name of EP HE)

The educational program is developed in accordance with the requirements:

**OS VO RUDN University**, approved by the order of the rector No. \_\_\_\_\_ dated "\_\_\_" \_\_\_\_\_ 20\_\_

The level of education:

**Masters**

(bachelor's / specialist's / master's / residency - enter the required)

Graduate Qualification:

**masters**

(qualification of a graduate in accordance with the order of the Ministry of Education and Science of Russia dated September 12, 2013 No. 1061)

The term for obtaining education in OP VO:

**2 years**

(Full-time education)

**2 years**

(part-time form  
training)

**2 years**

(extramural  
training)

Information about the features of the program implementation:

AGREED:

Head of EP HE

**Pakina E.N.**

Chairman of the MSCH

**Pakina E.N.**

Head of PMO

**Dovletyarova E.A.**

(signature)

(signature)

(signature)

"\_\_\_" \_\_\_\_\_ 20\_\_

"\_\_\_" \_\_\_\_\_ 20\_\_

"\_\_\_" \_\_\_\_\_ 20\_\_

2022 |

## **Description of educational program.**

### **General characteristics of EP HE**

#### ***1.1. Purpose (mission) of EP HE.***

The main goal in the implementation of educational programs in this area of study is to ensure the high quality of training and competitiveness of innovation-oriented specialists using new scientific and laboratory equipment, modern practice bases for priority high-tech sectors of the national economy through integration and cooperation with employers and strategic partners

#### ***1.2. Basic information.***

The master's program "Agronomy" specialization "Integrated Plant Protection" is the direction of obtaining basic higher education at the Agrarian and Technological Institute of RUDN University. Higher education under the master's program can be obtained full-time. Duration of study: 2 years.

K The features of the implementation of the main educational program include the modular principle and the use of elements of e-learning and distance learning technologies. When teaching people with disabilities, e-learning and distance learning technologies provide for the possibility of receiving and transmitting information in forms accessible to them.

#### ***1.3. Features of the implementation of EP HE.***

The peculiarity of the preparation of masters in the direction 35.04.04 "Agronomy" of the specialization "Integrated plant protection" is that already during their studies in the magistracy they have the opportunity to realize themselves in the field of innovative technologies business. The program is implemented in Russian and English.

#### ***1.4. The need of the labor market for graduates of this EP HE.***

Master in the direction of preparation 35.04.03 "Agronomy" specialization "Integrated Plant Protection" is preparing for a research type of professional activity.

Specialists of this profession are in demand at enterprises of various forms of ownership in large state, research and production associations, small and medium-sized businesses, implementation and consulting structures, including foreign companies.

Further professional activity:

- agricultural holdings of Russian and foreign companies;
- leading Russian and international companies in the development, production and sale of plant protection products;
- experimental stations for plant protection;
- specialized research institutions;
- system of FGU "Rosselkhoztsentr";
- customs service for phytosanitary supervision;
- enterprises FGU plant quarantine;
- representative offices of Russian and foreign insurance companies

Graduates of this direction have a universal set of knowledge, since the sphere of interest includes almost all processes occurring in the profile

enterprise, and the acquired knowledge allows solving the following professional tasks:

- programming crop yields for various levels of agricultural technologies;
- development and implementation of projects of environmentally friendly methods and technologies for the production of high-quality crop products, taking into account the properties of agricultural landscapes and economic efficiency;
- designing adaptive-landscape farming systems for various organizational forms of the agro-industrial complex and their development;
- consultations on innovative technologies in agronomy;
- collection, processing, analysis and systematization of scientific and technical information, domestic and foreign experience;
- development of methods for conducting experiments, mastering new research methods;
- organizing, conducting and analyzing the results of experiments;
- creation of optimization models of crop cultivation technologies, plant protection systems, varieties;
- preparation of scientific and technical reports, reviews and scientific publications based on the results of research.

### **1.5. Requirements for the applicant.**

A potential applicant of the main educational program in the direction of preparation 35.04.03 "Agronomy" of the specialization "Integrated Plant Protection" must be prepared for activities that require in-depth agricultural, research and pedagogical training and possess the following competencies:

- *general cultural competencies*: the ability to abstract thinking, analysis, synthesis; willingness to act in non-standard situations, bear social and ethical responsibility for the decisions made; readiness for self-development, self-realization, use of creative potential;
- *general professional competencies*: readiness for communication in oral and written forms in Russian and foreign languages to solve the problems of professional activity; willingness to lead a team in the field of their professional activity, tolerantly perceiving social, ethnic, confessional and cultural differences; the ability to make organizational and managerial decisions;
- *professional competencies*

*in areas of research activity*: the ability to summarize and critically evaluate the results obtained by domestic and foreign researchers, identify promising areas, draw up a research program; the ability to substantiate the relevance, theoretical and practical significance of the chosen topic of scientific research; the ability to conduct independent research in accordance with the developed program; the ability to present the results of the research to the scientific community in the form of an article or report.

### **1.6. Characteristics of the professional activity of the EP graduate:**

1.6.1 The field of professional activity of masters includes: agronomic research and development aimed at solving complex problems of organizing plant protection and producing high-quality crop products in modern agriculture.

1.6.2 The objects of professional activity of masters are: agrophytocenoses and associated pathosystems; chemical, biological and other modern means of plant protection; phytopathogenic complex in open

и protected ground; modern environmentally friendly technologies for the production of crop products.

1.6.3 Master in the field of study 35.04.04 "Agronomy" specialization "Integrated Plant Protection" is preparing for research and production and technological professional activities:

1.6.4 Tasks of professional activity.

-programming crop yields for different levels agricultural technologies; - development and implementation of projects of environmentally friendly methods and technologies production of high-quality crop products, taking into account the properties of agricultural landscapes and economic efficiency; - design of adaptive-landscape farming systems for various organizational forms of the agro-industrial complex and their development;

- consultations on innovative technologies in agronomy;

- collection, processing, analysis and systematization of scientific and technical information, domestic and foreign experience; - development of methods for conducting experiments, mastering new research methods;

- organizing, conducting and analyzing the results of experiments;

- creation of optimization models of crop cultivation technologies, plant protection systems, varieties; - preparation of scientific and technical reports, reviews and scientific publications based on the results of research.

### ***1.7. Requirements for the results of the development of EP HE.***

#### **The results of the development of the program:**

The results of mastering the main educational program (Master's) in the direction 35.04.04 "Agronomy" of the specialization "Integrated Plant Protection" are determined by the competencies acquired by the graduate, his ability to apply knowledge, skills and personal qualities in accordance with the tasks of professional activity.

The competencies of the graduate, formed in the process of mastering the educational program of higher education 35.04.04 "Agronomy" of the specialization "Integrated Plant Protection", are determined on the basis of the educational standard in the direction 35.04.04 "Agronomy" of the specialization "Integrated Plant Protection" and are supplemented by professionally specialized competencies in accordance with the goals and objectives of the OP VO:

#### *Universal competencies:*

- UK-1: Able to carry out a critical analysis of problem situations based on a systematic approach, develop an action strategy;
- UK-2: Able to manage the project at all stages of its life cycle;
- UK-3: Able to organize and manage the work of the team, developing a team strategy to achieve the goal;
- UK-4: Able to apply modern communication technologies, including in a foreign language(s), for academic and professional interaction;
- UK-5: Able to analyze and take into account the diversity of cultures in the process of intercultural interaction;

- UK-6: Able to determine and implement the priorities of their own activities and ways to improve it based on self-assessment;
- UK-7: Able to: search for the necessary sources of information and data, perceive, analyze, memorize and transmit information using digital means, as well as using algorithms when working with data received from various sources in order to effectively use the information received to solve problems; evaluate the information, its reliability, build logical conclusions based on incoming information and data;

*General professional competencies:*

- GPC-1: Able to solve the problems of developing the field of professional activity and (or) organization based on the analysis of the achievements of science and production;
- GPC-2: Able to transfer professional knowledge, taking into account pedagogical methods;
- GPC-3: Able to use modern methods of solving problems in the development of new technologies in professional activities;
- GPC-4: Able to conduct scientific research, analyze results and prepare reporting documents;
- GPC-5: Able to carry out a feasibility study of projects in professional activities;
- GPC-6: Able to manage teams and organize production processes;
- GPC-7: Able to carry out critical analysis, apply a systematic approach in the field of digital economy;

*Professional competencies:*

- PC-1: Willingness to use modern achievements of world science and advanced technology in research work;
- PC-2: The ability to substantiate the objectives of the study, choose the methods of experimental work, interpret and present the results of scientific experiments;
- PC-3: The ability to independently organize and conduct scientific research using modern methods of analysis of soil and plant samples;
- PC-4: Willingness to make practical recommendations on the use of research results;
- PC-5: Willingness to present results in the form of reports, abstracts, publications and public discussions;
- PC-6: Willingness to apply a variety of methodological approaches to the modeling and design of varieties, plant protection systems, techniques and technologies for the production of crop products;
- PC-7: The ability to use innovative processes in the agro-industrial complex in the design and implementation of environmentally friendly and cost-effective technologies for the production of crop production and reproduction;
- PC-8: Ability to develop adaptive-landscape farming systems for agricultural organizations;

- PC-9: The ability to ensure the environmental safety of agricultural landscapes in the cultivation of crops and the economic efficiency of production.

		Universal competencies																				
Name of disciplines (modules) in accordance with the curriculum		UK-1 - Able to search, critical analysis of problem situations based on a systematic approach, develop an action strategy	UK-2 - Able to manage a project at all stages of its life cycle	UK-3 - Able to organize and manage the work of the team, developing a team strategy to achieve the goal	UK-4 - Able to apply modern communication technologies in the state language of the Russian Federation and foreign language(s) for academic and professional interaction	UK-5 - Able to perceive the intercultural diversity of society in the socio-historical, ethical and philosophical contexts	UK-6 - Able to identify and implement the priorities of their own activities and ways to improve it based on self-assessment	UK-7 - Able to search for the necessary sources of information and data, perceive, analyze, memorize and transmit information using digital means, as well as using algorithms when working with data received from various sources in order to effectively use the information received to solve problems, evaluate information, reliability, build logical conclusions based on	OPK-1 - Able to solve the problems of developing the field of professional activity and (or) organization based on the analysis of the achievements of science and production	OPK-2 - Able to transfer professional knowledge, taking into account pedagogical methods	OPK-3 - Able to use modern methods of solving problems in the development of new technologies in professional activities	OPK-4 - Able to conduct scientific research, analyze results and prepare reports	OPK-5 - Able to carry out feasibility studies of projects in professional activities Able to participate in experimental research in professional activities	OPK-6 - Able to manage teams and organize production processes	OPK-7 - Able to use tools for working with large arrays of structured and unstructured information, use modern digital methods for processing, analyzing, interpreting and visualizing data in order to solve the tasks of professional and research activities in the field of agronomy	PC-1 - Able to collect, process, analyze and systematize scientific and technical information, domestic and foreign experience in the field of agronomy	PC-2 - Able to develop methods for conducting experiments, master new research methods	PC-3 - Able to organize, conduct and analyze the results of experiments (field experiments)	PC-4 - Able to create models of crop cultivation technologies, plant protection systems, varieties	PC-5 - Able to prepare scientific and technical reports, reviews and scientific publications based on the results of research	PC-6 - Able to prepare conclusions on the feasibility of introducing the studied methods, varieties and hybrids of agricultural crops into production based on the analysis of experimental data	PC-7 - Able to carry out phytosanitary control at the state border in order to protect the territory of the Russian Federation from the penetration of quarantine and other dangerous pathogens and pests of plants, weeds
<b>Block 1.</b>		<b>Disciplines (modules)</b>																				
B1.O		<b>Mandatory part</b>																				
B1.O.01		<b>base component</b>																				
B1.O.01.01	Professional foreign language				UK-4.1; UK-4.2; UK-4.3;	UK-5.1; UK-5.2																
B1.O.01.02	History and methodology of scientific agronomy	UK-1.2; UK-1.3;		UK-3.1; UK-3.2;		UK-5.1; UK-5.2;	UK-6.1; UK-6.2;			GPC-2.1; GPC-2.2;				GPC-6.2		PC-1.1;		PC-3.2;			PC-5.1; PC-5.3	
B1.O.01.03	Coursework "History and methodology of scientific agronomy"	UK-1.2; UK-1.3;				UK-5.1; UK-5.2;	UK-6.1; UK-6.2;			GPC-2.1; GPC-2.2;						PC-1.1;					PC-5.1; PC-5.3	
B1.O.01.04	Information Technology	UK-1.1; UK-1.2;						UK-7.1; UK-7.2;	GPC-1.3;		GPC-3.2;			GPC-6.1;	GPC-7.1; GPC-7.2;	PC-1.2;						PC-6.1
B1.O.01.05	Instrumental research methods	UK-1.2;							GPC-1.1;		GPC-3.1;	GPC-4.1;			GPC-7.2;		PC-2.2					
B1.O.01.06	Mathematical modeling and design							UK-7.1;	GPC-1.1;			GPC-4.1;						PC-3.1	PC-4.1;	PC-5.2		
B1.O.02		<b>Variable component</b>																				
B1.O.02.01	plant immunity	UK-1.2							OPK-1.2			GPC-4.2				PC-1.1	PC-2.1			PC-4.2; PC-4.5; PC-4.6		
B1.O.02.02	Coursework "Plant immunity"	UK-1.2							OPK-1.2			GPC-4.2				PC-1.1	PC-2.1			PC-4.2; PC-4.5; PC-4.6		
B1.O.02.03	Organization of integrated plant protection systems	UK-1.1; UK-1.3	UK-2.1; UK-2.2; UK-2.3						GPC-1.2; GPC-1.3		GPC-3.1	GPC-4.2; GPC-4.3	GPC-5.1; GPC-5.2; GPC-5.3			PC-1.1	PC-2.1; PC-2.2	PC-3.2		PC-4.2; PC-4.3; PC-4.4		PC-6.2
B1.O.02.04	Course work "Organization of integrated plant protection systems"	UK-1.1; UK-1.3	UK-2.1; UK-2.2; UK-2.3						GPC-1.2; GPC-1.3		GPC-3.1	GPC-4.2; GPC-4.3	GPC-5.1; GPC-5.2; GPC-5.3			PC-1.1	PC-2.1; PC-2.2	PC-3.2		PC-4.2; PC-4.3; PC-4.4		PC-6.2
B1.O.02.05	Biological plant protection method								GPC-1.1; OPK-1.2			GPC-4.2	GPC-5.1; GPC-5.2; GPC-5.3				PC-2.1; PC-2.2;	PC-3.2		PC-4.2; PC-4.3; PC-4.4		PC-6.2



