

Документ подписан простой электронной подписью
Информация о владельце:
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Должность: Ректор
Дата подписания: 01.07.2026 17:06:59
Уникальный программный ключ:
ca953a0120d891083f939673078ef1a980daa18a

**Federal State Autonomous Educational Institution of Higher Education
"Peoples' Friendship University of Russia named after Patrice Lumumba "**

Agrarian and Technological Institute

(name of the main educational unit (MEU) – developer of the program)

Department of Agrobiotechnology

(name of the basic educational unit (BEU) – developer of the program)

WORKING PROGRAM OF THE DISCIPLINE

Plant Protection

(name of discipline/module)

Scientific specialty:

4.1.3. Agrochemistry, Agrosoil Science, Plant Protection and Quarantine

(code and name of scientific specialty)

The discipline is mastered within the framework of the postgraduate program:

Agrochemistry, Agrosoil Science, Plant Protection and Quarantine

(name of the program for training scientific and scientific-pedagogical personnel)

1. THE GOAL OF MASTERING THE DISCIPLINE

The purposes of mastering the discipline "Plant Protection" are the construction of a modern integrated plant protection system and the technology for its implementation

2. REQUIREMENTS TO THE RESULTS OF MASTERING THE DISCIPLINE

As result of mastering the discipline "Plant Protection", the postgraduate student must:

Know:

patterns of formation of phytopathogenic entomofauna;
 patterns of occurrence and development of epiphytotics;
 influence of individual environmental factors on the dynamics of phytopathogen populations;
 directions of adaptation of harmful organisms.

Be able to::

determine the phase of population dynamics of phytopathogens;
 assess the influence of various environmental factors on intra- and interpopulation relationships within the phytopathogenic complex;
 determine economic thresholds of harmfulness and use them when constructing a system of protective measures.

Own:

и skills in constructing and methods for evaluating the effectiveness of a complex of protective measures for various agricultural crops.

3. SCOPE OF THE DISCIPLINE AND TYPES OF STUDY WORK

The total workload of the discipline "Plant Genetics" is 4 credit units (144 academic hours).

Type of academic work		Total, academic hours	Semester
			2
<i>Contact work</i>		108	108
including:			
Lectures (LC)		30	30
Laboratory work (LW)		—	—
Practical/seminar classes (SZ)		30	30
<i>Independent work of students</i>		48	48
<i>Control (exam)</i>		36	36
General complexity of the discipline	ac. h.	144	144
	credit unit	4	4

4. CONTENT OF THE DISCIPLINE

Наименование раздела дисциплины	Содержание раздела (темы)	Вид учебной работы
Phytopathogenic complex on various agricultural crops	Damage to agricultural crops by a complex of pests and diseases; symptoms of complex damage; sources of primary and secondary infection	LK, SZ
Agrotechnical method of plant protection	Advantages and disadvantages of the agrotechnical method of protection; role of crop rotation and soil cultivation in regulating the phytosanitary condition of crops and plantations	LZ, SZ
Biological method of plant protection	Advantages and disadvantages of the biological method of protection; use of natural enemies of phytophages, parasitic and predatory vertebrates, antagonistic fungi, hyperparasites	LZ, SZ
Physical and mechanical methods of plant protection	Advantages and disadvantages of physical and mechanical methods of protection; use of various	LZ, SZ

	physical factors for disinfection of seed and planting material	
Chemical method of plant protection	Advantages and disadvantages of the chemical method of protection; main groups of chemical preparations; purpose, nature of action, formulation forms, methods of preparation and application of working solutions, compatibility of preparations from different groups; safety measures when using chemical plant protection products	LZ, SZ
Modern methods of plant protection, integrated protection	Advantages and disadvantages of individual plant protection methods; combination of various protection methods; preventive and exterminatory measures	LZ, SZ
Plant quarantine	Quarantine as a method of plant protection; quarantine measures, quarantine diseases, pests and weeds; measures for external and internal quarantine	LZ, SZ

5. LOGISTIC AND TECHNICAL SUPPORT OF DISCIPLINE

Audience type	Equipping the auditorium	Specialized educational/laboratory equipment, software and materials
Seminar	An auditorium for conducting seminar-type classes, group and individual consultations, ongoing monitoring and midterm assessment, equipped with a set of specialized furniture and technical means for multimedia presentations	No
For independent work of students	A classroom for independent work of students (can be used for conducting seminars and consultations), equipped with a set of specialized furniture and computers with access to the EIS	No

6. EDUCATIONAL, METHODOLOGICAL AND INFORMATIONAL SUPPORT OF THE DISCIPLINE

Main literature:

Integrated Plant Protection / T. V. Dolzhenko, L. E. Kolesnikov, A. G. Semenova [et al.]. -- 3rd ed., ster. -- Saint Petersburg : Lan, 2024. -- 120 p. -- ISBN 978-5-507-47304-5. -- Text : electronic // Lan : electronic library system. -- URL: <https://e.lanbook.com/book/359825> (access date: 04.04.2025). -- Access mode: for authorized users.

Штерншис Shternshis, M. V. Biological Plant Protection : textbook for universities / M. V. Shternshis, I. V. Andreeva, O. G. Tomilova. -- 7th ed., ster. -- Saint Petersburg : Lan, 2024. -- 332 p. -- ISBN 978-5-507-49266-4. -- Text : electronic // Lan : electronic library system. -- URL: <https://e.lanbook.com/book/384752>

Further reading:

Onegrated Plant Protection in Agrophytocenoses : textbook for universities / V. E. Torikov, O. V. Melnikova, I. V. Sycheva [et al.] ; edited by V. E. Torikov. -- Saint Petersburg : Lan, 2024. -- 180 p. -- ISBN 978-5-507-48892-6. -- Text : electronic // Lan : electronic library system. -- URL: <https://e.lanbook.com/book/401012> (access date: 04.04.2025). -- Access mode: for authorized users.

Biological Plant Protection against Stress : textbook for universities / L. Z. Karimova, V.

A. Kolesar, R. I. Safin, G. K. Khuzina. -- 3rd ed., ster. -- Saint Petersburg : Lan, 2024. -- 100 p. -- ISBN 978-5-507-49137-7. -- Text : electronic // Lan : electronic library system. -- URL: [https://e.lanbook.com/book/379346Resources of the information and telecommunications network "Internet"](https://e.lanbook.com/book/379346Resources of the information and telecommunications network 'Internet'):

Electronic library system of RUDN and third-party electronic library systems to which university students have access on the basis of concluded agreements: Электронно-библиотечная система РУДН: [сайт]. URL: <http://lib.rudn.ru/MegaPro/Web>

- Library System of RUDN: [website]. URL: <http://lib.rudn.ru/MegaPro/Web>
- Educational platform "Yurayt": [website]. URL: <https://urait.ru> ЭБС «Лань»: [сайт]. URL: <https://e.lanbook.com>

Databases and search engines:

- Electronic fund of legal and normative-technical information: [site]. URL: <https://docs.cntd.ru/>
- Search engine "Yandex": [site]. URL : <https://yandex.ru/>
- Search engine « Google »: [site]. URL : <https://www.google.com/>

Educational and methodological materials for independent work of students in mastering a discipline/module:

A course of lectures on the subject of "Plant Protection".

7. EVALUATION MATERIALS AND SCORE-RATING SYSTEM FOR ASSESSING THE LEVEL OF DEVELOPMENT OF COMPETENCES IN THE DISCIPLINE

The assessment materials and the point-rating system for assessing the mastery of the discipline are presented in the TUIS.

DEVELOPERS:

Director of the Agrobiotechnological Department

E. N. Pakina

HEAD OF THE BUP

Director of the Agrobiotechnological Department

E. N. Pakina