

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

Ecological Faculty

COURSE UNIT ANNOTATION¹

Curriculum

05.06.01 "Earth Sciences"/ «Науки о Земле»

Modern environmental studies / Современные исследования окружающей среды

Course area	Foreign Language
Earned hours	5 credit units (180 hrs)
Curriculum briefing	
Course unit	Content of course unit:
Academic writing	Plan, theses, report, report on the research topic. Written reviewing and annotating of scientific information from various sources. Business letter.
Academic speaking	Message / conversation on the subject of dissertation research. Report (with multimedia presentation). Academic discussion. Oral reviewing and annotating of academic literature. Language material: orthoepic, lexical, grammatical, stylistic norm of scientific speech. Lexical minimum - 4500 units, including 500 specialty terms
Translation of specialized academic texts	Scientific translation. Basic concepts of scientific translation. Lexical-grammatical and stylistic features of scientific translation. Translational transformations. ICT is translated. Design and editing of the translation. Full, summarized, abstract translation. Workshop of written translation of a scientific text from a foreign language into Russian on the subject of research (using dictionaries, reference books, ICT).

Prepared by:

Assc. Prof. Dr. of Foreign lang. Dept.
Ecological Faculty


M.A. Rudneva

Head of Foreign lang. Dept.
Ecological Faculty


N.G. Valeeva

Line Director


N.A. Chernykh

ANNOTATION OF THE ACADEMIC DISCIPLINE

Education programs in all fields of postgraduate study

Course Title	History and Philosophy of Science
Course Scope	4 credits (144 hours)
COURSE SUMMARY	
Course Units (Topics)	Course Units (Topics) Outline:
The subject and the basic concepts of modern philosophy of science	Philosophy of science as the study of the general laws of scientific knowledge in its historical development and changing social and cultural context. Evolution of approaches to the science analysis. Logical and epistemological approach to the study of science. Positivist tradition in the philosophy of science. The expansion of the field of philosophical problems in postpositivist philosophy of science. The sociological and cultural approaches to the study of science. Internalism and externalism.
Science in the culture of modern civilization	Traditionalist and technogenic types of civilization development and its basic values. The role of science in modern education and the formation of personality. The functions of science in society
The appearance of science and the main stages of its historical evolution	The culture of the ancient polis and rising of the first forms of theoretical science. Antique logic and mathematics. Western and Eastern science in the middle ages. Formation of experimental science in modern European culture. Background of the experimental method and its connection with the mathematical description of nature. Science as a profession. The appearance of the disciplinary organized science. Formation of Technical Sciences. Formation of social sciences and humanities.
The structure of scientific knowledge	The variety of types of scientific knowledge. Empirical and theoretical levels, the criteria of its distinction. Features of the empirical and theoretical language of science. The structure of empirical knowledge. Experiment and observation. Empirical dependence and empirical facts. The structure of theoretical knowledge. The primary theoretical models and laws. The developed theory. Theoretical models as part of the internal organization of theory. The deployment of the theory as a process of problem solving. Ideals and norms of research. The scientific picture of the world. Its historical forms and functions. The philosophical foundations of science.
The dynamics of science as a process of generating of new knowledge	Historical variability of mechanisms of generation of scientific knowledge. Formation of the primary theoretical models and laws. The role of analogies in theoretical search. Problem of justification of theoretical knowledge. The mechanisms of the development of scientific concepts. Formation of advanced scientific theory. Problem situations in science.
Scientific traditions and scientific revolutions. Types of scientific rationality	The interaction of tradition and the emergence of new knowledge. Scientific Revolution as rebuilding of the foundations of science. Problems of typology of scientific revolutions. Internal disciplinary mechanisms of scientific revolutions. Global Revolutions and the types of scientific rationality. Historical change of types of scientific rationality: classical, nonclassical, post-nonclassical science.
Features of the present stage of development of science	Prospects of scientific and technical progress. Modern processes of differentiation and integration of sciences. The links of disciplinary and problem-oriented research. Global evolutionism as a synthesis of evolutionary and systemic approaches. New ethical challenges of science in the late XX century. Humanitarian control problem in the science and high technologies. Environmental and socio-humanitarian examination of

	scientific and technical projects. Scientism and anti-scientism. Science and pseudoscience. The role of science in addressing the current global crises.
Science as a social institution	Scientific communities and their historical types. Scientific schools. Training of scientists. The historical development of methods of translation of scientific knowledge. Science and economics. Science and power. The problem of state regulation of science.
Modern philosophical problems of specific scientific disciplines	<i>Depending on the field of postgraduate study</i>

Developers:

History of philosophy
name of the department

[Signature]
signature

Nizhnikov S.A.
full name

Specialty Supervisor:

name of the department

signature

full name

Federal State Autonomous Educational Institution of Higher Education
 "Peoples' Friendship University of Russia" (RUDN) Ecological Faculty

ABSTRACT OF THE ACADEMIC DISCIPLINE

Educational program

05.06.01 Earth Sciences

Ecology: Modern environmental studies |

Educational program	Russian as a foreign language / Русский язык как иностранный
05.06.01 Earth Sciences	5 units (180 hours.)
COURSE DESCRIPTION	
Course units	Outline of the course units
Introductory course of Phonetic and Grammar	Russian alphabet. Greeting. Construction <i>Кто это?</i> Personal pronouns. Acquaintance. Names of products. Constructions <i>Что это? Это молоко? Да, это молоко.</i> Accusative case in the constructions <i>Я (не) ем ... Я (не) люблю ...</i> Numbers 1 - 1000. Pronunciation of telephone numbers. Construction <i>Сколько стоит...?</i> Adverbs of place (<i>здесь, там, справа, около</i> , etc.). Interrogative sentences with the word <i>где?</i> Names of monetary units (<i>рубли, копейки</i>).
Basic level	Genders of nouns. Possessive Pronouns. Names of persons of male and female sex. Constructions <i>Что такое ...? Что значит ...? Как по-русски...?</i> Names of objects of the surrounding reality. Formation of Plural. Expression of time in the simple sentence. Adverbs of time, the names of the days of the week. Accusative Case. Nouns in Accusative Case. Russian Verbs. Verbs <i>быть, хотеть, родиться, жить, работать, отдыхать, учиться, говорить, учить, понимать, сказать, знать.</i> Constructions with the word <i>должен (должна + инфинитив)</i> . Tenses of Russian Verb. Constructions <i>У меня есть/нет.</i> Impersonal constructions with words <i>можно, нужно, нельзя.</i> Verbs of Motion. Verb <i>вернуться.</i> Accusative and Genitive Cases with questions <i>куда? откуда?</i> Etiquette of telephone conversation.

Developers:

Associate Professor
 of the Department
 of Russian Language
 Engineering Academy

Novikova N.S.

Head of the department
 of the Russian language
 Engineering Academy
 Professor

Pugachev I.A.

DISCIPLINE ANNOTATION

Education Programs in all fields of postgraduate study

Discipline	<i>Pedagogy of Higher Education</i>
Total	2 credits (72 hours)
Contents	
Units	Topics
Unit I. Pedagogy of higher education as a field of study and academic subject area.	1. Pedagogy as a science, key concepts. Pedagogy of higher education in the system of pedagogical science. 2. Systems of higher education: comparative analyses. 3. Contemporary trends in higher education. Internationalization of higher education.
Unit 2. Didactics of higher education.	1. General aspects of didactic system. 2. Content of higher education (laws and regulations; main principles of selecting content). Curriculum and course syllabus. 3. Forms and methods of teaching. Lecture in modern higher education. Seminars, practical training, laboratory class. Project – working. 4. Students' individual work. 5. Interactive methods of teaching (discussions, case-study, training, professional simulation etc.). 6. ICT in modern higher education. 7. Monitoring and evaluation of academic performance. Point rating system.
Unit 3. Educational environment of modern university.	1. Faculty members' rights and responsibilities. Professional ethics. 2. Faculty interaction with students: case study. 3. Educational potential of extra-curricular activities.

Author:

Associate Professor of the

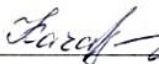
Psychology and Pedagogy Department



O.K. Logvinova

The Head of the

Psychology and Pedagogy Department



N.B. Karabushchenko

Federal state autonomous educational institution of higher professional education
 "People's Friendship University of Russia"

Ecological faculty

ANNOTATION OF THE ACADEMIC DISCIPLINE

05.06.01 Earth Sciences

Specification Ecology: Modern environmental studies

Course Title	Methodology of scientific research
Course Scope	3 credits (108 hours)
COURSE SUMMARY	
Course units (Topics)	Course units (Topics) Outline
Introduction	Modern science. Why do science. Summary determinant Classification of Sciences. Matches in science. Scientific work.
Paradoxes of scientific creativity	Hurry slowly, Title, Table of Contents, epigraph, first line, last paragraph, do everything myself, do it all at once,
Aspects of the methodology of scientific research and education	Features of collective scientific activity:
Hidden mechanisms of scientific creativity and ethics researcher.	Three stages of scientific creativity as an expression of the individual researcher. Responsibilities of the researcher. The norms of scientific ethics
Main features of the research	Prospect-thesis plan; justification of urgency topics; problem, object, object, goal, objectives. research approach, "On protection imposed" and "scientific novelty"
Working with scientific literature. Working with the conceptual apparatus	Book benefits and harms . citation, plagiarism. Information and desinformation.
Experimental work	Performance criteria,
Writing the thesis	Classification structural sections of the thesis, conclusions (and informative booklet) reduction.
Preparations for the defence	Overcurrent protection, the main issues on defense,
Publications on the subject of the dissertation	Primary requirements. Abstract.

Developer:

Senior lecturer, Department of environmental monitoring and forecasting



Kapralova Daria O.

The Head of the program

Professor



Chernykch Natalia A.

Ecological faculty

ANNOTATION OF THE ACADEMIC DISCIPLINE

"Stability of natural systems"

05.06.01 Earth Sciences

Specification Ecology: Modern environmental studies

Course Title	Stability of natural systems
Course Scope	4 credits (144 hours)

COURSE SUMMARY

Course units (Topics)	Course units (Topics) Outline
Part 1. General concepts of the natural systems stability	Sustainability of the natural systems and their development trajectory. Environmental norms as an instrument of nature management. Types of the standards. Nature management and environmental safety.
Part 2. Resistance of the air environment to contamination	Factors of the pollution and self-purification of the atmosphere. Main models of the atmosphere pollution. Norms of the atmospheric quality: approaches to the setting of norms and examples. Regulation of the atmospheric pollution.
Part 3. Stability of the surface hydrosphere to pollution and depletion	Factors of the pollution and self-purification of the water bodies. Basic models of the pollution of surface water flows. Norms of water quality. Factors of the pollution and self-purification of the water bodies. Basic models of the pollution of surface water flows. Norms of water quality.
Part 4. Resistance of the underground hydrosphere to pollution and depletion	Based on systemic principles, the possibilities of ecological regulation of technogenic impacts on the underground hydrosphere are considered. Approaches to assessing the stability of hydrogeological systems and the main processes of transformation of pollutants in aquifers are considered. The experience of impact assessment based on limiting factors in various areas of groundwater use in industry and agriculture is generalized. Information on the most promising methods and technologies for protecting the underground hydrosphere from pollution and depletion is provided.
Part 5. Stability of soils	Soil quality : assessment, models, approaches to justification of norms, types of norms, examples.
Part 6. Resistance of the living organisms to the environmental pollution and destruction: bioindication	Basic concepts of bioindication. Practical examples: use of biotests for the development of standards and for the environmental quality control. Main opportunities, perspectives and restrictions.
Part 7. Stability of natural systems and nature management	Environmental regulation system as a base of the nature management and environmental management system. Justification of environmental norms for the support of environmental systems quality.

Developed by:
Professor



Khaustov A.P.

Head of the program
05.06.01. Earth Science/ Modern environmental studies



Redina M.M.

COURSE UNIT ANNOTATION

Curriculum

05.06.01 Earth Science /Наука о Земле

Ecology: modern environmental studies /Современные исследования окружающей среды

01

Title of the discipline	Foreign language in professional communication Иностранный язык в сфере профессиональной коммуникации
Earned hours	4 SE (144 час.)
Curriculum briefing	
Course unit	Content of course unit
Academic writing	Written scientific work. Its varieties: analytical essay, scientific article, scientific report. Structure and rules of registration of scientific works. Rules for citing, making footnotes. The rules for compiling bibliography in the Russian and English scientific text. The practice of writing a scientific article, an analytical essay, a scientific report.
Business correspondence in research activities	Correspondence with international publishers, reviewers. Colleagues, conference organizing committees, granters. Types of letters. The structure and content of business letters.
Academic speaking	Presentation of the report (with multimedia presentation) on the research topic. Scientific discussion. Speech models, cliché, in oral scientific communication. Scientific presentation. Presentation rules for an international scientific conference. Language material: orthoepic, lexical, grammatical, stylistic norm of scientific speech. Lexical minimum – 5.000 units, including 500 specialty terms.

Prepared by:

Assoc. Prof. Dr. of Foreign lang. Dept.
Ecological Faculty



M.A. Rodneva

Head of Foreign lang. Dept.
Ecological Faculty



N.G. Valeeva

Line Director



N.A. Chernykh

Федеральное государственное автономное образовательное
учреждение высшего образования «Российский университет дружбы
народов»

Экологический факультет

АННОТАЦИЯ УЧЕБНОЙ ДИСЦИПЛИНЫ

Образовательная программа

Рекомендуется для аспирантов всех направлений экологического
факультета

(наименование образовательной программы (профиль, специализация

Наименование дисциплины	Русский язык в сфере профессиональной коммуникации
Объём дисциплины	4 ЗЕ (144 час.)
Краткое содержание дисциплины	
Название разделов (тем) дисциплины	Краткое содержание разделов (тем) дисциплины:
Раздел 1. Профессионально-ориентированное чтение научных текстов с целью получения информации для научной деятельности.	1). Основные виды чтения научноориентированных текстов с целью подготовки к научно-исследовательской деятельности аспирантов: <i>ориентированно-реферативное, обобщающе-реферативное, ориентированно-ознакомительное, оценочно-ознакомительное, изучающе-создающее</i> . Работа с научными текстами: ориентация, поиск, обобщение знаний, тематика текстовых материалов.
	2). Виды и жанры основных письменных научных текстов: заявка-обязательство на проведение научного исследования по специальности; индивидуальный план обучения аспиранта; план-проспект (реферативное изложение расположенных в логической последовательности вопросов, по которым может систематизироваться фактический материал); картотека научных публикаций (библиографическое описание и аналитическая аннотация источников информации)

<p>Раздел 2. Структурно-содержательные особенности реферативных текстов</p>	<p>1) Структура и содержание разных типов вторичного текста: <i>резюме, аннотация, реферат, реферат-обзор</i>. Логикоинформационные действия, которые необходимо произвести в ходе обработки текста-оригинала в целях получения вторичного текста.</p>
<p>Раздел 3. Структурно-композиционное построение фрагментов научного письменного текста</p>	<p>Persuasion и др.) реферата-обзора по теме исследования. Типы смысловой структуры абзаца как структурнокомпозиционной единицы текста: - дедуктивный (обобщение с последующим раскрытием мысли, иллюстрация аргументами); - индуктивный (излагаются частные факты – формулируется вывод).</p>
<p>Раздел 4. Язык и стиль письменных научных текстов</p>	<p>Лексико-грамматические знания: 1.общеупотребительная лексика; 2. терминологическая лексика; 3. слова-организаторы научной и технической мысли; 4. фразеологические и устойчивые словосочетания для выражения логических связей сообщений и обозначения определенных понятий.</p>
	<p>Языковое/речевое оформление вводной части проблемной статьи (общей части автореферата). Языковые и речевые стандарты – клише</p>
	<p>Использование речевых средств при создании реферата научной статьи / устного выступления- представления темы и проблемы исследования. Стандартные речевые клише, используемые во вступительной части, для общей характеристики содержания, аргументации положений, оценки авторской информации.</p>

Разработчики:

доцент кафедры русского языка
 Инженерной академии



Н.Г. Карапетян

Зав. кафедрой русского языка
 Инженерной академии
 профессор



И.А. Пугачев

Ecological faculty

Annotation of the academic discipline "Strategic environmental assessment"

05.06.01 Earth Sciences

Specification Ecology: Modern environmental studies

<i>Course Title</i>	<i>Stability of natural systems</i>
<i>Course Scope</i>	<i>4 credits (144 hours)</i>

COURSE SUMMARY

Course units (Topics)	Course units (Topics) Outline
SEA – history and development	Definition of SEA. Initiation and development of Strategic environmental assessment. SEA – introduction by international organizations - World Bank, 2011; UNEP, 2009; OECD, 2006. Stages of SEA development. EIA and not EIA SEA.
SEA – plans, policies and procedures	Issues and alternatives to be considered in policy, plan and programme (PPP) making. Examples of PPP. Approach to PPP identification in different countries. Plans and programmes with strategic nature, plans and programmes without strategic nature. Parties involved in the SEA performance.
SEA requirements in different countries, their relation with other environment assessment procedures	SEA legislation in different countries. Different SEA approaches – EIA mainframe, EIA modified \ appraisal style, Integrated assessment \ sustainability approach, Sustainable resource management. Statutory and non-statutory SEA provision
SEA report Content of SEA report	Different SEA sections content description. Involvement of public and NGO – identification of public participation in the report.
Application of SEA and other environmental assessment procedures in the project cycle	Project cycle. SEA and other more traditional procedures: Environmental baseline assessment (EBA) Environmental impact assessment (EIA) or Environmental Social Health and Safety Impact Assessment (ESHIA), what is more popular for international projects and Environmental or Health, Safety and environment (HSE) audit.
Application of oriented graphs for SEA	Theory of oriented graphs. Weights. Application of oriented graphs for planning at different scale. Application of oriented graphs for planning of large scale socio-economic - environmental systems.

Разработчики:

Доцент кафедры
прикладной экологии

_____ Ледящева Т.Н.

Доцент кафедры
прикладной экологии

_____ Пинаев В.Е.

Заведующий кафедрой
Прикладной экологии

_____ Редина М.М.

Ecological faculty

ANNOTATION OF THE ACADEMIC DISCIPLINE

05.06.01 Earth Sciences


Specification Ecology: Modern environmental studies

Course Title	Urban environment
Course Scope	4 credits (144 hours)

COURSE SUMMARY

Course units (Topics)	Course units (Topics) Outline
Part 1. Introduction to the Urban Environment	The specifics of urban nature: urban climate, urban ecosystems and their features. Specific urban pollutants. The impact of the urban environment on human health. Modeling in the ecology of the city: the quality of the atmosphere, water bodies, soils.
Part 2. Urban atmosphere	Ecological problems of modern cities. The main types of atmospheric pollution and their sources. Smog. Air quality control of cities. Transport in the city as a source of air pollution. Atmospheric quality management: measures to protect the atmosphere of cities. Acoustic environment. Russian and international experience.
Part 3. Water resources for the city	Water bodies of the city and sources of their pollution. Environmental problems of water supply in modern cities. General information about water treatment technologies. The quality of drinking water in cities. City wastewater: volume estimates, basic wastewater treatment technologies. Selection of the best technologies: Russian and international practice.
Part 4. Urban soils and vegetation	Urban soils: their features, condition assessment, restoration. Vegetation in a large city: the role of plants; selection of plants for landscaping. Plants as indicators of the urban environment. "The green frame of the city." Protected areas. City forests.
Part 5. Urban waste management	City waste: sources, types, composition, quantitative characteristics. Problems of processing and recycling of city waste. "Environmental friendliness" of waste management technologies. Environmental restrictions. World practice.
Part 6. Management of the urban environment	Opportunities for ensuring a comfortable stay in the city: optimal urban planning; environmental monitoring and quality management of the urban environment. Modern "green building" and models of "cities of the future".
Part 7. Sustainable cities	The concept of sustainable cities as part of the global sustainable development goals system. International Standards for Sustainable Urban Development. Current urban development trends. "Smart city." Environmental ratings and sustainable urban development ratings.

Developed by:
Assoc. Professor

 Redina M.M.

Head of the program
05.06.01. Earth Science/ Modern environmental studies

 Redina M.M.

Federal state autonomous educational institution of higher education
"People's Friendship University of Russia"
Ecological faculty

ANNOTATION OF THE ACADEMIC DISCIPLINE
"Expert-toxicological assessment of pollution effects"

05.06.01 Earth Sciences

Specification Ecology: Modern environmental studies

Course Title	
Course Scope	4 credits (144 hours)

COURSE SUMMARY

Course units (Topics)	Course units (Topics) Outline
Part 1. Introduction to environmental toxicology	Main concepts of toxicology. Objects and methods. Basic principles
Part 2. Experiment in environmental sciences	Principles of organization. Use of data obtained: main restrictions and requirements.
Part 3. Practical methods of environmental toxicology	Toxicological criteria. Assessment of toxic features of main pollutants. Toxicological experiments as a base of the development of environmental quality norms.
Part 4. Pollutants in the environment: toxicological effects	Types of the environmental norms. Instrumental methods of environmental expertise. Practical application of environmental-toxicological expertise

Head of the program
05.06.01. Earth Science/ Modern environmental studies



Redina M.M.

Ecological faculty

ANNOTATION OF THE ACADEMIC DISCIPLINE

"Monitoring of the Urban Environment"

05.06.01 Earth Sciences

Specification Ecology: Modern environmental studies

Course Title	<i>Monitoring of the Urban Environment</i>
Course Scope	4 credits (144 hours)

COURSE SUMMARY

Course units (Topics)	Course units (Topics) Outline
Part 1. Principles of organizing atmospheric air monitoring: the main types of monitoring implemented in the Republic of Belarus, their goals and objectives, monitoring parameters, main results	<ol style="list-style-type: none"> 1. Specificity of urban atmosphere. Basic principles of environmental monitoring: Integrity, Systematicity, Adequacy to existing threats and risks, Adequacy to the needs of various information groups, Unification. The structure of the environmental monitoring system: observation system; databases, analytical unit, information unit; environmental management unit. 2. Requirements for air monitoring systems: 3. Types of air monitoring: <ul style="list-style-type: none"> - Monitoring of atmospheric air as part of the NMHS (chemical, radiation, ozone layer, transboundary); - Integrated satellite and ground-based monitoring of air pollution; - Functional links with meteorological and sanitary monitoring. 4. Monitoring parameters, monitoring network: The composition of the network for monitoring the state and pollution of AB in the Republic of Belarus; The main and specific observable parameters. 5. The chemical composition of precipitation: <ul style="list-style-type: none"> - Observation network; - Observed parameters. 6. Air quality: <ul style="list-style-type: none"> - Assessment methods; - Dynamics of air quality in the Republic of Belarus. 7. Cross-border transfer: <ul style="list-style-type: none"> - Cross-border transfer programs; - Parameters for monitoring cross-border transport. 8. Methods of monitoring atmospheric air: <ul style="list-style-type: none"> - Types of observations: discrete, continuous, stationary, route; - Methods for measuring atmospheric concentrations; - Methods of collecting, processing, storing and presenting information. 9. The main results and development trends of the atmospheric air monitoring system: Current trends in the development of atmospheric air monitoring.
Part 2. Water quality monitoring	<p>Introduction: main problems of water quality monitoring on urban areas.</p> <ol style="list-style-type: none"> 1. CHEMICAL COMPOSITION OF WATER. Classification of the composition of natural waters. 2. HYDROCHEMICAL ANALYSIS OF WATER. Techniques for determining the composition of water. 3. HYDROBIOLOGICAL ANALYSIS OF SURFACE WATERS. Methods

	<p>of hydrobiological analysis. Criteria and significance of hydrobiological analysis.</p> <p>4. PROPERTIES AND PROCESSES OF TRANSFER OF RADIONUCLIDES IN NATURAL WATERS. Organization of runoff sites and experimental catchments to assess the removal and flushing of radionuclides from river catchments.</p> <p>5. PHYTOBIOLOGICAL ASPECTS OF REHABILITATION OF RESERVOIRS. Phytobiological aspects of the rehabilitation of water bodies.</p> <p>6. RADIOACTIVE POLLUTION OF WATER AND PLANNING OF WATER PROTECTION ACTIVITIES. The basic principles of the organization of radiation monitoring of surface waters: the choice of observation points, the frequency of observations, determined parameters.</p>
Part 3. Soil quality monitoring	<p>1 BASIS OF SOIL MONITORING Specificity of urban soils. The purpose and objectives of land monitoring. Land Monitoring Methodology. The concept of state monitoring of land in Belarus. Monitoring in various countries of the world.</p> <p>2 METHODOLOGICAL BASES OF MONITORING SOILS Current state of soil and land resources Land degradation and industrial pollution Background monitoring of land. Features of background monitoring. Network of monitoring observations. Controlled indicators. Land fund monitoring. Principles of organizing observations and selection of objects. The content of monitoring observations. Evaluation of observation results Monitoring of technologically polluted soils. The principles of the organization of monitoring observations on technologically polluted lands. Organization of work, selection of objects. Controlled indicators. Evaluation of the results of observations when monitoring technogenic contaminated soils.</p> <p>3. USE OF TECHNOGENICALLY CONTAMINATED LANDS. Principles and features of the use of land contaminated with radionuclides. Measures to reduce the transfer of radionuclides from soil to plants and crop products.</p>
Part 4. Basics of monitoring of flora and fauna	<p>Background state of the environment. Impacts and loads on the elements of the biosphere. Permissible and maximum permissible impacts and loads. Threshold of the effect on biological systems. Environmental sustainability and stability. Ecological reserve and ecological capacity of the system. The critical link. Biodiversity as an indicator of ecosystem resilience.</p>

Head of the program
05.06.01. Earth Science/ Modern environmental studies

Redina M.M.