

**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

Экология и здоровье населения / Ecology and public health

(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:

УПРАВЛЕНИЕ ПРИРОДОПОЛЬЗОВАНИЕМ / NATURE MANAGEMENT

(наименование (профиль/специализация) ОП ВО)

1. COURSE GOALS

The purpose of the discipline is to get acquainted with modern theoretical basics and best international practice of a comprehensive assessment of natural and industrial potentials of territories.

2. LEARNING OUTCOMES

The mastering of the discipline "Экология и здоровье населения / Ecology and public health" 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)
ПК-2 SPC-2	Способность творчески использовать в производственно-технологической деятельности знания фундаментальных и прикладных разделов специальных дисциплин The ability to creatively use knowledge of fundamental and applied sections of special disciplines in production and technological activities	ПК-2.1 Владеет навыками применения передовых достижений науки для выбора и внедрения наилучших доступных технологий (НДТ) SPC-2.1 Has the skills of applying advanced scientific achievements to select and implement the best available technologies (BAT)

3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The discipline "Экология и здоровье населения / Ecology and public health" 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 "Экология и здоровье населения / Ecology and public health".

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

Code	Competence	Previous Disciplines (Modules)	Subsequent Disciplines (Modules)
ПК-2 SPC-2	Способность творчески использовать в производственно-технологической деятельности знания фундаментальных и прикладных разделов специальных дисциплин	Сертификация сырья, производственных процессов и продукции по международным экологическим требованиям / Certification of raw materials, production processes and products in accordance with	Хранение, переработка и утилизация отходов / Storage, processing and disposal of waste Геохимические методы оценки окружающей среды / Geochemical methods of environmental assessment

Code	Competence	Previous Disciplines (Modules)	Subsequent Disciplines (Modules)
	The ability to creatively use knowledge of fundamental and applied sections of special disciplines in production and technological activities	international environmental requirements Радиоэкологическая безопасность территорий / Radioecological safety of territories Экологическое проектирование промышленных объектов / Environmental design of industrial facilities	Ландшафтное планирование / Landscape planning Управление минерально-сырьевым комплексом / Management of the mineral resource complex

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

Workload of the course «Комплексная оценка природных и производственных потенциалов территорий / Comprehensive assessment of natural and industrial potentials of territories» is 2 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
<i>Contact academic hours</i>	34			34	
Incl.:					
Lectures	17		17		
Lab work					
Seminars	17		17		
<i>Self-study</i>	47		22		
<i>Evaluation and assessment</i>	27		16		
Total workload	Ac.hours	72	72		
	ECTS	2	2		

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*
Introduction to the discipline	The history of the development of endoecology. The concept of endoecology. The main provisions of the endoecological law. The volume of fluid in different body environments: extracellular fluid and lymph, intracellular fluid, blood plasma. The concept of homeostasis. Links of humoral transport. The circulatory system. Extravascular tissues. Barrier and customs functions of the cell habitat. Morphofunctional base of general clinical lymphology, endoecology and endoecological rehabilitation. The metabolic role of the lymphatic system. Mechanisms of lymph transport. The role	Lectures, Seminars

	of the lymphatic system in the pathogenesis of diseases of civilization (atherosclerosis, tumor process). External influences on lymphatic drainage. Violations of tissue fluid transport.	
Endotoxycosis.	Mechanisms of lymph transport disorders. Violations of the function of the lymph nodes. VGT and LD under extreme conditions: overheating and hypothermia, dehydration, blood loss, anesthesia. The effect of chemicals (on the example of drugs) on the rate of lymphatic drainage. Dependence on the concentration of the substance	Lectures, Seminars
Methods for assessing the state of the environment and the forecast of a possible threat to human health	Methods for assessing the state of the environment and the forecast of a possible threat to human health. Review of methods for restoring health.	Lectures, Seminars
Substantiation of the basic principles and methods of human ecology	Substantiation of the basic principles and methods of human ecology. Hygienic rationing. Modern research on the level of public health. Healthy lifestyle skills and environmental culture	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	-

Classroom for Academic Activity Type	CLASSROOM EQUIPMENT	Specialized learning, laboratory equipment, software and materials for the mastering the course
	educational environment.	

7. RECOMMENDED SOURCES FOR COURSE STUDIES

Main reading:

1. Stokols D. Social ecology in the digital age: Solving complex problems in a globalized world. – Academic Press, 2018. URL: https://www.researchgate.net/profile/Sonomi-Hirata/publication/324078753_BOOK_REVIEWIntroducing_a_new_book_from_Professor_Daniel_Stokols_-_Social_Ecology_in_the_Digital_Age_Solving_Complex_Problems_in_a_Globalized_World_-_links/5abc5e6baca27222c75378cf/BOOK-REVIEWIntroducing-a-new-book-from-Professor-Daniel-Stokols-Social-Ecology-in-the-Digital-Age-Solving-Complex-Problems-in-a-Globalized-World.pdf

Additional sources:

1. Bubolz M. M., Sontag M. S. Human ecology theory //Sourcebook of family theories and methods. – Springer, Boston, MA, 2009. – С. 419-450.
2. Eskov V. M. et al. Principles of homeostatic regulation of functions in human ecology //Ekologiya cheloveka (Human Ecology). – 2019. – №. 10. – С. 41-49.
3. Dyball R. Social Ecology in the Digital Age: Solving Complex Problems in a Globalized World. – 2018. URL: <https://www.jstor.org/stable/pdf/26785911.pdf>

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 "Экология и здоровье населения / Ecology and public health".

* - 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 "Экология и здоровье населения / Ecology and public health" 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:

Professor of the ESandPQM
Department

Position, Department



Signature

Redina M.M.

Name

HEAD OF THE DEPARTMENT:

Head of the Department of
Environmental Safety and
Product Quality Management

Department



Signature

Savenkova E.V.

Name

HAED OF THE HIGHER EDUCATION PROGRAM:

Professor of the Department of
Environmental Safety and
Product Quality Management

Position, Department



Signature

Redina M.M.

Name