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

Medical Institute
(name of Educational Division developing the postgraduate program)

Department of pharmaceutical and toxicological chemistry
(name of the Educational Department developing the postgraduate program)

PROGRAM OF THE DISCIPLINE

Pedagogical practice
(name of the discipline)

Scientific speciality:

3.4.2. Pharmaceutical chemistry: Drug Analysis and Quality Control
(code and name of the scientific specialty)

Practical training of students is carried out within the framework of the postgraduate education program:

3.4. Pharmaceutical sciences
(name of the postgraduate program)

2022

1. COURSE GOALS

The goals of pedagogical practice are:

- consolidation in practice of knowledge, skills and practical skills acquired by students in the scientific specialty 3.4.2 Pharmaceutical chemistry (higher education – training of highly qualified personnel);
- preparation for the implementation of pedagogical activities in the system of higher professional and additional education;
- consolidation and formation skills of methodological development and analysis of the main forms at educational and extracurricular classes in pharmaceutical chemistry, pharmacognosy and quality control of medicines; explanation, testing and control of knowledge in pharmaceutical chemistry; organization of educational work with students; development and improvement of the curriculum of training courses in pharmaceutical chemistry.

The postgraduate's practice is aimed at obtaining professional skills and professional experience.

The objective of pedagogical practice is:

- definition 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 communication and interaction in study groups;
- evaluation and control of the effectiveness of teaching pharmaceutical disciplines.

2. REQUIREMENTS FOR THE RESULTS OF TRAINING BASED ON THE RESULTS OF PRACTICE

As a result of the practice, the student must acquire the following practical skills, abilities, universal and general professional competencies:

- the ability to design and carry out complex research, including interdisciplinary, based on a holistic systematic scientific worldview using knowledge in the field of history and philosophy of science;
- the ability to plan and solve problems of their own professional and personal development;
- ability and readiness to organize applied scientific research in the field of pharmaceutical and biological technology of medicines, quality control of medicines, including biopharmaceutical analysis, circulation of medicines;
- readiness to teach in educational programs of higher education;

3. THE SCOPE OF THE DISCIPLINE Total workload of the discipline «Pedagogical practice» takes 5 credits (180 academic hours).

4. CONTENTS OF THE DISCIPLINE

Table 4.1. Contents of the discipline

Name of the practice section	Content of the section (topics, types of practical activities)	Course workload, ac. hours
Section 1. Preparatory stage	An introductory conference at the department, familiarization with the internship program, the procedure for defending the practice report, requirements and evaluation criteria. Safety instruction.	3
	Drawing up an individual practice plan.	3
	Attending practical classes of the teaching staff of the department	18
Section 2. The main stage	Study of job responsibilities and rights of university teaching staff, internal regulations, documents regulating the educational process. Study of the Federal State Educational Standard, 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 the main and additional literature in accordance with the subject and objectives of the planned classes. Development of the program of the module (section) of the academic discipline. Preparation of teaching materials for conducting classes. Development of a plan and a summary of classes.	30
	Conducting all types of classroom practical and laboratory classes with students	36
	Organization and conduct of extracurricular activities	26
	Participation in the organization and conduct of intermediate and final certification in the disciplines of the Department of Education	18
Making a practice report		9
Preparation for the defense and protection of the practice report		27
	TOTAL:	**180**

5. MATERIAL AND TECHNICAL SUPPORT OF THE DISCIPLINE

Table 5.1. Material and technical support of the discipline

Auditorium type	Equipment the audience	Specialized educational/laboratory equipment, software and materials for the development of the discipline
Lecture hall	Auditorium 448 RUDN	A set of specialized furniture;

	Medical Institute, 117198, Moscow, Miklukho-Maklaya str., 8/2 for conducting lecture-type classes, equipped with a set of specialized furniture; a board (screen) and technical means of multimedia presentations.	technical means: a multimedia projector, a computer, a white magnetic board, a set of markers for the board, a set of educational presentations, educational posters and tables. Software: Microsoft products (OS, office application package, including MS Office/ Office 365, Teams, Skype.
Educational and Scientific Laboratory	Auditorium 447 RUDN Medical Institute, 117198, Moscow, Miklukho-Maklaya str., 8/2	• A set of specialized furniture • Spectrophotometer Cary-630 • pH-meter pH-410 «Aquilon» • pH-meter pB-11 «Sartorius» • refractometer Abbe «KOM3» (4) • The ATP-02 Aquilon titrator • Circular polarimeter CM-3 "ZOMS" (2) • Dry-burning cabinet "BINDER FD-23" • Cabinets with reagents (6) • Cabinets with laboratory equipment (5) • CN-6 dark room for viewing "Vilber Loumat" chromatograms
For independent work of students	Auditorium 278 RUDN Medical Institute, 117198, Moscow, Miklukho-Maklaya str., 10/2 and Auditorium 451 RUDN Medical Institute, 117198, Moscow, Miklukho-Maklaya str., 8/2 for independent work of students (can be used for seminars and consultations)	• Cary-630 Agilent IR Fourier spectrometer • RF-6000 Spectrofluorimeter, Shimadzu • Dynamic light scattering laser system Zetasizer Nano ZS, Malvern • Atago POL-1/2 polarimeter with Peltier temperature control system • Altami BIO 2 + PC Microscope • Mastersizer 2000 Malvern Particle Size Analyzer • pH meter pH-410 "Aquilon" • Abbe "KOM3" refractometer

		• ATP-02 Aquilon titrator • Water bath Memmert WNB 7-45 • Scales Laboratory GR 200 • Exhaust cabinet MM 396 01 S

Pedagogical practice of students in the direction 3.4. Pharmaceutical sciences, profile 3.4.2. Pharmaceutical chemistry, pharmacognosy (higher education – training of highly qualified personnel) is carried out on the basis of the RUDN Medical Institute.

6. METHODS OF PRACTICE

Pedagogical practice is included in Block 2 of the "Practice" and is aimed at obtaining professional skills and professional experience by a graduate student.

The postgraduate student undergoes pedagogical practice in the amount of 5 credits (180 ak. hours) under the guidance of a scientific supervisor based on a specialized division (department) of the RUDN.

The practice based on an external organization (outside of the RUDN) is carried out on the basis of a corresponding contract, which specifies the terms, place and conditions of the practice in the base organization.

The terms of the internship correspond to the period specified in the calendar curriculum of the postgraduate program. The terms of the internship can be adjusted in coordination with the Department of Educational Policy and the Department of Organization of Practices and Employment of Students at the RUDN.

7. EDUCATIONAL, METHODOLOGICAL AND INFORMATIONAL SUPPORT OF THE PRACTICE

a) basic literature

1. Standardization and quality control of medicines: A textbook for universities / Edited by N.A.Tyukavkina. - M.: MIA, 2008. - 384 p.: ill. - ISBN 5-89481-605-x : 259.00.

2. Pleteneva T.V., Morozova M.A., Uspenskaya E.V., Rakhmetova A.A., Maksimova T.V., Dolinkin A.O. "Standardization and quality control of medicinal products funds. Pharmacopoeial methods of analysis". Textbook // Moscow RUDN, 2012

b) additional literature

1. Pleteneva T.V.,.Salomatin E.M., Syroeshkin A.V., Popov P.I. et al. Toxicological chemistry: Textbook for universities/ Edited by T.V.Pletnev. - M.: Geotar-Media, 2005. – 512 p.

2. Uspenskaya E.V., Shishova E.Yu. Quality control of medicines by chromatography in a thin layer of sorbent. Textbook for correspondence students of the specialty "Pharmacy" / ed. Pletenevoy T.V. - M.: RUDN. – 2011. - 56 p.

c) software:

Mentor Testing Program

d) databases, information and reference and search engines:

1. Electronic library system of the RUDN;
2. RUDN Educational Portal (http://web-local.rudn.ru);
3. Scientific Electronic library (http://elibrary.ru/defaultx.asp);
4. Universal Library ONLINE (http://biblioclub.ru);
5. BENTHAM OPEN Electronic Magazine Library (http://www.benthamscience.com/open/a-z.htm);
6. Elsevier Electronic Magazine Library (http://www.elsevier.com/about/open - access/open-archives)
7. MedLib Online Medical Library (http://med-lib.ru /);
8. ScienceDirect - http://www.sciencedirect.com
9. Higher Attestation Commission (HAC) - http://vak.ed.gov.ru/

8. EVALUATION MATERIALS AND A POINT-RATING SYSTEM FOR ASSESSING THE LEVEL OF COMPETENCE FORMATION BASED ON THE RESULTS OF THE INTERNSHIP

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

* - EM and PRS are formed on the basis of the requirements of the relevant local regulatory act of the RUDN (regulations / order).

DEVELOPERS:

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Post, Department	Signature	Name
Associate Professor of the Department of Pharmaceutical and toxicological chemistry		Maximova T.V.
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HEAD OF THE DEPARTMENT:

Pharmaceutical and toxicological chemistry		Syroeshkin A.V.
Name of the Department	Signature	Name