

*Federal State Autonomous Educational establishment of higher education
RUDN-University*

Engineering Academy

Recommended by ICSS

PRACTICE PROGRAM

Type of Practice: Practice in Obtaining Professional Skills and Professional Experience (Research Practice)

Recommended for the program track: 09.06.01 Informatics and computer engineering

Educational program specialization: Management in social and economic systems (engineering science): strategic management

1. Practice objectives and learning outcomes

Aim of research practice is to acquire practical skills of independent research work.

Practice objectives:

- 1) study the experience of scientific and analytical activities;
- 2) master modern methods and methodology of scientific research;
- 3) learn how to present the results obtained in the form of reports, publications, reports.

2. Place of the course in the structure of General Education Programme

The research practice belongs to the variable part of Block 2 of the curriculum. Table 1 shows the previous and subsequent components of the educational program aimed at the formation of competencies in accordance with the competence matrix of Education Programme of High Education Competence-based education.

Table No. 1

Preceding and subsequent courses, directed to the competences forming

№ п/п	Compe- tence and its code	Preceding courses	Following courses
Universal competencies			
1	UC-1	-	History and philosophy of science Scientific research (preparation of scientific and qualifying work (dissertation) for the degree of candidate of sciences) Preparation and passing of the state exam in the direction and profile
General professional competencies			
2	GPC-2	-	Research methodology Scientific research (preparation of scientific and qualifying work (dissertation) for the degree of candidate of sciences) Preparation and passing of the state exam in the direction and profile
Professional competencies			
3	PC-3 PC-5	-	Research methodology Research Seminar Management in social and economic systems Modern problems of the theory of management of social and economic systems System analysis, control and information processing. Modeling social and economic systems. Scientific research (preparation of scientific and qualifying work (dissertation) for the degree of candidate of sciences) Preparation and passing of the state exam in the direction and profile

4. Practice form

The practice is carried out continuously, by allocating a continuous period of study time in the calendar training schedule.

5. Place and time of the teaching practice

The practice is conducted in the Department of Innovation Management in industrial sectors of the RUDN Engineering Academy, and is distributed. The time of the practice is set by the curriculum and the schedule of the educational process.

The student can come up with an initiative about the place of internship. The direction of the professional activity of the organization offered to students for practical training should correspond to the profile of the educational program and the types of professional activities for which the graduate of the program is preparing. The place of practical training must be agreed with the head of the department, followed (if a positive decision is made) by the conclusion of a corresponding contract with the professional organization proposed by the student.

Students with disabilities and / or belonging to the category of "disabled" undergo practical training in an accessible form in the laboratories of the university, as well as in specialized organizations with which relevant contracts have been concluded and which provide the opportunity (equipment, special means and infrastructure) to work with these categories of citizens.

6. Competencies formed by students as a result of practice

The learning outcomes of the course are special knowledge, abilities, relevant skills and experience, which will ensure the achievement of the planned results of mastering the educational program and will characterize the stages of the formation of the following competence:

–able to analyze critically and evaluate modern scientific achievements, generate new ideas when solving research and practical problems, including in interdisciplinary areas (UK-1);

–ready for independent (including leading) research activities, requiring broad fundamental training in modern areas of branch science, deep specialized training in the chosen direction, possession of the skills of modern research methods (PC-3);

–get fundamental knowledge in the main sections of informatics and computer technology, must have the ability to conduct scientific research and obtain new scientific and applied results (PC-5).

7. Workload of the practice and forms of study work

General workload of the course is 6 credit units (216 academic hours).

academic hours

Form of study work	Total hours									Bcero
	Semester									
	1	2	3	4	5	6	7	8		
Class hours (total)	90	90	-	-	-	-	-	-	-	180
Including:										
Lectures	-	-	-	-	-	-	-	-	-	-
Practical classes (PC)	4	4	-	-	-	-	-	-	-	8
Self-study	86	86	-	-	-	-	-	-	-	172
Assessment	18	18	-	-	-	-	-	-	-	36
Total hours:	108	108	-	-	-	-	-	-	-	216
credits:	3	3	-	-	-	-	-	-	-	6

8. Content of the course

8.1. Course Units

№ п/п	Name of the practice part	Subject matter of the part
1	Organizational and preparatory	Receiving an individual task for research work from the internship supervisor Safety briefing in the workplace (laboratory and / or production)
2	Main	Performing an individual task for practice. Current control of the internship by the supervisor of the practice. Students keep a diary of their internship. Development of educational and methodological and reporting materials.
3	Reporting	Preparation of an practice report by students. Preparation for the defense of the practice report and the defense of the report (appraisal)

8.2. Types and scope of practice

academic hours

№ п/п	Name of the practice part	Lec- tures	Semi- nars	Self- study	As- sess- ment	Total workload, hours o
1	Organizational and preparatory	-	-	12	1	13
2	Main	-	6	90	24	120
3	Reporting	-	2	70	11	83
Total:		-	8	172	36	216

9. Educational, research and production technologies used in practice

During the internship, the following educational technologies are used:

- contact work of the student with the teacher, which consists in obtaining an individual task, passing an instruction, receiving consultations;

- other forms of educational work (educational activity), which include the main activity of the student to perform sections of the practice in accordance with the individual task, recommended methods and sources of literature, aimed at forming certain professional skills or experience of professional activity

provided for by the practice program, as well as filling out current and reporting documentation, and preparing for the defense of the report on the internship.

During the internship, the following research and production technologies are used:

- mastering the methods of information analysis and interpretation of the results of research activities by students;
- performing written analytical and calculation tasks within the framework of practice with the use of recommended information sources;
- the use of various computer software products for graphic, analytical and / or industrial purposes (depending on the place of practice and the specifics of the task).

10. Technical Support

Classrooms with technical support	Address
Classroom for lectures, seminars and midterm assessments № 493 Projector Epson EH-TW5300 (LCD, 1080p 1920 x 1080, 2200Lm, 35000:1, 2 x HDMI, MHL Screen Draper Baronet NTSC (3:4) 244/96(8) 152*203 MW Set of specialized furniture	Moscow, Ordzhonikidze str., 3
Education and methodology Classroom for self-study № 345 Equipment and furniture: - personal computers with access to the Internet; - desks, chairs	Moscow, Ordzhonikidze str., 3

11. Study-methodical and information sources

Databases, reference systems and search engines:

1. Electronic library system(ELS) РУДН and third-party ELS :
 - ELS RUDN <http://lib.rudn.ru/MegaPro/Web>
 - ELS «University Library Online» <http://www.biblioclub.ru>
 - ELS Юрайт <http://www.biblio-online.ru>
 - ELS « Student's consultant » www.studentlibrary.ru
 - ELS «Лань» <http://e.lanbook.com/>
2. Websites of ministries, departments, services, production enterprises and companies whose activities are specialized for the course:
 - <http://economy.gov.ru/minec/main/>- website of the Ministry of Economic Development of the Russian Federation
3. Databases and search engines:
 - electronic fund of legal and normative-technical documentation <http://docs.cntd.ru/>
 - Yandex search engine <https://www.yandex.ru/>
 - search engine Google <https://www.google.ru/>
 - abstract database SCOPUS <http://www.elsevierscience.ru/products/scopus/>

12. Educational methodology resources

Basic literature

- 1) Исследование систем управления: Учебное пособие / Баранов В.В., Зайцев А.В., Соколов С.Н. - М.: Альпина Паблишер, 2013. - 216 с. Режим доступа . <http://www.studentlibrary.ru/book/ISBN9785890358271>
- 2) Лапаева, М.Г. Методология научных исследований: учебное пособие для аспирантов / М.Г. Лапаева, С.П. Лапаев; Министерство образования и науки Российской Федерации, Федеральное государственное бюджетное образовательное учреждение высшего образования «Оренбургский государственный университет». – Оренбург: ОГУ, 2017. – 249 с.: ил. – Библиогр. в кн. - ISBN 978-5-7410-1791-3; То же [Электронный ресурс]. – URL: <http://biblioclub.ru/index.php?page=book&id=485476> (06.05.2018). Основы научных исследований. [Электронный ресурс] / Шкляр М.Ф. - М.: Дашков и К, 2016. - <http://www.studentlibrary.ru/book/ISBN9785394018008.html>
- 3) Мирошниченко Н. А., Стефанов С. А. В помощь молодому преподавателю. метод. пособие/ Н. А. Мирошниченко, С. А. Стефанов.- Одесса: Юрична література, 2003.-92 с. 2. Развитие профессионализма преподавателя высшей школы. учеб.-метод. пособие. Изд. 2-е, стер./ В. С.

Агапов [и др.]- М.: Изд-во РАГС, 2017.-384 с.
http://lib.rudn.ru/MegaPro2/UserEntry?Action=Rudn_FindDoc&id=470098&idb=0

- 4) Скок Г.Б., Лыгина Н.И. Как спроектировать учебный процесс по курсу: Учебное пособие. Изд. второе, перераб. и дополн. – М.: Педагогическое общество России. 2017. – 96с.
http://lib.rudn.ru/MegaPro2/UserEntry?Action=Rudn_FindDoc&id=470098&idb=0
- 5) Управление качеством образования: Практико-ориентированная монография и методическое пособие/ Под ред. М.М. Поташника. М., 2016.

Supplementary literature:

- 1) Магистерская диссертация [Электронный ресурс]: учебное пособие / К.С. Идиатуллина, И.З. Гарафиев. - Казань: Издательство КНИТУ, 2015.
http://lib.rudn.ru/MegaPro2/UserEntry?Action=Rudn_FindDoc&id=418786&idb=0
- 2) Планирование и организация научных исследований [Электронный ресурс]: учебное пособие / В.И. Комлацкий, С.В.Логинов, Г.В. Комлацкий. - Ростов н/Д: Феникс, 2017. - (Высшее образование) - Режим доступа
http://lib.rudn.ru/MegaPro2/UserEntry?Action=Rudn_FindDoc&id=470098&idb=0

13. Forms of intermediate assessment (based on the results of practice)

During the internship, the practice supervisor carries out the current control of the student's performance. According to the results of the practice, an interim assessment is provided in the form of appraisal with final score (based on the results of the defense of the practice report).

The program was drawn up in accordance with the requirements of the OS of the RUDN.

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