

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

**Institute of Environmental Engineering**

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

**COURSE SYLLABUS**

**International collaboration**

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(наименование дисциплины/модуля)

**Recommended by the Methodological Council for the Education Field:**

**05.04.06 Ecology and nature management**

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(код и наименование направления подготовки/специальности)

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

**УПРАВЛЕНИЕ ПРИРОДОПОЛЬЗОВАНИЕМ / NATURE MANAGEMENT**

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(наименование (профиль/специализация) ОП ВО)

## 1. COURSE GOALS

The course is aimed on extended study of international collaboration in the field of ecology, environmental protection, nature management and sustainability.

## 2. LEARNING OUTCOMES

The mastering of the discipline "International collaboration" 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) УК-2.2; УК-5.1; УК-5.2; УК-5.3 ПК-5.2; ПК-5.3;*

| Code          | Competence   | Indicators of competence achievement (within the framework of this discipline)   |
|---------------|--|--|
| УК-2<br>GC-2  | Способен управлять проектом на всех этапах его жизненного цикла.<br><br>Able to manage a project at all stages of its life cycle.  | <b>УК-2.2</b> способен разрабатывать концепцию проекта, формулирует цель, задачи, обосновывает актуальность, ожидаемые результаты и сферы их применения<br><b>GC-2.2</b> is able to develop the concept of the project, formulates the goal, objectives, justifies the relevance, expected results and scope of their application  |
| УК-5<br>GC -5 | Способен анализировать и учитывать разнообразие культур в процессе межкультурного взаимодействия.<br><br>Able to analyze and take into account the diversity of cultures in the process of intercultural interaction | <b>УК-5.1.</b> знает основные категории философии, законы исторического развития, основы межкультурной коммуникации<br><b>GC-5.1</b> knows the main categories of philosophy, the laws of historical development, the basics of intercultural communication  |
|               |  | <b>УК-5.2</b> умеет вести коммуникацию в мире культурного многообразия и демонстрировать взаимопонимание между обучающимися – представителями различных культур с соблюдением этических и межкультурных норм<br><b>GC-5.2</b> is able to communicate in a world of cultural diversity and demonstrate mutual understanding between students - representatives of different cultures in compliance with ethical and intercultural norms                                     |
|               |  | <b>УК-5.3.</b> владеет практическими навыками анализа философских и исторических фактов, оценки явлений культуры; способами анализа и пересмотра своих взглядов в случае разногласий и конфликтов в межкультурной коммуникации<br><b>GC-5.3</b> owns the practical skills of analyzing philosophical and historical facts, evaluating cultural phenomena; ways of analyzing and revising one's views in case of disagreements and conflicts in intercultural communication |
| ПК-5<br>SPC-5 | Способен разрабатывать типовые природоохранные мероприятия и проводить   | <b>ПК-5.2.</b> Владеет навыками оценки воздействия планируемых сооружений или иных форм хозяйственной деятельности на окружающую среду   |

| Code | Competence   | Indicators of competence achievement (within the framework of this discipline)  |
|------|--|---|
|      | оценку воздействия планируемых сооружений или иных форм хозяйственной деятельности на окружающую среду   | <b>SPC-5.2</b> Has the skills to assess the impact of planned structures or other forms of economic activity on the environment   |
|      | Is able to develop standard environmental protection measures and assess the impact of planned structures or other forms of economic activity on the environment | <b>ПК-5.3</b> Знает требования к подготовке и реализации программ экологической модернизации предприятий, внедрения НДТ, организации экологического мониторинга, учета и отчетности<br><b>SPC-5.3</b> Knows the requirements for the preparation and implementation of environmental modernization programs of enterprises, the introduction of BAT, the organization of environmental monitoring, accounting and reporting |

### 3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The discipline "His International collaboration " 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 " International collaboration ".

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

| Code          | Competence  | Previous Disciplines (Modules)  | Subsequent Disciplines (Modules)  |
|---------------|---|---|---|
| <b>GC -2</b>  | Able to use special and new sections of ecology, geocology and nature management in solving research and applied problems of professional activity. |   | Экологическое проектирование промышленных объектов / Environmental design of industrial facilities<br>Научно-исследовательская работа в семестре, включая курсовые работы / Research work in the semester, including term papers<br>Производственная практика / Production practice |
| УК-5<br>GC -5 | Способен анализировать и учитывать разнообразие культур в процессе межкультурного взаимодействия.<br><br>Able to analyze and take into account the  | Философские проблемы естествознания / Philosophical problems of nature science<br>Современные проблемы экологии и природопользовани | Устойчивое развитие / Sustainable development<br>Методология научного творчества / Methodology of scientific creativity   |

| Code          | Competence   | Previous Disciplines (Modules)                       | Subsequent Disciplines (Modules)   |
|---------------|--|--|--|
|               | diversity of cultures in the process of intercultural interaction  | я / Modern problems of ecology and nature management |  |
| ПК-5<br>СПС-5 | <p>Способен разрабатывать типовые природоохранные мероприятия и проводить оценку воздействия планируемых сооружений или иных форм хозяйственной деятельности на окружающую среду</p> <p>Is able to develop standard environmental protection measures and assess the impact of planned structures or other forms of economic activity on the environment</p> |  | <p>Сертификация сырья, производственных процессов и продукции по международным экологическим требованиям / Certification of raw materials, production processes and products in accordance with international environmental requirements</p> <p>Радиоэкологическая безопасность территорий / Radioecological safety of territories</p> <p>HSE менеджмент / HSE-management</p> <p>Экологическое проектирование промышленных объектов / Environmental design of industrial facilities</p> <p>Современные методы и технологии защиты окружающей среды / Modern methods and technologies of environmental protection</p> <p>Хранение, переработка и утилизация отходов / Storage, processing and disposal of waste</p> <p>Международные стандарты управления качеством окружающей среды / International Environmental Quality Management Standards</p> <p>Управление минерально-сырьевым комплексом / Management of the mineral resource complex</p> |

#### 4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

Workload of the course « International collaboration » 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> |       |           |    |   |   |
| Incl.:                        |       |           |    |   |   |
| Lectures                      | 17    |           | 17 |   |   |
| Lab work                      |       |           |    |   |   |

| Вид учебной работы               |          | TOTAL     | Semesters |           |   |   |
|----------------------------------|----------|-----------|-----------|-----------|---|---|
|                                  |          |           | 1         | 2         | 3 | 4 |
| Seminars                         |          | 17        |           | 17        |   |   |
| <i>Self-study</i>                |          | 11        |           | 11        |   |   |
| <i>Evaluation and assessment</i> |          | 27        |           | 27        |   |   |
| <b>Total workload</b>            | Ac.hours | <b>72</b> |           | <b>72</b> |   |   |
|                                  | ECTS     | <b>2</b>  |           | <b>2</b>  |   |   |

## 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  | <p>General ideas about the necessity and methods of implementing international cooperation in the field of nature protection Absolute dependence of man on flora and fauna.</p> <p>The biosphere as a human habitat that has no state borders.</p> <p>The necessity and contradictory nature of international cooperation in the protection and rational use of flora and fauna.</p> <p>The main forms of international cooperation in the field of environmental protection and nature management. International cooperation in the field of wildlife protection and nature management, as a compromise of nature management. The main mechanisms of international cooperation.</p>   | Lectures, Seminars         |
| Examples of the implementation of international cooperation | <p>Examples of the implementation of international cooperation in the field of nature protection on the example of the main global conventions. Rio Declaration on Environment and Development. The UN Framework Convention on Climate Change. The UN Convention on Biological Diversity.</p> <p>The Kyoto Protocol as an implementation of the UN Framework Convention on Climate Change. UNESCO, United Nations Educational, Scientific and Cultural Organization. UNESCO Program "Man and the Biosphere" (MAB). The Rome Convention.</p> <p>International trade in endangered species of wild fauna and flora as one of the main factors in reducing species diversity. plants and animals on planet Earth (CITES Convention).</p> <p>Berne Convention.</p> | Lectures, Seminars         |

|  |      |  |                    |
|--|------|--|--------------------|
| International governmental environmental organizations | non- | International non-governmental environmental organizations and their role in international cooperation in the field of OS protection<br>International Whaling Commission (IWC).<br>International Union for Conservation of Nature (IUCN).<br><br>World Wildlife Fund (WWF) | 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:*

1. Monkelbaan J. Governance for the sustainable development goals //Singapura: Spinger. – 2019.

### *Additional sources:*

1) Allen, C., Metternicht, G., & Wiedmann, T. (2016). National pathways to the Sustainable Development Goals (SDGs): A comparative review of scenario modelling tools. *Environmental Science & Policy*, 66, 199-207.

2) van den Bergh, J. C., and Marjan W. Hofkes, eds. *Theory and implementation of economic models for sustainable development*. Vol. 15. Springer Science & Business Media, 2013.

3) Corbett, H., & Swibold, S. (2002). *Guide to sustainable development and environmental policy*. Duke University Press.

- 4) Jolink, A., & Niesten, E. (2015). Sustainable development and business models of entrepreneurs in the organic food industry. *Business Strategy and the Environment*, 24(6), 386-401.
- 5) König, J., Suwala, L., & Delargy, C. (2021). Helix models of innovation and sustainable development goals (pp. 473-487). Springer International Publishing.
- 6) Plumecocq, G., Debril, T., Duru, M., Magrini, M. B., Sarthou, J. P., & Therond, O. (2018). The plurality of values in sustainable agriculture models. *Ecology and Society*, 23(1).
- 7) Robertson, G. P. (2015). A sustainable agriculture?. *Daedalus*, 144(4), 76-89.
- 8) Van Soest, H. L., Van Vuuren, D. P., Hilaire, J., Minx, J. C., Harmsen, M. J., Krey, V., ... & Luderer, G. (2019). Analysing interactions among sustainable development goals with integrated assessment models. *Global Transitions*, 1, 210-225.
- 9) Vaquero-García, A., Álvarez-García, J., & Peris-Ortiz, M. (2017). Urban models of sustainable development from the economic perspective: Smart cities. In *Sustainable Smart Cities* (pp. 15-29). Springer, Cham.
- 10) Zucchella, A., & Previtali, P. (2019). Circular business models for sustainable development: A “waste is food” restorative ecosystem. *Business Strategy and the Environment*, 28(2), 274-285. URL: [https://www.google.com/books?hl=ru&lr=&id=qRYsEAAAQBAJ&oi=fnd&pg=PA11&dq=book+ecology&ots=T1QuTNW1uM&sig=yd2pOCR\\_1l67KmxmnriHZQ9zCN0](https://www.google.com/books?hl=ru&lr=&id=qRYsEAAAQBAJ&oi=fnd&pg=PA11&dq=book+ecology&ots=T1QuTNW1uM&sig=yd2pOCR_1l67KmxmnriHZQ9zCN0)

*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](http://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/>
  - .....

*Educational and methodological materials for independent work of students during the development of the discipline/ module \*:*

1. A course of lectures on the discipline " International collaboration ".

\* - 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 "

International collaboration " 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 Department of  
Environmental Safety and  
Product Quality Management

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