Federal State Autonomous Educational Institution for Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA (RUDN University)

Educational Division (faculty/institute/academy):
Institute of Ecology

COURSE SYLLABUS

ENVIRONMENTAL DIDACTICS

Recommended by the Didactic Council for the Education Field for the specialization:

44.04.02 "Psychological and pedagogical education"

The mastering of the course is carried out as part of the implementation of the main professional syllabus (Higher Education programme, specialization)

Environmental Pedagogy
(master's programme)

AGREED:

Head of the Higher Education Programme	Chairperson of the Didactic Council	Head of the Department
Y.L. Zakirova		
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(подпись)	(подпись)	(подпись)
«___»_____202__ г.	«___»_____202__ г.	«___»_____202__ г.

Moscow, 2022

1. Course Goals and Objectives:

The goal of the course: is mastery of competencies in analysis, research, design, modeling the content, methods and technologies of school and higher professional environmental education.

Objectives:
– development of theoretical knowledge, reflecting the level of development of theory and methodology of teaching Ecology at the present stage of its development;
– formation of the ability to design a modern educational process;
– formation of students' competencies in the field of organization of educational activities on educational programs of different levels of study; their development and quality assessment;
– mastering the ways of solving professional problems in the field of teaching theory and methods of teaching ecology;
– development of communicative abilities via the discussion of topical problems of professional and pedagogical education;
– development of reflective abilities through the formation and development of a systematic vision of pedagogical reality; ability to consider the ways of solving educational problems.

2. Course in Higher Education Programme Structure:

The course «**Environmental Didactics**» refers to an optional part of block 1 of the curriculum.

Table No. 1 shows the previous and subsequent disciplines aimed at the formation of the competencies of the corresponding course in accordance with the competence matrix of EP HE.

Table 1. Previous and subsequent courses aimed at building competencies

Nr.	Competence code and title	Previous courses	Subsequent courses
Universal competencies			
1	**UC-1** Able to carry out a critical analysis of problem situations based on a systematic approach, to develop an action strategy. **UC-2** Able to manage a project at all stages of its life cycle. **UC-3** Able to organize and manage the work of the team, developing a team strategy to achieve the goal. **UC-5** Able to analyze and take into account the diversity of cultures in the process of intercultural interaction. **UC-6** Able to identify and implement the priorities of their own activities and ways to improve it based on self-esteem.	Environmental Education Concept of Environmental Pedagogy Research Work Introductory Practice	Teaching Practice Research Work on the Topic of the Final Qualifying Work
General competencies			

| 2 | **GC-1** Able to carry out and optimize professional activities in accordance with regulatory legal acts in the field of education and professional ethics.
GC-2 Able to design basic and additional educational programs and develop scientific and methodological support for their implementation.
GC-3 Able to design the organization of joint and individual educational and educational activities of students, including those with special educational needs.
GC-5 Able to develop programs for monitoring the results of students' education, develop and implement programs to overcome learning difficulties.
GC-6 Able to design and use effective psychological and pedagogical, including inclusive, technologies in professional activities, necessary for the individualization of education, development, education of students with special educational needs.
GC-7 Able to plan and organize the interaction of participants in educational relations.
GC-8 Able to arrange pedagogical activities based on special scientific knowledge and research results. | Environmental Education Concept of Environmental Pedagogy
Research Work
Introductory Practice | Teaching Practice
Research Work on the Topic of the Final Qualifying Work |

Specialized professional competencies (type of professional activity – research, control and expert, organizational and management)

| 3 | **SPC-1** Able to carry out | Environmental | Teaching Practice |

research support and educational and methodological support for the implementation of basic and additional, including professional programs. **SPC-2** Able to arrange pedagogical activities based on special scientific knowledge and research results.	Education Concept of Environmental Pedagogy Research Work Introductory Practice	Research Work on the Topic of the Final Qualifying Work

3. Requirements to Learning Outcomes:

The process of studying the course is aimed at the formation of the following competencies according to the educational standard:

Universal competence – 1. Able to carry out a critical analysis of problem situations based on a systematic approach, to develop an action strategy.

Universal competence – 2. Able to manage a project at all stages of its life cycle.

Universal competence – 3. Able to organize and manage the work of the team, developing a team strategy to achieve the goal.

Universal competence – 5. Able to analyze and take into account the diversity of cultures in the process of intercultural interaction.

Universal competence – 6. Able to identify and implement the priorities of their own activities and ways to improve it based on self-esteem.

General competence – 1. Able to carry out and optimize professional activities in accordance with regulatory legal acts in the field of education and professional ethics.

General competence – 2. Able to design basic and additional educational programs and develop scientific and methodological support for their implementation.

General competence – 3. Able to design the organization of joint and individual educational and educational activities of students, including those with special educational needs.

General competence – 5. Able to develop programs for monitoring the results of students' education, develop and implement programs to overcome learning difficulties.

General competence – 6. Able to design and use effective psychological and pedagogical, including inclusive, technologies in professional activities, necessary for the individualization of education, development, education of students with special educational needs.

General competence – 7. Able to plan and organize the interaction of participants in educational relations.

General competence – 8. Able to arrange pedagogical activities based on special scientific knowledge and research results.

Specialized professional competence – 1. Able to carry out research support and educational and methodological support for the implementation of basic and additional, including professional programs.

Specialized professional competence – 2. Able to arrange pedagogical activities based on special scientific knowledge and research results.

As a result of studying the course, the student must:

Know:

– the place of environmental education as a component of education for sustainable development;

– the history of the formation of the methodology of environmental education in the historical retrospective of Russia;

– peculiarities of the selection of the content for the course of Ecology, educational technologies for its implementation;

– the structure of the educational and methodological complex on Ecology and the requirements for it;

– features of the system of extracurricular work with students;

– domestic and foreign experience of environmental education.

Be able to:

- determine the features and trends in the development of modern methods of teaching Ecology in the context of the development of pedagogical science;

– conduct a research and critical analysis of scientific works, strategies, concepts, scientific publications on the problems of theory and methodology of teaching Ecology;

– use the categorical and conceptual apparatus of the theory and methods of teaching Ecology;

– set the tasks of methodological activities and ways to solve these tasks;

– competently formulate pedagogical goals at different levels;

- use a variety of pedagogical technologies in teaching Ecology;

– develop course programs, teaching materials, etc. on Ecology;

– conduct Ecology classes according to programs of different educational levels;

– organize independent work of students according to the corresponding programs;

– control and evaluate the process and results of learning.

Master:

– analysis of theories, concepts and educational systems in the field of environmental education;

– designing the development of educational systems of different levels;

– designing the learning process of students: the ability to apply pedagogically sound forms, methods and techniques of organizing a classroom and independent work of students, use educational technologies, including interactive, simulation, informative ones;

– design of educational communication;

– a system of methods and techniques of teaching Ecology, aimed at formation of ecological culture.

4. Course Workload and Academic Activities

The course workload of «**Environmental Didactics**» is 4 credits.

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

Types of academic activities		Total hours	Semesters				
			1	2	3	4	5
Contact academic hours							
Including:							
Lectures							
Seminars (workshops/tutorials)		12				12	
Lab works							
Self-study		134				134	
Evaluation and assessment (exam; pass/fail grading)		8 exam				8	
Total course workload	hours	144			144		
	credits	4			4		

5. Course content

Table 5.1 Course modules and contents

course modules	contents

1. Sources of formation of the theory and methods of teaching ecology.	Theory and methods of teaching ecology: its place and significance in education. History of environmental education. The system of environmental education. Goals of environmental education. Education in ecology.
2. Requirements for the professional activities of an environmental teacher	Features of the professional activity of the teacher-ecologist. Qualification characteristic of the teacher-ecologist. Professional functions of the teacher-ecologist. The educational function of the teacher-ecologist. Requirements for the personality of the teacher.
3. Ecology teaching methods.	Ecology teaching methods. Methods of formation and development of ecological concepts. Methods of formation of skills. Pedagogical technologies in teaching ecology.
4. Forms of teaching ecology.	The system of forms of teaching ecology. General characteristics of the forms of teaching ecology. The lesson as the main and very first form of education in the history of the school. Excursion as an extracurricular form of environmental education.
5. Material base of teaching ecology.	Material base of teaching ecology. An office, a living corner, an educational and experimental site with an environmental department. Methodology for monitoring plant communities, monitoring the air environment.

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 and materials for mastering the module
Lecture hall (room)		
Laboratory		
Seminar room	Classroom, equipped with a set of specialized furniture; a whiteboard; a personal computer with a standard package of office programmes; 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	
Computer lab		
For students'self-study		

7. Recommended sources for course studies

Main reading
Podlasy I.P. Pedagogy. - Moscow : Yurayt, 2013. - 696 p.

Additional reading

1. Deryabo S.D., Yasvin V.A. Ecological pedagogy and psychology: Textbook for universities.-Rostov-on-Don, 1996-480s
2. Archie, M. & McCrea, E. (1996). Environmental education in the United States: Definition and Direction. In M. Archie (Ed.), Environmental education in the United States – Past, present, and future. Collected papers of the 1996 National Environmental Education Summit. (pp.1-8). Burlingame, CA.
3. Carter, R. L, and Simmons, B. (in press). The history and philosophy of environmental education. In Bodzin, Klein, & Weaver (Eds.) The Inclusion of Environmental Education in Science Teacher Education. Dordrecht, Netherlands: Springer.
4. Disinger, J. F. & Monroe, M. C. (1994). Defining environmental education. University of Michigan: Ann Arbor, MI. pp. 2-14.
5. Kaspar, M. (1999). Achieving standards through environmental education. In L. Mabb (Ed.), EEducator Special Issue: Advancing Education Reform (pp. 48-51). NAAEE: Rock Springs, GA.
6. Pennock, M. T., & Bardwell L. V. (1994). Approaching environmental issues in the classroom. University of Michigan: Ann Arbor, MI. pp.1-23.

Internet-based sources
Electronic libraries with access for RUDN students
Education and society [Electronic resource]: Scientific, informational–analytical journal for researchers and organizers of the education system. – URL: http://www.jeducation.ru:80 .

Educational issues [Electronic resource]: Scientific and educational journal Higher School of Economics. – URL: http://vo.hse.ru
Pedagogy [Electronic resource]: scientific and theoretical journal. – URL: http://pedagogika-rao.ru
Pedagogy [Electronic resource]: Scientific and theoretical journal of the Russian academy of education. – URL: http://pedagogika-rao.ru/ .
Public education [Electronic resource]: Social and pedagogical magazine. – URL: http://elibrary.ru/title_about.asp?id=7908 .

8. Mid-Term Assessment and Evaluation Toolkit
Evaluation materials for students' intermediate certification in the course of «**Environmental Education**» are presented in Appendix 1 to this work programme.

*Assessment materials for the course are developed and executed in accordance with the requirements of the Regulations for the assessment and evaluation funds, approved by order of the rector dated 05.05.2016 No. 420, and include a list of competencies indicating the stages of their formation; description of indicators and criteria for assessing competencies at various stages of their formation, description of assessment scales; standard control tasks or other materials necessary to assess knowledge, skills and (or) experience of activity that characterize the stages of formation of competencies in the process of mastering the educational course; didactic materials that define the procedures for assessing knowledge, skills and (or) experience of activity that characterize the stages of competency formation).

Assessment and Evaluation Fund

ON THE COURSE

ENVIRONMENTAL DIDACTICS

Direction 44.04.02 Psychological and pedagogical education

Programme:

Environmental Pedagogy

Qualification of the graduate – *Master*

Assessment and evaluation fund passport

Direction 44.04.02 "Psychological and pedagogical education"

Course: <u>ENVIRONMENTAL DIDACTICS</u>

12.1. Assessment and grading system and characteristics of the assessment scale

Controlled competence code or part	Controlled course module	Forms of control					Module points
		Classroom work			Self-study	Exam	
		Test	Control work	Class work	Seminar report		
UC-1, 2, 3, 5, 6, 7, 8 GC-1,2,3,5,6,7,8 SPC-1,2	1. Sources of formation of the theory and methods of teaching ecology.	X		8	8		16
UC-1, 2, 3, 5, 6, 7, 8	2. Requirements for the professional activities of an environmental teacher	X		8	8		16
GC-1,2,3,5,6,7,8	3. Ecology teaching methods.	X		8	8		16
SPC-1,2	4. Forms of teaching ecology.	X		8	8		16
UC-1, 2, 3, 5, 6, 7, 8	5. Material base of teaching ecology.	X		8	8		16
	Exam		10	40	40	10	100

12.2 The maximum number of credits in the course is 3. At the same time, the following ratio is established between the number of points and the number of credits:

Points to credits ratio

Total points	Final assessment	Amount of credits
95-100	5	3
86 – 94	5 (B)	3
69-85	4 (C)	2
61-68	3+ (D)	1
51 – 60	3 (E)	1
31 – 50	2 (FX)	0
<30	2 (F)	0

Deciphering of grades is also accepted according to the specified document:

- **A: "Excellent"** - the theoretical content of the course has been fully mastered, the necessary practical skills for working with the material learned have been formed, all the educational tasks provided for by the training programme have been completed, the quality of their implementation was assessed by the number of points close to the maximum.

- **B: "Very good"** - the theoretical content of the course is mastered completely, the necessary practical skills of working with the acquired material are basically formed, all the educational tasks provided for by the training programme are completed, the quality of most of them is assessed by the number of points close to the maximum.

- **C: "Good"** - the theoretical content of the course has been mastered completely, some practical skills of working with the mastered material are not sufficiently formed, all the educational tasks provided for by the training programme have been completed, the performance quality of none of them has not been assessed with a minimum number of points, some types of tasks have been completed with mistakes.

- **D: "Satisfactory"** - the theoretical content of the course is partially mastered but the gaps are not significant, the necessary practical skills to work with the acquired material are basically formed, most of the educational tasks provided for in the training programme have been completed, some of the completed tasks may contain errors.

- **E: "Mediocre"** - the theoretical content of the course is partially mastered, some practical skills have not been formed, many of the educational tasks provided for by the training programme have not been completed, or the quality of some of them is assessed by the number of points close to the minimum.

- **FX: "Conditionally unsatisfactory"** - the theoretical content of the course has been partially mastered, the necessary practical skills have not been formed, most of the educational tasks provided for by the training programme have not been completed, or the quality of their implementation was assessed by the number of points close to the minimum; it is possible to improve the quality of completing educational tasks with additional independent work on the course material.

- **F: "Certainly unsatisfactory"** - the theoretical content of the course has not been mastered, the necessary practical skills are not formed, all the completed study tasks contain gross errors, additional independent work on the course material will not lead to any significant improvement in the quality of the study tasks.

12.3 List of competencies and their formation stages

Nr.	Competence code and title	Previous courses	Subsequent courses
Universal competencies			
1	**UC-1** Able to carry out a critical analysis of problem situations based on a systematic approach, to develop an action strategy. **UC-2** Able to manage a project at all stages of its life cycle.	Environmental Education Concept of Environmental Pedagogy Research Work Introductory Practice	Teaching Practice Research Work on the Topic of the Final Qualifying Work

	UC-3 Able to organize and manage the work of the team, developing a team strategy to achieve the goal. **UC-5** Able to analyze and take into account the diversity of cultures in the process of intercultural interaction. **UC-6** Able to identify and implement the priorities of their own activities and ways to improve it based on self-esteem.		
General competencies			
2	**GC-1** Able to carry out and optimize professional activities in accordance with regulatory legal acts in the field of education and professional ethics. **GC-2** Able to design basic and additional educational programs and develop scientific and methodological support for their implementation. **GC-3** Able to design the organization of joint and individual educational and educational activities of students, including those with special educational needs. **GC-5** Able to develop programs for monitoring the results of students' education, develop and implement programs to overcome learning difficulties. **GC-6** Able to design and use effective psychological and pedagogical, including inclusive, technologies in professional activities, necessary for the individualization of	Environmental Education Concept of Environmental Pedagogy Research Work Introductory Practice	Teaching Practice Research Work on the Topic of the Final Qualifying Work

	education, development, education of students with special educational needs. **GC-7** Able to plan and organize the interaction of participants in educational relations. **GC-8** Able to arrange pedagogical activities based on special scientific knowledge and research results.		
Specialized professional competencies (type of professional activity – research, control and expert, organizational and management)			
3	**SPC-1** Able to carry out research support and educational and methodological support for the implementation of basic and additional, including professional programs. **SPC-2** Able to arrange pedagogical activities based on special scientific knowledge and research results.	Environmental Education Concept of Environmental Pedagogy Research Work Introductory Practice	Teaching Practice Research Work on the Topic of the Final Qualifying Work

12.4. Typical control tasks or other materials necessary to assess knowledge, skills and (or) experience of activities, characterizing the formation stages of competencies in the process of mastering the educational course

Questions to prepare for certification

1. Theory and methods of teaching ecology: its place and significance in education.
2. History of environmental education.
3. The system of environmental education.
4. Goals of environmental education.
5. Education in ecology.
6. Features of the professional activity of the teacher-ecologist.
7. Qualification characteristic of the teacher-ecologist.
8. Professional functions of the teacher-ecologist.
9. The educational function of the teacher-ecologist.
10. Requirements for the personality of the teacher.
11. Ecology teaching methods.
12. Methods of formation and development of ecological concepts.
13. Methods of formation of skills.
14. Pedagogical technologies in teaching ecology.

15. The system of forms of teaching ecology.
16. General characteristics of the forms of teaching ecology.
17. The lesson as the main and very first form of education in the history of the school. Excursion as an extracurricular form of environmental education.
18. Material base of teaching ecology.
19. An office, a mini-zoo, an educational and experimental site with an environmental department.
20. Methodology for monitoring plant communities, monitoring the air environment.

The assessment and evaluation of knowledge, skills and abilities is carried out by using the components of the WCF presented in paragraphs 12.1-12.3, 12.4 in accordance with the sequence of acquisition of competencies indicated in table 12.2.

The programme is compiled in accordance with the requirements of the ES HE RUDN / FGOS HE.

Developer:

Associate Professor of the Department of Foreign Languages   Y.L.Zakirova

signature

Head of the Higher Education program

Associate Professor of the Department of Foreign Languages   Y.L.Zakirova

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