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**PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
NAMED AFTER PATRICE LUMUMBA
Institute of Environmental Engineering**

COURSE SYLLABUS

Sustainable Development in the Context of Environmental Culture

**Recommended by the Didactic Council for the Education Field for the specialization:
05.04.06 "Ecology and nature management"**

The course instruction is implemented within the professional education programme of higher education:

44.04.02 Психолого-педагогическое образование
Environmental Pedagogy / Экологическая педагогика (англ.)

1. COURSE GOAL(s)

The course is designed to help students to formate a methodological basis for sustainable development, aimed at systematic change in traditional forms of nature management and people's lifestyle to ensure the sustainability of the biosphere and the development of society.

• 2. REQUIREMENTS FOR COURSE OUTCOMES

The course implementation is aimed at the development of the following competences:

Competence code	Competence descriptor	Competence formation indicators (within this course)
GC-6	Able to determine and implement the priorities of their own activities and ways to improve it based on self-assessment	GC-6.1 Able to analyze large amounts of information of professional content
		GC-6.2 Able to analyze, synthesize and optimize solutions to the tasks
GPC-2	Able to design basic and additional educational programs and develop scientific and methodological support for their implementation	GPC-2.1 Knows the principles, methods and approaches to the design of basic and additional educational programs, the main approaches to the development of scientific and methodological support for the implementation of programs
		GPC-2.2 Able to develop target, content and organizational sections of the main and additional educational programs of the educational process; develop elements of the content of the programs and select them taking into account the planned educational results; select elements of the content of programs, determine the principles of their continuity, determine the planned educational results; develop scientific and methodological support for the implementation of programs
		Able to develop the target, content and organizational sections of the main and additional educational programs, taking into account the planned educational results; carry out the design of basic and additional educational programs, taking into account the planned educational results; select and structure the content of basic and additional educational programs; develops scientific and methodological support for the implementation of basic and additional educational programs
GPC-4	Able to create and implement the conditions and principles of spiritual and moral education of students on the basis of basic national values	GPC-4.1 Knows the principles, theories, methods of spiritual and moral education, methods and forms of organizing the education of students on the basis of basic national values
		GPC-4.2 Knows how to apply elements of educational methods, forms and means of students based on basic national values

		GPC-4.3 Owns ways to create conditions for the spiritual and moral education of students on the basis of basic national values
GPC-8	Able to design pedagogical activities based on special scientific knowledge and research results	GPC-8.1 Knows the modern methodology of pedagogical design, the state and development trends of international and domestic pedagogical research; methodology and technology for designing pedagogical activity, the content and results of research in the field of pedagogical design
		GPC-8.2 Able to identify and systematize the main ideas and results of international and domestic pedagogical research; apply modern scientific knowledge and materials of pedagogical research in the process of pedagogical design; determine the purpose and objectives of designing pedagogical activity based on the conditions of the pedagogical situation; assess the pedagogical situation and determine pedagogical tasks, use the principles of the project approach in the implementation of pedagogical activities
		GPC-8.3 Able to use modern scientific knowledge and the results of pedagogical research in pedagogical design; independently determine the pedagogical task and design the pedagogical process to solve it; choose methods of pedagogical design, taking into account the given conditions of the pedagogical process; analyze and adjust the modeled pedagogical project, taking into account scientific developments

As a result of course studying, the student must:

Know:

- theoretical foundations of sustainable development and circular economy;
- mechanisms and principles of the circular economy;
- regulatory framework in the field of "green" economy and sustainable development;

Be able to:

- develop a strategy for the sustainable development in the region;
- calculate indices and indicators of sustainable development;
- analyze the rating of the region in the context of sustainable development;

Own :

- skills in working with indices and indicators;
- skills of working with different methods of sustainable development assessment .

3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

Discipline *Sustainable Development in the Context of Environmental Culture / Устойчивое развитие в контексте экологической культуры* refers to the **Electives** (block 3 of the 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 course.

Table 3.1

The list of the higher education programme components that contribute to the achievement of the expected learning outcomes

Competence code	Competence descriptor	Previous courses/modules, internships*	Subsequent courses/modules, internships*
GC-6	Able to determine and implement the priorities of their own activities and ways to improve it based on self-assessment	Environmental Culture: Genesis and Modern Issues Fundamentals of Environmental Science Applied Ecology Humanitarian Ecology	Environmental Ethics Research work in the term including projects / Industrial / pedagogical practice Research work on thesis State Exam degree Diploma
GPC-2	Able to design basic and additional educational programs and develop scientific and methodological support for their implementation	Applied Ecology Fundamentals of Environmental Science	Environmental Ethics Research work in the term including projects / Industrial / pedagogical practice Research work on thesis State Exam degree Diploma
GPC-4	Able to create and implement the conditions and principles of spiritual and moral education of students on the basis of basic national values	Environmental Culture: Genesis and Modern Issues	Research work in the term including projects / Industrial / pedagogical practice Research work on thesis State Exam degree Diploma
GPC-8	Able to design pedagogical activities based on special scientific knowledge and research results	Applied Ecology	Research work in the term including projects / Industrial / pedagogical practice Research work on thesis State Exam degree Diploma

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the discipline is **4** credit units.

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

Types of academic activities	Total hours	Semestre(s)			
		1	2	3	4
<i>Contact academic hours</i>					
Lectures	17			17	
Lab works					
Seminars (workshops/tutorials)	17			17	
<i>Self-study</i>	74			74	

Types of academic activities	Total hours	Semestre(s)			
		1	2	3	4
<i>Evaluation and assessment (exam; pass/fail grading)</i>	36			36	
The total course workload	hours			144	
	credits			4	

5. COURSE CONTENT

Table 5.1. Course Modules and Contents

Title of Course Modules		Content	Types of academic activities
1.	The history of the concept of "sustainable development" and the formation of its modern concept	Global problems of mankind	L, S
		Environmental ethics	
2	Global models and international agreements in the field of environment and development	Biodiversity	L, S
3	Scenarios for sustainable development	Features of the transition of the Russian Federation to SD	L, S
4	Fundamentals of the theory of system stability.	Resource capacity	L, S
5	The concept of SD. Socio-economic problems of sustainable development	SD definition, SD components, SD provisions	L, S
	Indices and indicators of sustainable development	HDI calculation	L, S
		Demographics	
	The concept of accumulated OS damage	Reports on objects	L, S
	Technologies for elimination of accumulated OS damage	Calculation of elimination of accumulated damage	
	Ecosystem services. Approaches to economic evaluation	Calculation of forest ecosystem services	L, S
		City Capacity Calculation	
	Carbon footprint. Calculation methods at the level of a person, enterprise, city, country	Calculation of the US of a person, calculation of the company's RS	L, S

6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Classroom equipment and technology support requirements

Classroom for Academic Activity Type	Classroom equipment	Specialized educational / laboratory equipment, software and materials for mastering the course (if necessary)
Lecture	Classroom, equipped with a set of specialized furniture; whiteboard; a set of devices includes portable multimedia projector, laptop, projection screen, stable wireless	No
Seminars	Classroom, equipped with a set of specialized furniture; whiteboard; a set of devices includes portable multimedia projector, laptop, projection screen, stable wireless	
Computer Lab	Computer Lab for conducting classes, group and individual consultations, current control and intermediate certification, equipped with personal computers (in the amount of 12), a board (screen) and technical devices of multimedia presentations.	No
For Self-Study	Classroom for self-study (can be used for seminars and consultations), equipped with a set of devices includes laptop, stable wireless.	No

7. RECOMMENDED SOURCES FOR COURSE STUDIES

a) Main reading:

1. Gorbunov S.S. Sustainable development: Materials for the lecture course / S.S.Gorbunov. - M., 2014. - ISBN 978-5-00077-072-6.
URL: https://lib.rudn.ru/MegaPro/UserEntry?Action=Link_FindDoc&id=447493&idb=0
2. Sopilko N. Yu. Theoretical Foundations of the Economics of Sustainable Development [Text / electronic resource]: Textbook / N. Yu. Sopilko , A.F. Orlova, S.M. Lissitskaya. - Electronic text data. - M.: Publishing House of RUDN University, 2017. - 165 p.: ill. - ISBN 978-5-209-07861-6 : 219.48. Library of RUDN University.
3. Kharlamova M.D. Modern Technologies of Waste Management, Recycling and Environmental Protection [Текст/электронный ресурс] = Modern methods of waste management, recycling and environmental protection: Study Guide / M.D. Kharlamova, A.I. Kurbatova. - Electronic text data. - M. : Publishing House of RUDN University, 2017. - 98 p. : ill. - ISBN 978-5-209-07889-0 Sustainable Development Goals <https://www.undp.org/sustainable-development-goals>
4. [Alan Weisman](#) The World Without Us 324 pages Published July 10th 2007 by Thomas Dunne Books

b) Additional reading

5. Muslim M.A., Prasojo E., Salomo R.V. Leadership and Collaborative Governance in Transition Era from Millennium Development Goals to Sustainable Development Goals: A Systematic Mapping Study // Bulletin of the Peoples' Friendship University of Russia. Series: State and municipal administration. 2022. T. 9. No 2. C. 172–188. <https://doi.org/10.22363/2312-8313-2022-9-2-172-188>
6. Nyaranga M.S., Hao Ch., Hongo D.O. The Role of Public Participation in Governance towards Achieving Sustainable Development. Part 1 // Bulletin of the Peoples' Friendship

University of Russia. Series: State and municipal administration. 2021. T. 8. No 4. C. 395–404. DOI: 10.22363/2312-8313-2021-8-4-395-404

7. Gómez-Baggethun, E. and D.N. Barton 2013 Classifying and valuing ecosystem services for urban planning. 2013. Ecological Economics 86: 235—245
8. Morel J.L., C. Chenu, K. Lorenz. 2014. Ecosystem services provided by soils of urban, industrial, traffic, mining, and military areas (SUITMAs). Journal of Soil and Sediments (article in press)

Internet-based sources

1. ELS of RUDN University and third-party ELS, to which university students have access on the basis of concluded agreements:

- RUDN Electronic Library System - RUDN EBS <http://lib.rudn.ru/MegaPro/Web>
- ELS "University Library Online" <http://www.biblioclub.ru>
- EBS Yurayt <http://www.biblio-online.ru>
- ELS "Student Consultant" www.studentlibrary.ru
- EBS "Lan" <http://e.lanbook.com/>
- EBS "Trinity Bridge"

2. Databases and search engines:

- electronic fund of legal and normative-technical documentation <http://docs.cntd.ru/>
- Yandex search engine [https:// www .yandex.ru/](https://www.yandex.ru/)
- Google search engine <https://www.google.ru/>
- abstract database SCOPUS [http:// www .elsevierscience.ru/ products / scopus /](http://www.elsevierscience.ru/products/scopus/)

8. MID-TERM ASSESSMENT AND EVALUATION TOOLKIT

Evaluation materials and a point- rating system* for assessing the level of competence formation (part of competences) based on the results of mastering the discipline **Sustainable Development in the Context of Environmental Culture** are presented in the Appendix to this Work Program of the discipline.

DEVELOPER:

Senior Lecturer of the EE
Department



Kapralova D.O.

Position

Signature

Name, Surname

HEAD OF DEPARTMENT:

Director of EE Department



Kucher D.E.

Position

Signature

Name, Surname

HEAD OF PROGRAMME:

Position

Signature

Name, Surname