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

**Medical Institute**

(name of the main educational unit (PMO) - the developer of the postgraduate program)

**Department of General Pharmaceutical and Biomedical Technology**

(name of the basic educational unit (BUE) - the developer of the postgraduate program)

**PRACTICE PROGRAM**

Teaching practice

(name of practice)

**Scientific specialty:**

3.4.1. Industrial Pharmacy and Drug Technology

(code and name of scientific specialty)

**Practical training of students is carried out as part of the implementation of the  
postgraduate program:**

Drug Technology: Biopharmacy / Технология получения лекарств: Биофармация

(name of postgraduate program)

## 1. PURPOSE OF THE PRACTICE

The goals of pedagogical practice are:

- consolidation in practice of knowledge, skills and practical skills acquired by students in a scientific specialty 3.4.1. Industrial Pharmacy and Drug Technology;
- preparation for the implementation of pedagogical activities in the system of higher professional and additional education;
- consolidation and formation of skills in methodological development and analysis of the main forms of educational and extracurricular activities in pharmaceutical technology; explanations, development and control of knowledge on pharmaceutical technology;
- organization of educational work with students; development and improvement of the program of training courses on drug technology for graduate students.

The tasks of pedagogical practice are to prepare graduate students for the following types of pedagogical activities:

- determination of the content, forms and technologies of education in the system of higher and additional education;
- system design of educational material, design of training sessions, organization of communications and interaction in study groups;
- evaluation and control of the effectiveness of teaching practical disciplines.

## 2. REQUIREMENTS FOR LEARNING OUTCOMES ON THE RESULTS OF PRACTICE

As a result of passing pedagogical practice, the student must:

*Know:*

- basic principles, methods and forms of organization of the pedagogical process in the university;
- systems of competencies and professionally significant qualities of trainees and teachers;
- requirements for a university teacher in modern conditions;
- the main psychological, pedagogical, methodological patterns of teaching the discipline of pharmaceutical technology, biotechnology, biopharmacy at the university.

*Be able to:*

- carry out educational and methodological work on the design and organization of the educational process;
- analyze the difficulties that arise in pedagogical activity and adopt an action plan to resolve them;
- develop and improve training course programs;
- conduct self-control and self-assessment of the process and result of pedagogical activity;
- conduct all types of classroom training in the disciplines of the training profile;
- organize extracurricular and educational work with students.

*Own:*

- skills of public speaking in front of an audience and creating a creative atmosphere in the classroom;
- skills of methodological development and analysis of the main forms of educational and extracurricular activities in pharmaceutical technology.

### 3. SCOPE OF PRACTICE

The total labor intensity of the "Pedagogical Practice" is 6 credits (216 academic hours).

### 5. CONTENT OF PRACTICE

*Table 5.1. Practice content*

Name of practice section	Contents of the section (topics, types of practical activities)	labor input,ac.h.
Section 1. Preparatory stage	Orientation meeting at the department, familiarization with the practice program, the procedure for defending the practice report, the requirements and evaluation criteria.Safety briefing.	3
	Drawing up an individual practice plan.	3
	Visiting practical classes of the teaching staff of the department	17
Section 2 main stage	The study of official duties and rights of the teaching staff of the university, internal regulations, documents regulating the educational process. The study of the Federal State Educational Standard, curricula and training programs for students in the specialty "Pharmacy"; approved working curricula (modules) in the disciplines of the training curriculum and the principles of their compilation.	10
	Selection and analysis of basic and additional literature in accordance with the topics and goals of the planned classes. Development of a program for a module (section) of an academic discipline. Preparation of teaching materials for classes. Development of a plan and summary of classes.	42
	Conducting classroom laboratory classes with students	60
	Organization and holding extracurricular activities.	18
	Participation in the organization and conduct of intermediate and final certification in the disciplines of the Department of Education.	18
	Preparation of a practice report	9
	Preparation for defense and defense of the practice report	36
<b>TOTAL:</b>		<b>216</b>

### 6. LOGISTICS AND TECHNICAL SUPPORT OF PRACTICE

*Table 6.1. Logistics*

Audience type	Audience equipment	Specialized educational / laboratory equipment, software and materials for mastering the discipline (if necessary)
Teaching laboratory (943)	Audience for laboratory work, individual consultations, current control and intermediate certification equipped with a set of specialized furniture and equipment.	<p>A set of specialized furniture; hardware: Notebook Lenovo ThinkPad E15-IML; multimedia projector Epson EB-X31, there is Internet access.</p> <p>Software: Microsoft products (OS, office suite, including MS Office / Office 365, Teams, Skype) list of specialized equipment, etc.</p>
Teaching laboratory (944)	Audience for laboratory work, individual consultations, current control and intermediate certification equipped with a set of specialized furniture and equipment.	<p>A set of specialized furniture; technical means: video projector Epson EMP-S1 sch.1257, laptop Dell Vostro 7500, Internet access.</p> <p>Software: Microsoft products (OS, office suite, including MS Office / Office 365, Teams, Skype) list of specialized equipment, etc.</p>
Teaching laboratory (946)	Audience for laboratory work, individual consultations, current control and intermediate certification equipped with a set of specialized furniture and equipment.	<p>Set of 3 heating mantles for 250, 500 and 1000 ml flasks manufactured by Labtex</p> <p>Set of hydrometers AON-1 GOST 18481-81</p> <p>Analytical balance I class ViBRA HT 224RCE</p> <p>Moisture Analyzer Vibra MD-83</p> <p>Ultrasonic cleaner SONOREX DIGITEC DT 156 VH manufactured by Bandelin</p> <p>Bath water laboratory STEGLER WB-6</p> <p>Dry oven with forced ventilation LOIP LF 120/300-VS1</p> <p>Box of abacterial air environment for working with crops of bacteriological cultures that do not pose a threat to health operators BAVnp-01-“Laminar-S.”</p> <p>Vibrodrive VP-3OT</p> <p>Scales ATILON ATL 120d4-1 analytical germanium</p> <p>Bath water double L N-2LABTEX</p> <p>Heidolph overhead laboratory stirrer with USB interface Hei-TORQUE 400 Precision</p> <p>Vacuum pump Germany</p> <p>Switch for 3 Heidoiph vaporizers</p>

Audience type	Audience equipment	Specialized educational / laboratory equipment, software and materials for mastering the discipline (if necessary)
		Vacuum control unit Heidolp Vacuum valve Heidoiph AV-50Halogen moisture analyzer 0.02-50 Laborota 4002 control HB/G1. Heidolph programmable rotary evaporator Dish dryer STL 56 by Gerhardt Exhaust cabinet No. 1 IIB-20
Teaching laboratory (947)	An auditorium for laboratory work, individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and equipment.	ND, orders, GF, GOSTs, scales with weights and electronic, measured laboratory glassware, mortars with pestles, scales with weights and electronic, evaporation cups, small laboratory equipment, heating devices, filters, hydrometers, electric stoves, water and sand baths, laboratory thermostat, mold for pouring out suppositories, pill machines, homogenizer, laboratory stirrer, steam sterilizer GK-10-1- "TZMOI" Box of abacterial air environment BAVnp-01- "Laminar-S"-1.2 Refractometer IRF-454 Bath water laboratory 8-seater H 19 V Hydro Refractometer with backlight and additional scale IRF-454 B2M Refrigerator pharmaceutical Pozis XB-140-1 Exhaust cabinet No. 2 ShV-202 Scales electronic laboratory Adam NSV-302 Cap crimping machine POK-1 Dish dryer STL 56 by Gerhardt Bath water laboratory four-seater LT-4 production Tare scales on column VA-4M Water bath - thermostat WB-4MS Dish dryer STL 56 by Gerhardt Analytical balance I class ViBRA HT 224RCE Water bath - thermostat WB-4MS Exhaust cabinet No. 2.ShV-202
For independent work of students	An auditorium for independent work of students (can be used for	

Audience type	Audience equipment	Specialized educational / laboratory equipment, software and materials for mastering the discipline (if necessary)
(926)	seminars and consultations), equipped with a set of specialized furniture and computers with access to the EIOS.	

## 7. WAYS OF PRACTICE

"Pedagogical practice" is carried out at the Department of General Pharmaceutical and Biomedical Technology.

The internship program includes the preparation and conduct of practical classes in the disciplines "General Pharmaceutical Technology", "Private Pharmaceutical Technology" "Biotechnology" with students of the 3rd-5th year of the training direction "Pharmacy", attending classes and participating in their discussion, as well as organizing educational work with students.

The timing of the internship corresponds to the period specified in the calendar academic schedule of the postgraduate program. The timing of the internship can be adjusted upon agreement with the Department of Educational Policy and the Department for Organization of Internships and Employment of Students at RUDN University.

## 8. EDUCATIONAL-METHODOLOGICAL AND INFORMATION SUPPORT OF PRACTICE

### a) basic literature

1. Pharmaceutical Technology/K.V. Alexeev, S.A. Kedyk. - M.: IFT JSC, 2019.- 570s.
2. Extemporaneous manufacturing technology. Teaching Manual/ed. Bykova V.A. — Voronezh 2011.

### b) additional literature

1. State Pharmacopoeia of the Russian Federation. - XIV Edition
2. Industrial drug technology/ed. Chueshov V.I. (d. 1,2) Kharkiv-2001 T.

### *Resources of the information and telecommunications network "Internet":*

1. RUDN ELS and third-party ELS, to which university students have access on the basis of concluded agreements:

- RUDN Electronic Library System - RUDN EBS <http://lib.rudn.ru/MegaPro/Web>
- ELS "University Library Online" <http://www.biblioclub.ru>
- EBS Yurayt <http://www.biblio-online.ru>
- EBS "Student Advisor" [www.studentlibrary.ru](http://www.studentlibrary.ru)
- EBS "Lan" <http://e.lanbook.com/>
- EBS "Trinity Bridge"

2. Databases and search engines:

- electronic fund of legal and normative-technical documentation <http://docs.cntd.ru/>

- Yandex search engine <https://www.yandex.ru/>
- Google search engine <https://www.google.ru/>
- abstract database SCOPUS <http://www.elsevierscience.ru/products/scopus/>

*Educational and methodological materials for internship, filling out a diary and preparing an internship report* \*:

1. Safety regulations for the passage of "Pedagogical practice" (initial briefing).
2. Guidelines for filling in a diary by students and preparing a practice report.





\* - all educational and methodological materials for internship are posted in accordance with the current procedure on the internship page in TUIS!

## **8. EVALUATION MATERIALS AND SCORE-RATING SYSTEM FOR ASSESSING THE LEVEL OF FORMATION OF COMPETENCES ON THE RESULTS OF PRACTICE**

Evaluation materials and a point-rating system\* for evaluating students based on the results of passing "Pedagogical practice" are presented in the Application to this Practice Program (module).

\* - OM and BRS are formed on the basis of the requirements of the relevant local normative act of RUDN University (regulations / order).

### **DEVELOPERS:**

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Docent, Department of General Pharmaceutical and Biomedical Technology		R. Mussa
Assistant of the Department of General Pharmaceutical and Biomedical Technology		D.V. Radeva
<b>HEAD OF BUP:</b> Head Department of General Pharmaceutical and Biomedical Technology		S.N. Suslina