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**Federal State Autonomous Educational Institution for Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
NAMED AFTER PATRICE LUMUMBA (RUDN University)**

Institute of Environmental Engineering

INTERNSHIP SYLLABUS

Pre-graduate internship

internship title

educational

internship type

Recommended by the Didactic Council for the Education Field of:

05.04.06 "Ecology and Nature Management"

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

Climate Project Management

Moscow,
2024

1. INTERNSHIP GOAL(s)

The Internship aims at expansion of professional knowledge acquired by masters in the study process, the formation of practical skills and abilities to conduct independent research work, practical participation in the research work of scientific teams, as well as the collection, analysis and generalization of scientific material, the development of original scientific ideas for the of a master's thesis preparation Pre-graduate internship is carried out to perform the final qualifying work and it is mandatory.

2. REQUIREMENTS FOR LEARNING OUTCOMES

The internship is designed for students to acquire following competences (competences in part):

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

Code and descriptor of generic competence	Code and competence level indicator
PC-1 Able to organize and manage the enterprise activities using in-depth knowledge in the field of greenhouse gas management	PC-1.2 able to organize the management of research, scientific, production and expert-analytical work at the enterprise
PC-4 Able to conduct environmental analysis of projects for expansion, reconstruction, modernization of existing production facilities, taking into account the requirements of the greenhouse gas management standards	PC-4.1 able to carry out calculations of greenhouse gas absorption/emissions and predict their changes depending on the selected technologies
	PC-4.2 able to develop the climate projects
	PC-4.3 has skills in preparing project documentation (defining a baseline, monitoring plan), as well as documentation for projects validation and verification
PC-5 Able to develop measures to minimize possible risks of climate change for conducting various types of economic activities	PC-5.1 able to identify direct/indirect sources of greenhouse gas emissions at all stages of the product life cycle
	PC-5.2 has the skills to organize the activities of carbon areas
	PC-5.3 ensures the implementation of environmental action plans, including the technologies' introduction taking into account the requirements for reducing greenhouse gas emissions

3. INTERNSHIP IN HIGHER EDUCATION PROGRAMME STRUCTURE

The internship refers to the University Disciplines Module 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*
PC-1	Able to organize and manage the enterprise activities using in-depth knowledge in the field of greenhouse gas management	Environmental Engineering and Climate Change	State Exam Master's Thesis Defence
PC-4	Able to conduct environmental analysis of projects for expansion, reconstruction, modernization of existing production facilities, taking into account the requirements of the greenhouse gas management standards	Carbon Cycles Climate Project Development Carbon Test Areas and GHG Monitoring Climate Change Models Climate Neutrality and Waste Management Industrial Internship	State Exam Master's Thesis Defence
PC-5	Able to develop measures to minimize possible risks of climate change for conducting various types of economic activities	Environmental Engineering and Climate Change Carbon Test Areas and GHG Monitoring Climate Neutrality and Waste Management Industrial Internship	State Exam Master's Thesis Defence

4. INTERNSHIP WORKLOAD

The total workload of the internship is 18 credits (648 academic hours).

5. INTERNSHIP CONTENTS

Table 5.1. Internship contents *

Modules	Contents (topics, types of practical activities)	Workload, academic hours
Module 1. Organizational and preparatory part	Receiving an assignment for an internship from a supervisor, receiving consultations on internships	2
	Instruction on labor protection and fire safety	2
	Research object and methodology choice	10
	Drawing up the study roadmap	6
	Literature review on the research topic using foreign literature	100
Module 2. Main part	Activities for the collection, processing and systematization of material according to the final qualification work subject	186
	Caring out an experiment / calculations on the final qualification work subject	200

Modules	Contents (topics, types of practical activities)	Workload, academic hours
	Formatting the text of final qualifying work	100
	Current internship control by the supervisor	20
Module 3. Reporting	Internship Report Preparation	20
	Report Defense	2
TOTAL:		432

6. INTERNSHIP EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

The infrastructure and technical support necessary for the internship implementation include following:

Audience equipment	Specialized educational / laboratory equipment, software and materials for mastering the discipline (if necessary)
An auditorium for lecture-type classes, equipped with a set of specialized furniture; board (screen) and technical means of multimedia presentations.	A set of specialized furniture; chalk board; hardware: HP PRO system unit, HP-V2072A monitor, LUMIEN retractable projection screen, Internet access. Microsoft Windows 7 corporate. License No. 5190227, date of issue March 16, 2010 MS Office 2007 Prof , License # 6842818, date of issue 09/07/2009
An auditorium for conducting seminar-type classes, group and individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and technical means for multimedia presentations.	
An auditorium for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to the EIOS.	

7. INTERNSHIP LOCATION AND TIMELINE

The internship 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.

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 reading:

1. Verma R., Verma S., Abhishek K. Research Methodology. – Booksclinic Publishing, 2024. (is available on TUIS)
2. Stehr N., von Storch H. Science in Society: Climate Change and Climate Policies. – World Scientific, 2024. (is available on TUIS)

Additional reading:

1. Kothari C. R. Research methodology: Methods and techniques. – New Age International, 2004. (is available on TUIS)
2. Kapur R. Research methodology: Methods and strategies //Department of Adult Education and Continuing Extension, University of Delhi: New Delhi, India. – 2018. (is available on TUIS)

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.elsevier.com/locate/scopus/>

Scientific full-text databases. The list of databases is in alphabetical order with a description of each resource and a link. The collection of electronic resources UNIBTS (NB) contains:

- universal databases of world famous publishers and suppliers of electronic information for all scientific areas: Cambridge Journals, Oxford Journals, JSTOR, ScienceDirect Freedom _ Collection, PROQUEST DISSERTATIONS AND THESES GLOBAL, Springer Journals, Taylor & Francis Online, Wiley Online Library, etc.
- specialized databases for specific areas of knowledge: CASC, IEL IEEE, INSPEC, Reaxys / RMC, IOPSCIENCE, MathSciNET, Pathway Studio, Royal Society of Chemistry, Nature, Science online, zbMATH, scientific protocols and scientific materials in physical sciences and engineering Springer Protocols and Springer Materials, Questel patents Orbit, etc.
- full text open access databases rigorously rated by professional experts: ScienceDirect Open, Oxford Open, Palgrave Open, De Gruyter Online Open, Sage Open, Springer Open, Taylor & Francis Online

- archives scientific articles Western Publishers : AGU (Wiley), Annual Reviews, Cambridge University Press, IOP Publishing, Oxford University Press, Nature Publishing Group, Royal Society of Chemistry, SAGE Publications, Taylor and Francis, The American Association for the Advancement of Science
- Mendeley is an international scientific social network that allows you to find like-minded scientists, create scientific associations and study trends in modern research, combine information on the user's personal computer, forming your own collection of full-text scientific papers for distribution and citation, provides an opportunity for communication, facilitates establishing contacts with colleagues who deal with similar topics. Mendeley users are scientists from universities around the world: Stanford, Harvard, Oxford, Michigan, Cambridge, etc.

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 (safety awareness 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.

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.

DEVELOPER:

Associate Professor of the ES&PQM Department		Popkova A.V.
Position	Signature	Name, Surname

HEAD OF EDUCATIONAL DEPARTMENT:

Director of ES&PQM Department		Savenkova E.V.
Position	Signature	Name, Surname

HEAD OF HIGHER EDUCATION PROGRAMME:

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