

**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

Environmental accounting and reporting

(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 course goal is to get practical competences in preparation official state and free environmental statistical reporting forms as well as processing and analyses of data obtained.

2. LEARNING OUTCOMES

The mastering of the discipline "Environmental accounting and reporting" 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)
GC -1	Able to carry out a critical analysis of problem situations based on a systematic approach, to develop a strategy of actions	GC-1.1 able to analyze a problem situation as a system, identifying its components and the connections between them
		GC-1.2 possesses argumentation and develops a meaningful strategy for solving a problem situation based on systemic and interdisciplinary approaches
		GC -1.3 knows the basics of the strategy and identifies possible risks, suggesting ways to eliminate them
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-5	Able to develop standard environmental measures and assess the impact of planned facilities or other forms of economic activity on the environment	SPC-5.1 Able to develop and plan the implementation of standard environmental measures, taking into account international practice and the requirements of national legislation
		SPC-5.2. Has the skills to assess the impact of planned structures or other forms of economic activity on the environment
		SPC-5.3 Knows the requirements for the preparation and implementation of programs for the environmental modernization of enterprises, the introduction of BAT, the organization of environmental monitoring, accounting and reporting
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 "Environmental accounting and reporting" 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 "Environmental accounting and reporting".

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

Code	Competence	Previous Disciplines (Modules)	Subsequent Disciplines (Modules)
GC-1	Able to carry out a critical analysis of problem situations based on a systematic approach, to develop a strategy of actions	IT in ecology and natural resources management / Компьютерные технологии в управлении природопользованием Management of natural resources / Менеджмент природных ресурсов	Environmental norms for sustainability / Экологические нормы для устойчивого развития Учебная практика / Educational practice Производственная практика / Production practice Научно-исследовательская работа / Research work НИР / Research work Преддипломная практика / Pre-graduate practice
SPC -4	Able to use modern methods of processing and interpreting environmental information in scientific and industrial research.	Industrial nature management and economics / Промышленное природопользование и экономика Standards of environmental management and occupational safety / Стандарты экологического менеджмента и охраны труда Occupational safety and HSE-audit / Охрана труда и HSE-аудит	Wastes: Landfills, Processing and Recycling / Отходы: хранение, захоронение, рециклинг Surface water quality: modeling and management / Качество поверхностных вод: моделирование и менеджмент Базовая компонента Учебная практика / Educational practice Вариативная компонента Производственная практика / Production practice Научно-исследовательская работа / Research work НИР / Research work Преддипломная практика / Pre-graduate practice
SPC-5	Able to develop standard environmental measures and assess the impact of planned facilities or	Estimations of natural resources / Оценки природных ресурсов Management of environmental-economic risks /	Modern remediation technologies / Современные технологии ремедиации Management of water resources / Управление водными ресурсами

Code	Competence	Previous Disciplines (Modules)	Subsequent Disciplines (Modules)
	other forms of economic activity on the environment	Управление эколого-экономическими рисками Учебная практика / Educational practice Научно-исследовательская работа / Research work	Environmental-economic aspects of environmental projects / Эколого-экономические аспекты экологических проектов Wastes: Landfills, Processing and Recycling / Отходы: хранение, захоронение, рециклинг Surface water quality: modeling and management / Качество поверхностных вод: моделирование и менеджмент 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 Occupational safety and HSE-audit / Охрана труда и HSE-аудит	Modern remediation technologies / Современные технологии ремедиации Management of energy resources / Менеджмент ресурсов энергетики Environmental norms for sustainability / Экологические нормы для устойчивого развития Wastes: Landfills, Processing and Recycling / Отходы: хранение, захоронение, рециклинг Surface water quality: modeling and management / Качество поверхностных вод: моделирование и менеджмент 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 «Environmental accounting and reporting» 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>	17				
Incl.:					
Lectures					
Lab work					
Seminars	17	17			
<i>Self-study</i>	28	28			
<i>Evaluation and assessment</i>	27	27			
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.	Environment as an object of statistical observation. Sources of statistical data in the sphere of environmental protection, environmental safety and nature management	Seminars
State statistical observation	State statistical observation. Systems of accounting and reporting. Theoretical basics of environmental statistics. Characteristics of natural resources as a part of national welfare. System of indicators of statistics of natural resources. Environment and Natural Resources Statistics	Seminars
Environmental statistics for enterprises	Statistical observation in the field of environmental management and sustainable development at the level of enterprises and companies. Reporting formats. Use of Observations	Seminars
Environmental accounting and reporting	International practice. Standards of non-financial reporting. Green reporting. GRI standards.	Seminars
Environmental accounting and reporting as an informational base for the analyses	Environmental accounting and reporting as an informational base for the analyses. Sources of data and approaches to their analyses. Sustainability indicators of an organization.	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
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:

GRI STANDARDS: URL: <https://www.globalreporting.org/how-to-use-the-gri-standards/gri-standards-english-language/>

Additional sources:

1. Crowther D. A Social Critique of Corporate Reporting: A Semiotic Analysis of Corporate Financial and Environmental Reporting: A Semiotic Analysis of Corporate Financial and Environmental Reporting. – Routledge, 2018.

2. Esty D. C., Cort T. (ed.). Values at work: Sustainable investing and ESG reporting. – Palgrave Macmillan, 2020.

3. ESG Data Book 2022. URL: <https://corporate.ford.com/content/dam/corporate/us/en-us/documents/reports/esg-data-book.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 "Environmental accounting and reporting".

* - 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 "Environmental accounting and reporting" 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:

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Position, Department



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