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

educational division (faculty/institute/academy) as higher education programme developer

INTERNSHIP SYLLABUS

TECHNOLOGICAL TRAINING

internship title

INDUSTRIAL

internship type

Recommended by the Didactic Council for the Education Field of:

35.04.04 AGRONOMY

field of studies / speciality code and title

The student's internship is implemented within the professional education programme of higher education:

GENERAL AGRONOMY

higher education programme profile/specialisation title

1. INTERNSHIP GOAL(s)

"Technological Training" is part of the Master's program "General Agronomy" under the field of study 35.04.04 "Agronomy" and is conducted in the 2nd semester of the 1st year. The internship is delivered by the Agrobiotechnology Department.

The goal of the "Technological Training" is: acquisition of practical skills in production and technological activities (agronomist, assistant agronomist, team leader); acquisition of practical skills and consolidation of theoretical training in organizational and management activities (administrative staff, enterprise manager); mastering production processes in various sectors of agriculture based on independent professional activity.

2. REQUIREMENTS FOR LEARNING OUTCOMES

The "Technological Training" is aimed at developing the following competencies (parts of competencies) in students:

Table 2.1. List of competences that students acquire during the internship

Competence code	Competence descriptor	Competence formation indicators (within this course)
GC-1	Able to carry out critical analysis of problem situations based on a systematic approach, develop an action strategy	GC-1.1 Performs search for necessary information, its critical analysis and generalizes the results of the analysis to solve the assigned task; GC-1.2 Uses a systematic approach to solve assigned tasks; GC-1.3 Develops a strategy for achieving the set goal as a sequence of steps, anticipating the result of each of them and assessing their impact on the external environment of the planned activities and on the relationship between the participants in these activities;
GC-2	Able to manage a project at all stages of its life cycle	GC-2.1 Develops a project concept within the defined problem, formulating the goal, objectives, relevance, significance (scientific, practical, methodological, etc., depending on the project type), expected results and possible areas of their application; GC-2.2 Forms a schedule for the implementation of the project as a whole and a plan for monitoring its execution, organizes and coordinates the work of project participants; GC-2.3 Proposes possible ways (algorithms) for implementing the project results into practice (or implements it);
GC-6	Able to determine and implement priorities of own activity and ways of its improvement based on self-assessment	GC-6.1 Assesses own resources and their limits (personal, situational, temporal), optimally uses them for successful completion of the assigned task; GC-6.2 Plans professional trajectory taking into account the features of both professional and other types of activities and labor market requirements;
GPC-1	Able to solve problems of development of the field of professional activity and/or organization based on the analysis of scientific and production achievements	GPC-1.2 Uses methods for solving problems of agronomy development based on search and analysis of modern scientific and production achievements; GPC-1.3 Applies available technologies, including information and communication technologies, to solve professional tasks in agronomy;

Competence code	Competence descriptor	Competence formation indicators (within this course)
GPC-3	Able to use modern methods of solving problems when developing new technologies in professional activities	GPC-3.1 Analyzes methods and ways of solving problems related to the development of new technologies in agronomy; GPC-3.2 Uses information resources, achievements of science and practice when developing new technologies in agronomy;
GPC-6	Able to manage teams and organize production processes	GPC-6.2 Defines tasks of personnel of a structural unit based on the goals and strategy of the organization;
GPC-7	Able to master the tools for working with large arrays of structured and unstructured information, use modern digital methods of processing, analysis, interpretation and visualization of data in order to solve assigned tasks of professional and research activities in the field of agronomy	GPC-7.1 Masters the tools for working with large arrays of structured and unstructured information; GPC-7.2 Uses modern digital methods of processing, analysis, interpretation and visualization of data in order to solve assigned tasks;
PC-1	Able to organize and conduct experiments (field trials) to assess the effectiveness of innovative technologies (technology elements), varieties and hybrids under production conditions	PC-1.1 Develops a research program to study the effectiveness of innovative technologies (technology elements), varieties and hybrids, develops methodologies for conducting experiments, masters new research methods;
PC-2	Able to develop and implement environmentally safe practices and technologies for the production of high-quality crop production, taking into account the properties of agrolandscapes and economic efficiency	PC-2.1 Determines the planned yield of agricultural crops, taking into account available natural and production resources using generally accepted calculation methods; PC-2.2 Organizes quality control and safety of crop production; PC-2.3 Substantiates specializations and types of products grown in an agricultural organization;
PC-3	Able to determine directions for improving and increasing the efficiency of crop production technologies based on scientific achievements and advanced experience of domestic and foreign producers	PC-3.1 Identifies promising directions for improving the efficiency of crop production; PC-3.2 Carries out operational regulation of the production process of crop production;

3. INTERNSHIP IN HIGHER EDUCATION PROGRAMME STRUCTURE

"Undergraduate practice/Pre-diploma practice" belongs to the core component of Block 1 "Disciplines (modules)" of the higher education programme curriculum.

Within the higher education programme, students also master other disciplines and/or internships that contribute to the achievement of the expected learning outcomes as results of the internship.

Table 3.1. The list of the higher education programme components that contribute to the achievement of the expected learning outcomes as the internship results.

Competence code	Competence descriptor	Previous courses/modules, internships*	Subsequent courses/modules, internships*
GC-1	Able to carry out critical analysis of problem situations based on a systematic approach, develop an action strategy	Mechanization of Crop Production; Soil Fertility Management; Management**; Marketing**;	Undergraduate practice/Pre-diploma practice; Soil Fertility Management; Crop Production;
GC-2	Able to manage a project at all stages of its life cycle	Information Technology; Pests and Diseases; Soil Fertility Management; Scientific research work; Crop Production; Management**; Marketing**;	Undergraduate practice/Pre-diploma practice; Pests and Diseases; Soil Fertility Management; Scientific research work; Postharvest Management; Crop Production;
GC-6	Able to determine and implement priorities of own activity and ways of its improvement based on self-assessment		Undergraduate practice/Pre-diploma practice;
GPC-1	Able to solve problems of development of the field of professional activity and/or organization based on the analysis of scientific and production achievements		Postharvest Management;
GPC-3	Able to use modern methods of solving problems when developing new technologies in professional activities	Scientific research work; Crop Production; Soil Fertility Management; Pests and Diseases; Information Technology;	Crop Production; Scientific research work; Undergraduate practice/Pre-diploma practice; Postharvest Management; Soil Fertility Management; Pests and Diseases;
GPC-6	Able to manage teams and organize production processes	Soil Fertility Management; Information Technology;	Undergraduate practice/Pre-diploma practice; Soil Fertility Management;

Competence code	Competence descriptor	Previous courses/modules, internships*	Subsequent courses/modules, internships*
GPC-7	Able to master the tools for working with large arrays of structured and unstructured information, use modern digital methods of processing, analysis, interpretation and visualization of data in order to solve assigned tasks of professional and research activities in the field of agronomy	Information Technology; Scientific research work; Pests and Diseases;	Scientific research work; Undergraduate practice/Pre-diploma practice; Plant Protection; Pests and Diseases;
PC-1	Able to organize and conduct experiments (field trials) to assess the effectiveness of innovative technologies (technology elements), varieties and hybrids under production conditions	Scientific research work; Information Technology; Crop Production; Mechanization of Crop Production; Pests and Diseases; Soil Fertility Management;	Scientific research work; Undergraduate practice/Pre-diploma practice; Crop Production; Pests and Diseases; Breeding and Seed Production; Plant Protection; Soil Fertility Management;
PC-2	Able to develop and implement environmentally safe practices and technologies for the production of high-quality crop production, taking into account the properties of agrolandscapes and economic efficiency	Crop Production; Pests and Diseases; Scientific research work;	Crop Production; Pests and Diseases; Plant Protection; Scientific research work; Breeding and Seed Production;
PC-3	Able to determine directions for improving and increasing the efficiency of crop production technologies based on scientific achievements and advanced experience of domestic and foreign producers	Scientific research work; Crop Production;	Scientific research work; Crop Production; Postharvest Management; Breeding and Seed Production; Plant Protection;

* To be filled in according with the competence matrix of the higher education programme.

** – elective disciplines/practices

4. INTERNSHIP WORKLOAD

The total workload of the "Technological Training" is 15 credit units (540 academic hours).

5. INTERNSHIP CONTENTS

*Table 5.1. Internship contents**

Modules	Contents (topics, types of practical activities)	Workload, academic hours
Module 1. Preparatory Stage	Topic 1.1. Safety briefing before the start of the internship	4
Module 2. Practical Stage	Topic 2.1. Production safety briefing at the workplace	6
	Topic 2.2. Familiarization with the organizational and economic structure and location of the enterprise	56
	Topic 2.3. Study of land plots and structure of sown areas	56
	Topic 2.4. Study of measures and technological processes for preparation for sowing and sowing of agricultural crops	56
	Topic 2.5. Study of measures and technological processes for preparation for fodder procurement and fodder procurement	56
	Topic 2.6. Study of measures and technological processes for preparation for harvest and harvest	56
	Topic 2.7. Study of yield accounting	56
Module 3. Interim Assessment	Topic 3.1. Analysis of the farm's work, production and economic indicators of the farm for the last 2–3 years	68
	Topic 3.2. Collection, processing and systematization of factual and literary material	108
Writing an internship report		9
Preparing for defence and defending the internship report		9
TOTAL:		540

* The contents of internship through modules and types of practical activities shall be FULLY reflected in the student's internship report.

6. INTERNSHIP EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

The need for material and technical support is specified in the student's individual assignment and depends on the tasks set and the internship base.

7. INTERNSHIP LOCATION AND TIMELINE

The internship can be carried out at the structural divisions of RUDN University or at Moscow-based organizations (stationary), as well as at bases located outside Moscow (field/travel).

The internship at an external organization (outside RUDN University) is legally arranged on the grounds of an appropriate agreement, which specifies the terms, place and conditions for an internship implementation at the organization.

The period of the internship, as a rule, corresponds to the period indicated in the training calendar of the higher education programme. However, the period of the internship can be rescheduled upon agreement with the Department of Educational Policy and the Department for the Organization of Internship and Employment of RUDN students.

8. RESOURCES RECOMMENDED FOR INTERNSHIP

Main readings:

1. *Production practice of bachelors. In the field of "Agronomy": Methodological guidelines* / V.V. Vvedensky, V.N. Grishin, V.A. Krupnov. – M.: RUDN, 2010 – 46 p.
2. Tarakanov G.I. *Vegetable growing.* / Tarakanov G.I., Mukhin V.D. et al. M.: Kolos, 2002, -472p.
3. *Farming* / Ed. by A.I. Puponin. M.: Kolos, 2000, -549p.

Additional readings:

1. *Agrochemistry* / Ed. by B.A. Yagodin. -M.: Kolos, 2002 –584p.
2. *Plant protection from pests.* / Ed. by Isaichev V.V. M.: Kolos, 2001 –468p.
3. *Plant protection from diseases* / Ed. by Shkalikov V.A. M.: Kolos, 2001 – 244p.

Internet sources

1. Electronic libraries (EL) of RUDN University and other institutions, to which university students have access on the basis of concluded agreements:

- RUDN Electronic Library System (RUDN ELS): <https://mega.rudn.ru/MegaPro/Web>
- EL "University Library Online": <http://www.biblioclub.ru>
- EL "Yurayt": <http://www.biblio-online.ru>
- EL "Student Consultant": www.studentlibrary.ru
- EL "Znanium": <https://znanium.ru/>

2. Databases and search engines:

- Sage: <https://journals.sagepub.com/>
- Springer Nature Link: <https://link.springer.com/>
- Wiley Journal Database: <https://onlinelibrary.wiley.com/>
- Scientometric database Lens.org: <https://www.lens.org>
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The training toolkit and guidelines for a student to do an internship, keep an internship diary and write an internship report:*

1. Safety regulations to do the internship "Technological Training" (initial briefing).
2. Machinery and principles of operation of technological production equipment used by students during their internship; process flow charts, regulations, etc. (if necessary).

3. Guidelines for keeping an internship diary and writing an internship report "Technological Training".

*The training toolkit and guidelines for the internship are placed on the internship page in the university telecommunication training and information system under the set procedure.

DEVELOPERS:

Director of the
Agrobiotechnology Department

Pakina E.N.

position, educational department

signature

name and surname.

HEAD OF EDUCATIONAL DEPARTMENT:

Director of the
Agrobiotechnology Department

Pakina E.N.

educational department

signature

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**HEAD OF
HIGHER EDUCATION PROGRAMME:**

Director of the
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Pakina E.N.

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