

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

Institute of Environmental Engineering

(наименование основного учебного подразделения (ОУП)-разработчика ОП ВО)

COURSE SYLLABUS

Occupational safety and HSE-audit

(наименование дисциплины/модуля)

Recommended by the Methodological Council for the Education Field:

05.04.06 Ecology and nature management

(код и наименование направления подготовки/специальности)

The discipline is mastered within the framework of the main professional higher education program:

Economics of natural resources management

(наименование (профиль/специализация) ОП ВО)

1. COURSE GOALS

The purpose of the discipline is to get acquainted with modern international standards on occupational safety, incl. ISO standards, OSAS, NEBOSH documents and practical examples of their implementing as well as evaluation of the HSE-management system (HSE-audit).

2. LEARNING OUTCOMES

The mastering of the discipline "Occupational safety and HSE-audit" is aimed at the formation of the following competencies (parts of competencies) in students:

Table 2.1. List of competencies formed by students during the development of the discipline (LEARNING OUTCOMES)

Code	Competence	Indicators of competence achievement (within the framework of this discipline)
GPC-3	Able to apply environmental research methods to solve research and applied problems of professional activity	GPC -3.1 Knows the principles and methods of environmental monitoring of environmental components
		GPC -3.2 Owns analytical methods for monitoring pollutants and physical impacts and processing the information received
		GPC -3.3 Able to develop systems for environmental monitoring and control in production and solve applied problems in professional activities
SPC-4	Able to use modern methods of processing and interpreting environmental information in scientific and industrial research	SPC-4.1 Able to apply modern methods of processing and interpreting environmental information when conducting industrial research
		SPC-4.2 Able to interpret the results of studies in terms of compliance with safety and performance indicators
		SPC-4.3 Has the skills to conduct control and supervisory activities based on modern methods of processing environmental information
SPC-6	Able to develop standard environmental measures and assess the impact of planned facilities or other forms of economic activity on the environment	SPC-6.1 Capable of detecting inconsistencies in the state of environmental components with the requirements of national and international standards
		SPC-6.2 Able to develop programs for monitoring natural complexes under conditions of technogenic loads and programs for environmental rehabilitation of territories

3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The discipline " Occupational safety and HSE-audit " refers to Compulsory Disciplines of the Higher Education Program.

Within the framework of the higher education program, students also master other disciplines and/or practices that contribute to expected learning outcomes of the discipline " Occupational safety and HSE-audit ".

Table 3.1. List of Higher Education Program components that contribute to expected learning outcomes

Code	Competence	Previous Disciplines (Modules)	Subsequent Disciplines (Modules)
GPC-3	Able to apply environmental research methods to solve research and applied problems of professional activity	Estimations of natural resources / Оценки природных ресурсов Economic aspects of natural resources management / Экономические аспекты природопользования Научно-исследовательская работа / Research work	Modern technologies for nature protection / Современные технологии защиты окружающей среды Management of energy resources / Менеджмент ресурсов энергетики Management of water resources / Управление водными ресурсами Environmental-economic aspects of environmental projects / Эколого-экономические аспекты экологических проектов Environmental norms for sustainability / Экологические нормы для устойчивого развития Standards of environmental management and occupational safety / Стандарты экологического менеджмента и охраны труда Wastes: Landfills, Processing and Recycling / Отходы: хранение, захоронение, рециклинг Surface water quality: modeling and management / Качество поверхностных вод: моделирование и менеджмент Учебная практика / Educational practice Производственная практика / Production practice НИР / Research work Преддипломная практика / Pre-graduate practice
SPC-4	Able to use modern methods of processing and interpreting environmental information in	Estimations of natural resources / Оценки природных ресурсов Management of environmental-economic	Management of water resources / Управление водными ресурсами Environmental-economic aspects of environmental projects / Эколого-

Code	Competence	Previous Disciplines (Modules)	Subsequent Disciplines (Modules)
	scientific and industrial research	risks / Управление эколого-экономическими рисками	экономические аспекты экологических проектов Environmental statistics / Экологическая статистика Environmental accounting and reporting / Экологический учет и отчетность Wastes: Landfills, Processing and Recycling / Отходы: хранение, захоронение, рециклинг Surface water quality: modeling and management / Качество поверхностных вод: моделирование и менеджмент Учебная практика / Educational practice Научно-исследовательская работа / Research work Производственная практика / Production practice НИР / Research work Преддипломная практика / Pre-graduate practice
SPC-6	Able to develop standard environmental measures and assess the impact of planned facilities or other forms of economic activity on the environment	Management of natural resources / Менеджмент природных ресурсов Modern technologies for nature protection / Современные технологии защиты окружающей среды Industrial nature management and economics / Промышленное природопользование и экономика Economic aspects of natural resources management / Экономические аспекты природопользования Standards of environmental management and occupational safety / Стандарты экологического менеджмента и охраны труда	Management of energy resources / Менеджмент ресурсов энергетики Environmental norms for sustainability / Экологические нормы для устойчивого развития Environmental statistics / Экологическая статистика Environmental accounting and reporting / Экологический учет и отчетность Wastes: Landfills, Processing and Recycling / Отходы: хранение, захоронение, рециклинг Surface water quality: modeling and management / Качество поверхностных вод: моделирование и менеджмент

Code	Competence	Previous Disciplines (Modules)	Subsequent Disciplines (Modules)
		Occupational safety and HSE-audit / Охрана труда и HSE-аудит	Industrial safety / Промышленная безопасность Simulation and prevention of accidents / Моделирование и предупреждение аварий Учебная практика / Educational practice Производственная практика / Production practice Научно-исследовательская работа / Research work НИР / Research work Преддипломная практика / Pre-graduate practice

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

Workload of the course « Occupational safety and HSE-audit » is 3 ECTS.

Table 4.1. Types of academic activities during the period of the HE program mastering

Вид учебной работы	TOTAL	Semesters			
		1	2	3	4
Contact academic hours	34	34			
Incl.:					
Lectures	17	17			
Lab work					
Seminars	17	17			
Self-study	47	47			
Evaluation and assessment	27	27			
Total workload	Ac.hours	108	108		
	ECTS	3	3		

5. COURSE CONTENTS

Table 5.1. The content of the discipline (module) by type of academic work

Name of the discipline section	Content of the section (topics)	Type of academic activity*
Place in the profession	Ensuring occupational safety at various stages of the project cycle	Lectures, Seminars
Engineering and environmental surveys	Organization and conduct of environmental surveys to assess the current state of the environment	Lectures, Seminars
Environmental impact assessment	Conducting an environmental impact assessment, including the organization of public discussions	Lectures, Seminars
Environmental audit	Conducting an environmental audit is a modern practice in the Russian Federation	Lectures, Seminars
Fire safety audit	Conducting a fire safety audit within the HSE audit	

Occupational safety audit	Conducting an occupational safety audit	Lectures, Seminars
Industrial safety audit	Conducting an industrial safety audit	Lectures, Seminars
First aid in case of an accident at the enterprise	Methods of first aid – legal requirements. The procedure for providing assistance and training requirements. First aid kits	Lectures, Seminars

6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Classroom equipment and technology support requirements

Classroom for Academic Activity Type	CLASSROOM EQUIPMENT	Specialized learning, laboratory equipment, software and materials for the mastering the course
Lecture	An auditorium for conducting lecture-type classes, equipped with a set of specialized furniture; a board (screen) and technical means of multimedia presentations.	-
Seminars	Classroom, equipped with a set of specialized furniture; whiteboard; a set of devices includes portable multimedia projector, laptop, projection screen, Stable wireless Internet connection. Software: Microsoft Windows, MS Office / Office 365, MS Teams, Chrome (latest stable release), Skype	-
Self-studies	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 an electronic information and educational environment.	-

7. RECOMMENDED SOURCES FOR COURSE STUDIES

Main reading:

NEBOSH Support Materials. URL: <https://www.nebosh.org.uk/course-materials/>

Additional sources:

1. Ledashcheva T. N., Pinaev V. E. Environmental support of projects in Russia–modern practices. – 2019..
2. Ледащева Т. Н., Пинаев В. Е. Environmental impact fee calculation in Russia for EIA–modern practices. – 2019.
3. Carpi M., Bruschini M., Burla F. HSE Management Standards and burnout dimensions among rehabilitation professionals //Occupational Medicine. – 2021. – Т. 71. – №. 4-5. – С. 204-210.
4. Falahati M. et al. Model of the selection KPI for assessing the performance of the urban HSE management system //Iran Occupational Health. – 2019. – Т. 16. – №. 1. – С. 60-71.

5. Hooshmand H. A review of HSE management in construction industry & reduction of work-related accidents //Civil and Project Journal. – 2020. – Т. 2. – №. 6. – С. 11-28.

Internet-sources:

1. Electronic library system of the RUDN and third-party electronic library systems, to which university students have access on the basis of concluded contracts:

- electronic library system of the RUDN University <http://lib.rudn.ru/MegaPro/Web>
- electronic library system «Университетская библиотека онлайн» <http://www.biblioclub.ru>
- electronic library system Юрайт <http://www.biblio-online.ru>
- electronic library system «Консультант студента» www.studentlibrary.ru
- electronic library system «Лань» <http://e.lanbook.com/>
- electronic library system «Троицкий мост»

2. Databases and search engines:

- electronic fund of legal and regulatory and 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/>
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*Educational and methodological materials for independent work of students during the development of the discipline/ module *:*

1. A course of lectures on the discipline " Occupational safety and HSE-audit ".

* - all educational and methodological materials for independent work of students are placed in accordance with the current procedure on the discipline page in the Telecommunication educational and Information System!

8. MID-TERM ASSESSMENT AND EVALUATION TOOLKIT

Evaluation materials and a point-rating system* for assessing the level of competence formation (part of competencies) based on the results of mastering the discipline " Occupational safety and HSE-audit " are presented in the Appendix to this Work Program of the discipline.

* - evaluation toolkit and ranking system are formed on the basis of the requirements of the relevant local regulatory act of the RUDN (regulations / order).

DEVELOPER:

Assoc. Professort of the
ESandPQM Department

Position, Department



Signature

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Name

HEAD OF THE DEPARTMENT:



Head of the Department of
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