Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA NAMED AFTER PATRICE LUMUMBA
RUDN University

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

INTERNSHIP SYLLABUS

Introductory Practice
internship title

Introductory
internship type

Recommended by the Didactic Council for the Education Field of:

08.04.01 Civil Engineering
field of studies / speciality code and title

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

Civil Engineering and Built Environment
higher education programme profile/specialisation title

2025

1. INTERNSHIP GOAL(s)

The goal of the Internship is to deepen, systematize and consolidate theoretical knowledge, as well as for students to master modern technologies in the construction of buildings and structures, including familiarization of students with the activities of construction organizations.

The main objectives of the introductory practice are:

- to study the organization and principles of quality control of all construction cycles, materials used, production quality control of technological processes;
- to learn how to determine the technical and economic indicators of the assessment of activity in construction, their values and factors contributing to their increase;
- master the primary skills and basic techniques of conducting construction technological work.

2. REQUIREMENTS FOR LEARNING OUTCOMES

The internship implementation is aimed at the development of the following competences (competences in part):

Competence code	**Competence descriptor**	**Competence formation indicators** (within this course)
GC-1	Able to critically analyze problem situations on the basis of a systematic approach, to develop a strategy of action	GC-1.1 Analyzes the problem, identifying its basic components; GC-1.2 Identifies and ranks the information required to solve the task; GC-1.3 Selects ways to solve the problem, analyzes the possible consequences of their use
GC-6	Able to identify and implement the priorities of their own activities and ways to improve them on the basis of self-assessment	GC-6.1 Analyzes tasks, projects, and their goals. Defines its resources and their limits (personal, situational, temporary, etc.) for the successful completion of the task; GC-6.2 Prioritize and choose the appropriate tools and methods for achieving goals and managing time
GC-7	Able: to search for the neces-sary sources of information and data, perceive, analyze, remember and transmit information using digital means, as well as using algorithms when working with data received from various sources to effectively use the information to solve problems ; to assess information, its reliability, to build logical conclusions on the basis of incoming information and data	GC-7.1 Searches for relevant sources of information and data, perceives, analyzes, remembers and transmits information using digital tools and algorithms when working with data from various sources in order to effectively use the information to solve problems; GC-7.2 Evaluates information, its reliability, builds logical conclusions on the basis of incoming information and data
GPC-2	Able to analyze, critically comprehend and present information, search for scientific and technical information, acquire new knowledge, including with the help of information technology	GPC-2.1 Able to search for scientific and technical information, including with the help of information technology; GPC-2.2 Able to analyze, critically comprehend information, acquire new knowledge; GPC-2.3 Able to present found and meaningful information, including with the help of information technology

3. INTERNSHIP IN HIGHER EDUCATION PROGRAMME STRUCTURE

The Introductory Practice internship refers to the base component of B2 block of the higher educational programme curriculum.

Within the higher education programme students also master other disciplines (modules) 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 critically analyze problem situations on the basis of a systematic approach, to develop a strategy of action	Problem solving tecniques in Civil Engineering; Numerical methods for Civil Engineering; Mathematical Modelling; Geoinformation Systems and Applications; Independent Research Work (obtaining basic skills of research work)	Final State Examination
GC-6	Able to identify and implement the priorities of their own activities and ways to improve them on the basis of self-assessment	Problem solving tecniques in Civil Engineering; Project management; Life Cycle Economics of Buildings; Independent Research Work (obtaining basic skills of research work)	Final State Examination
GC-7	Able: to search for the neces-sary sources of information and data, perceive, analyze, remember and transmit information using digital means, as well as using algorithms when working with data received from various sources to effectively use the information to solve problems ; to assess information, its reliability, to build logical conclusions on the basis of incoming information and data	Problem solving tecniques in Civil Engineering; Digital technologies in construction; Geoinformation Systems and Applications; Life Cycle Economics of Buildings; BIM-Technology in Construction Management; Independent Research Work (obtaining basic skills of research work)	Final State Examination
GPC-2	Able to analyze, critically comprehend and present information, search for scientific and technical information, acquire new knowledge, including	Problem solving tecniques in Civil Engineering; Independent Research Work (obtaining basic skills of research work)	Final State Examination

	with the help of information technology		

4. INTERNSHIP WORKLOAD

The total workload of the internship Introductory Practice is 3 credits (108 academic hours).

5. INTERNSHIP CONTENTS

*Table 5.1. Internship contents**

Modules	Contents (topics, types of practical activities)	Workload, academic hours
Organizational and preparatory	Receiving an individual task for practice from the head	2
	Briefing on safety at the workplace (in the laboratory and / or in production)	2
Basic	Introduction to the principles of construction, installation and finishing works. Study of all construction cycles. Departure to the construction site.	94
	Current control of the internship by the head	4
	Keeping an internship diary	2
Reporting	Preparation of a report on the internship	2
	Intermediate assessment (preparation for the defense and defense of the report)	2
	TOTAL:	**108**

* 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 infrastructure and technical support necessary for the internship implementation include:

Laboratory of hydrological and technical safety of hydraulic structures.

Computer class. Multimedia. Interactive board.

Laboratory and research bench for water supply.

Laboratory and research stand for heating

Laboratory and research stand for ventilation.

Laboratory equipped with the following equipment: modernized HMS-50 tensile testing machine, GMS-20 tensile testing machine, PG-100 press, KMU-5 twisting machine, 2PG-2.5 press, TR-294 lever strain gauges, 3UKPA-5 Aistov device, calipers, deflectometer - indicators of movement of the pointer type, desktop drilling machine NS-12Az, printer HP LJ 1012W sch. Peleng-500 diaprector, HP Presario CQ61 laptop, demo models, and installations.

7. INTERNSHIP LOCATION AND TIMELINE

The internship Introductory Practice can be carried out at the structural divisions of RUDN University (at Moscow-based organisations), as well as those located outside Moscow.

The internship at an external organisation (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 organisation.

Main internship locations:

- laboratories of the Department of Civil Engineering;
- organizations (enterprises) for the construction, installation, repair and reconstruction of buildings, structures, their parts, and individual constructs (specialized organizations);
- research, design and development institutions and firms;
- firms for the production of building structures and products, the introduction of experimental materials and technologies for construction;
- construction laboratories, quality and certification centers, customer and supervision services, etc.

The student himself can come up with an initiative about the place of internship. The direction of the organization's professional activity offered to students for internship must correspond to the profile of the educational program and the types of professional activity for which the graduate of the program is preparing. The place of internship must be agreed with the head of the department, followed by (if the decision is positive) the conclusion of an appropriate agreement with the organization proposed by the student.

Students with disabilities and/or those who are classified as "disabled" undergo practical training, in an accessible form for them, in the laboratories of the university, as well as in specialized organizations with which relevant agreements have been concluded and which have the opportunity (equipment, special facilities, and infrastructure) for working with these categories of citizens.

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 the 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. Schreiber, K.A. Production technology of repair and construction works: monograph / K.A. Schreiber. - Moscow: ACB Publishing House, 2024. - 261 p. : illustrations, tables, schemes. - Bibliography: p. 258 - ISBN 978-5-4323-0038-6; Access mode:http://biblioclub.ru/index.php?page=book&id=312360.

2. Shirshikov, B.F. Reconstruction of objects: (Organization of work. Limitations. Risks): monograph / B.F. Shirshikov, M.N. Ershov. - Moscow: ACB Publishing House, 2020. - 115 p. : tab., scheme., ill. - Bibliography. in book. - ISBN 978-5-93093-760-2; Access mode:http://biblioclub.ru/index.php?page=book&id=273821.

3. Mikhailov A.Yu., Technology and organization of construction. Workshop [Electronic resource]: Textbook / Mikhailov A.Yu. - M. : Infra-Engineering, 2018. - 196 p. - ISBN 978-5-9729-0140-1 - Access mode: http://www.studentlibrary.ru/book/ISBN9785972901401.html

Additional readings:

1. Komarov A.S., Construction technology of water supply and sanitation systems and facilities [Electronic resource]: textbook / A.S. Komarov, O.A. Ruzhitskaya - M. : Publishing house MISI - MGSU, 2017. - 81 p. - ISBN 978-5-7264-1751-6 - Access mode: http://www.studentlibrary.ru/book/ISBN9785726417516.html

2. Ivanov E.S., Technology and organization of work in the construction of environmental and water management facilities [Electronic resource] / E.S. Ivanov - M.: DIA Publishing House, 2017. - 560 p. - ISBN 978-5-4323-0018-8 - Access mode: http://www.studentlibrary.ru/book/ISBN9785432300188.html

3. Revich Ya.L., Technology of building production [Electronic resource]: Textbook / Revich Ya. L., Rudomin E.N., Mazhaisky Yu.A. etc. - M. : DIA Publishing House, 2011. - 376 p. - ISBN 978-5-93093-798-5 - Access mode: http://www.studentlibrary.ru/book/ISBN9785930937985.html

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) http://lib.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 "Lan" http://e.lanbook.com/
- EL "Trinity Bridge"

2.*Databases and search engines:*

- electronic foundation of legal and normative-technical documentation http://docs.cntd.ru/
- Yandex search engine https:// www .yandex.ru/
- Google search engine https://www.google.ru/
- Scopus abstract database http://www.elsevierscience.ru/products/scopus/

The training toolkit and guidelines for a student to do an internship, keep an internship diary and write an internship report:*

1. Guidelines for internship, maintenance of current and preparation of reporting documentation for students in the direction 08.04.01 Construction.

*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.

8. ASSESSMENT TOOLKIT AND GRADING SYSTEM* FOR EVALUATION OF STUDENTS' COMPETENCES LEVEL AS INTERNSHIP RESULTS

The assessment toolkit and the grading system* to evaluate the level of competences (competences in part) formation as the internship results are specified in the Appendix to the internship syllabus.

* The assessment toolkit and the grading system are formed on the basis of the requirements of the relevant local normative act of RUDN University (regulations / order).