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**Federal State Autonomous Educational establishment of higher education
RUDN-University
Engineering Academy**

PROGRAMM

Innovative technologies of environmental management in industries

The program track 27.04.05 Innovations Study

Educational program of higher education

Innovation management

1. The aim

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.

2. Requirements to the outcome of the course:

The following competences are formed in the study process.

Table 2.1. A list of formed competences

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. Place of the course in the structure of GEP: Part, formed by educational relations participants - the first block of EP HE.

Table 3.1. A list of EP HE components, bringing forward planned results achievement

A code of a competence	A competence	Preceding courses	Following courses
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 Organisation and managerial training (S) Organisation and managerial training (P) Predegree training State exam Graduation qualification work

4. Workload of the course and forms of study work

General workload of the course 3.

Table 4.1. Form of study work of EP HE

Form of study work	Total hours	Semester
		1
Class hours (total)	36	36
Including:		
Lectures (Lc)	18	18
Laboratory classes (LC)		
Seminars (S)	18	18
Autonomous work (AW), hr	72	72
In total	hr	108
	credits	3

5. Content of the course

Table 5.1. Content of the course

Наименование раздела дисциплины	Содержание раздела (темы)	Виды учебной работы
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.	L,S, AW
Use and protection of renewable natural resources.	Use, protection and renewal of water, air resources, soil and biota.	L,S, AW
Use and protection of non-renewable natural resources.	Use, renewal and protection of subsoil.	L,S, AW
Key environmental management tools	Environmental audit, environmental insurance, environmental labeling	L,S, AW
Greening sectors of the economy.	The economic mechanism of the eco-economicization of the economy. The state and the market in environmental protection. Greening the economy and overcoming environmental crises. The effectiveness of environmental protection measures.	L,S, AW

6. Technical Support Requirements

Table 6.1. Technical Support Requirements

A type of a classroom	Technical Support Requirements	Special equipment, software
For lectures	An auditorium for lecture-type classes, equipped with a set of specialized furniture; board (screen) and technical means of multimedia presentations	-
For seminars	Audience 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 autonomous work	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 the EIS	-

6. Study-methodical and information sources:

Main literature:

1) Сладкопепцев, С. А. Системы природопользования: учебное пособие / С. А. Сладкопепцев. — Москва : Академический Проект, 2020. — 79 с. — ISBN 978-5-8291-3003-9. — Текст : электронный // Лань : электронно-библиотечная система. — URL: <https://e.lanbook.com/book/132518> (дата обращения: 07.02.2022)

2) Рудский, В. В. Основы природопользования : учебное пособие / В. В. Рудский. — 2-е изд. — Москва : Логос, 2020. — 208 с. — ISBN 978-5-98704-772-9. — Текст : электронный // Лань : электронно-библиотечная система. — URL: <https://e.lanbook.com/book/163075> (дата обращения: 07.02.2022)

Additional literature:

Кондратьева, И. В. Экономический механизм государственного управления природопользованием : учебное пособие / И. В. Кондратьева. — Санкт-Петербург : Лань, 2021. — 388 с. — ISBN 978-5-8114-2817-5. — Текст : электронный // Лань : электронно-библиотечная система. — URL: <https://e.lanbook.com/book/169039> (дата обращения: 07.02.2022).

Internet resources:

- 1) <http://www.businessstest.ru/> деловые тесты
- 2) <http://www.smartcat.ru/Personnel/> электронная библиотека учебной литературы
- 3) Electronic library systems:
 - ЭБС РУДН <http://lib.rudn.ru/MegaPro/Web>
 - ЭБС «Университетская библиотека онлайн» <http://www.biblioclub.ru>
 - ЭБС «Юрайт» <http://www.biblio-online.ru>
 - ЭБС «Консультант студента» www.studentlibrary.ru
 - ЭБС «Лань» <http://e.lanbook.com/>
 - ЭБС «Троицкий мост»
- 4) Data bases and browsers:
 - электронный фонд правовой и нормативно-технической документации <http://docs.cntd.ru/>
 - поисковая система Яндекс <https://www.yandex.ru/>
 - поисковая система Google <https://www.google.ru/>
 - реферативная база данных SCOPUS <http://www.elsevierscience.ru/products/scopus/>
- 5) Sites:
 - <https://www.mos.ru/mka/>
 - <http://www.minstroyrf.ru/>

7. Assessment system

Materials for assessing the level of mastering the educational material of the discipline (assessment materials), including a list of competencies indicating the stages of their formation, a description of indicators and criteria for assessing competencies at various stages of their formation, a description of assessment scales, standard control tasks or other materials necessary for assessment knowledge, abilities, skills and (or) experience of activity, characterizing the stages of the formation of competencies in the process of mastering the educational program, the methodological materials defining the procedures for assessing knowledge, skills, skills and (or) experience of the activity, characterizing the stages of the formation of competencies, are developed in full and are available for students on the discipline page in the TUIS RUDN University.

Educational designer:

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