

Документ подписан
Информация о документе
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**Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA NAMED AFTER PATRICE
LUMUMBA
RUDN University**

ACADEMY OF ENGINEERING

educational division (faculty/institute/academy) as higher education program developer

COURSE SYLLABUS

Innovative Technologies of Ecological Management in Industries

course title

Recommended by the Didactic Council for the Education Field of:

27.04.05 Innovatics

field of studies / speciality code and title

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

Digital transformation in production management

higher education program profile / specialization title

2025 year

1. THE PURPOSE OF MASTERING THE DISCIPLINE

The goals and objectives of the discipline are to form students' economic thinking, to teach them to apply the principles of economic analysis in solving environmental problems and issues of rational use of natural resources, to acquaint students with the main modern concepts of innovative technologies for environmental management; to teach students to understand the dynamics of qualitative and quantitative phenomena of the business environment; evaluate concepts of the efficiency of natural resource use; to teach students to use theoretical knowledge to solve specific practical problems of environmental management in various industries.

The purpose of mastering the discipline is to acquire knowledge, skills and abilities in the field under study, characterizing the stages of competence formation and ensuring the achievement of the planned results of mastering the educational program.

2. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

Mastering the discipline is aimed at developing the following competencies (parts of competencies) among students:

Table 2.1. The list of competencies formed by students in the course of mastering the discipline (the results of mastering the discipline)

A code of a competence	A competence	Indicators of achieving a competence
PC-2	Shows the knowledge of innovative products quality, value and competitive ability assessment	PC-2.2. Uses methods of ecological safety assessment

3. THE PLACE OF DISCIPLINE IN THE STRUCTURE OF OP VO

The discipline refers to the part formed by the participants in educational relations of the OP VO.

Within the higher education programme students also master other disciplines and internships that contribute to the achievement of the expected learning outcomes as results of the subject mastery.

Table 3.1. The list of components of the OP VO that contribute to the achievement of the planned results of the development of the discipline

Competency code	Name of competence	Previous disciplines, practices	Subsequent disciplines, practices
PC-2	Shows the knowledge of innovative products quality, value and competitive ability assessment	-	Practical applications of Earth remote sensing data and GIS Introductory training; Organization and managerial training (S); Organization and managerial training (P); Pre-degree training; State exam; Graduation qualification work

4. VOLUME OF DISCIPLINE AND TYPES OF EDUCATIONAL WORK

The total complexity of the discipline is 3 credit units.

Table 4.1. Types of educational work by periods of development of OP VO

Type of study work		Total, academic hour	Semester 1
Contact work		36	36
Including:			
Lecture		18	18
Seminar classes		18	18
Independent work of the student		63	63
Control (test with assessment)		9	9
The total complexity of the discipline	Academic hours	108	108
	Credit Units	3	3

5. CONTENT OF THE DISCIPLINE

Table 5.1. The content of the discipline by type of educational work

Name of the discipline section	Contents of the section (topic)	Types of educational work
Economic development and environmental factors. Sustainable development. From technogenic to sustainable development.	Stages of the Club of Rome. Goals and objectives of the Stockholm Conference and the Conference in Rio de Janeiro. The principles of sustainable development. Nat. sustainable development programs.	LEC, SM, IW
Use and protection of renewable natural resources.	Use, protection and renewal of water, air resources, soil and biota.	LEC, SM, IW
Use and protection of non-renewable natural resources.	Use, renewal and protection of subsoil.	LEC, SM, IW
Key environmental management tools	Environmental audit, environmental insurance, environmental labeling	LEC, SM, IW
Greening sectors of the economy	The economic mechanism of the eco-economization of the economy. The state and the market in environmental protection. Greening the economy and overcoming environmental crises. The effectiveness of environmental protection measures.	LEC, SM, IW

* LEC - lecture, SM - seminars; IW - independent work

6. LOGISTICS AND TECHNICAL SUPPORT OF THE DISCIPLINE

Table 6.1. Logistics of discipline

Types of Auditorium	Audience equipment	Specialized educational / laboratory equipment, software and materials for mastering the discipline (if necessary)
Lecture	An auditorium for lecture-type classes, equipped with a set of specialized furniture; board (screen) and technical means of multimedia presentations	-
Seminar	An auditorium for conducting seminar-type classes, group and individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and technical means for multimedia presentations	-
For independent work of students	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 EIOS	-

7. EDUCATIONAL-METHODOLOGICAL AND INFORMATION SUPPORT OF THE DISCIPLINE

Main literature:

- 1) Сладкопеев С.А. Системы природопользования: учебное пособие / М.: Академический Проект, 2020. 79 с. <https://e.lanbook.com/book/132518>.
- 2) Рудский В.В. Основы природопользования: учебное пособие / 2-е изд. М.: Логос, 2020. 208 с. <https://e.lanbook.com/book/163075>.
- 3) Emerging Technologies for Innovation Management in the Software Industry / Edited by Varun Gupta, and Chetna Gupta. Электронные текстовые данные. Engineering Science Reference, 2022. 282 с.

Additional literature:

- 4) Кондратьева И.В. Экономический механизм государственного управления природопользованием: учебное пособие / Санкт-Петербург: Лань, 2021. 388 с. <https://e.lanbook.com/book/169039>.

The electronic library system (ELS) of RUDN University and third-party EBS, to which university students have access on the basis of concluded contracts:

- ELS RUDN <http://lib.rudn.ru/MegaPro/Web>
- ELS «University Library Online» <http://www.biblioclub.ru>
- ELS Юпайт <http://www.biblio-online.ru>
- ELS «Student Advisor» www.studentlibrary.ru
- ELS «Троицкий мост»

Databases and browsers:

- Electronic fund of legal and normative-technical documentation <http://docs.cntd.ru/>
- Yandex search <https://www.yandex.ru/>
- Google search <https://www.google.ru/>
- Abstract database SCOPUS <http://www.elsevierscience.ru/products/scopus/>

Educational and teaching materials for independent work of students in the course of mastering the discipline:*

A course of lectures on the discipline.

* all educational and teaching materials for independent work of students are placed in accordance with the current procedure on the discipline page in the telecommunication educational in-formation system (TEIS) of RUDN

8. EVALUATION MATERIALS AND SCORE-RATING SYSTEM FOR ASSESSING THE LEVEL OF FORMATION OF COMPETENCES IN THE DISCIPLINE

Evaluation materials and a point-rating system for assessing the level of formation of competencies (parts of competencies) based on the results of mastering the discipline are presented in the Appendix to this Work Program of the discipline.

DEVELOPERS:

Associate professor, Department of Innovation
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name and surname

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