

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

Faculty of ecology
Recommended by ISSC

THE WORKING PROGRAM OF THE DISCIPLINE

Title of the discipline STRATEGIC ENVIRONMENTAL ASSESSMENT

Recommended for the direction of training / specialty
05.06.01 EARTH SCIENCES

Focus of the program (profile)
Ecology: Modern environmental studies

1. Goals and objectives of the discipline:

The objectives of the discipline are the formation of basic competencies BC- 3, 4; general professional competencies 1, 2; professional competencies (PC1-4), including:

- the formation of students ' systemic ideas about theoretical and methodological foundations of analysis and modeling of socio-ecological and economic systems stability;
- the formation of ideas about the mechanisms of mutual influence of social, economic and environmental factors, approaches to their identification and regulation on this basis of anthropogenic activities;
- the formation of ideas and skills to plan the development of socio-ecological and economic systems at different levels, from the enterprise to the region, in order to implement sustainable development.

To achieve this goal in the process of teaching the course, the following tasks are to be solved:

- formation of ideas about the sustainability of socio-ecological and economic systems;
- analysis of existing tools and standards of environmental design for different areas of environmental management;
- formation of ideas about strategic environmental assessment as a tool of environmental design for sustainable development of territories;
- formation of ideas about approaches and methods of strategic environmental assessment of territories and enterprises.

2. Place of discipline in the structure of the educational program:

Discipline refers to the basic part of the curriculum.

Table 1 shows the previous and subsequent disciplines aimed at the formation of the competencies of the discipline in accordance with the matrix of competencies

Table 1

Previous and subsequent disciplines aimed at the formation of competences

№ п/п	Code and name of competency	Previous disciplines	Subsequent disciplines (groups of disciplines)
Basic competencies			
	BC-3: To have the willingness to participate in the work of Russian and international research teams to solve scientific and scientific-educational problems	Methodology of scientific research Stability of natural systems	Expert-toxicological assessment of pollution effects Monitoring of the Urban Environment
	BC-4: To own the readiness to use modern methods and technologies of scientific communication in the state and foreign languages, including readiness for communication in oral and written forms in Russian and foreign languages for solving problems of professional activity, possession of foreign language communicative competence in the official business, academic, scientific , social and	Stability of natural systems	Expert-toxicological assessment of pollution effects Monitoring of the Urban Environment

	cultural, everyday-household spheres of foreign language communication		
General professional competencies			
	GPC-1 To own the ability to independently carry out research activities in the relevant professional field using modern research methods and information and communication technologies	Stability of natural systems	Expert-toxicological assessment of pollution effects Monitoring of the Urban Environment
	GPC-2 To have a willingness to teach in the main educational programs of higher education	Stability of natural systems	Expert-toxicological assessment of pollution effects Monitoring of the Urban Environment
Professional competencies			
	PC-1 To own the theoretical knowledge on modern issues of scientific-subject area (Environmental sciences: Stability of natural systems, Strategic environmental assessment, Urban environment, Experimental Ecotoxicology, Environmental Management, Environmental Impact Assessment) in the direction of the program and be able to use it for scientific, practical and pedagogical purposes	Stability of natural systems	Expert-toxicological assessment of pollution effects Monitoring of the Urban Environment
	PC-4 To be able to organize and manage research, research and production, expert-analytical work and pedagogical activities using advanced knowledge in the field of training	Stability of natural systems	Expert-toxicological assessment of pollution effects Monitoring of the Urban Environment

3. Requirements to the results of mastering the discipline:

The process of studying the discipline is aimed at the formation of the following competencies:

BC-3: To have the willingness to participate in the work of Russian and international research teams to solve scientific and scientific-educational problems

BC-4: To own the readiness to use modern methods and technologies of scientific communication in the state and foreign languages, including readiness for communication in oral and written forms in Russian and foreign languages for solving problems of professional activity, possession of foreign language communicative competence in the official business, academic, scientific, social and cultural, everyday-household spheres of foreign language communication

GPC-1 To own the ability to independently carry out research activities in the relevant professional field using modern research methods and information and communication technologies

GPC-2 To have a willingness to teach in the main educational programs of higher education

PC-1 To own the theoretical knowledge on modern issues of scientific-subject area (Environmental sciences: Stability of natural systems, Strategic environmental assessment, Urban environment, Experimental Ecotoxicology, Environmental Management, Environmental Impact Assessment) in the direction of the program and be able to use it for scientific, practical and pedagogical purposes

PC-4 To be able to organize and manage research, research and production, expert-analytical work and pedagogical activities using advanced knowledge in the field of training

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

Know: theoretical and methodological foundations of analysis and modeling of socio-ecological and economic systems stability; the mechanisms of mutual influence of social, economic and environmental factors, approaches to their identification and regulation on this basis of anthropogenic activities

Be able to: to conduct a critical analysis of development of socio-ecological and economic systems at different levels, from the enterprise to the region; to plan the development of socio-ecological and economic systems in order to implement sustainable development.

To have skills: in analyzing of the development of socio-ecological and economic systems at different levels; in applying of different approaches and methods of strategic environmental assessment of territories and enterprises.

4. The volume of discipline and types of educational work

Type of study	Hours	
		Semester 3
Class hours (total)	30	
<i>Including:</i>	-	
Lectures	10	10
Practical training	20	20
Laboratory works		
Independent work (total)	96	96
Credit system	час	
	зач. ед.	
	144	
	4	

5. The content of the discipline

5.1 the content of the sections of the discipline

№ п/п	Course units (Topics)	Course units (Topics) Outline
1.	<i>Part 1. SEA – history and development</i>	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.
2.	<i>Part 2. SEA – plans, policies and procedures</i>	Issues and alternatives to be considered in policy, plan and programm (PPP) making. Examples of PPP. Approach to PPP identification in different countries. Plans and programs with strategic nature, plans and programmes without strategic nature. Parties involved in the SEA performance.
3.	<i>Part 3. SEA requirements in different countries, their relation with other environment assessment procedures</i>	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
4.	<i>Part 4. SEA report</i>	Content of SEA report. Different SEA sections content description. Involvement of public and NGO – identification of public participation in the report.
5.	<i>Part 5. Application of SEA and other environmental assessment procedure</i>	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
6.	<i>Part 6. Application of oriented graphs for SEA</i>	Theory of oriented graphs. Weights. Calculations of weights by statistic information Application of oriented graphs for planning at different scale. Application of oriented graphs for analysis and planning of large scale socio-economic - environmental systems.

5.2 Sections of disciplines and types of classes

№ п/п	Name	Lectures	Practical lessons	Indep. work	Control	Hours total
1.	<i>Part 1. SEA – history and development</i>	2	2	2	1	7
2.	<i>Part 2. SEA – plans, policies and procedures</i>	4	2	16	1	23
3.	<i>Part 3. SEA requirements in different countries, their relation with other environment assessment procedures</i>	2	4	18	4	28
4.	<i>Part 4. SEA report</i>	0	4	20	4	28
5.	<i>Part 5. Application of SEA and other environmental assessment procedure</i>	0	4	20	4	28
6.	<i>Part 6. Application of oriented graphs for SEA</i>	2	4	20	4	30

7. Laboratory practice (if applicable) – NO

7. Practical classes (seminars)

No	Unit	Topics	Hours
1.	<i>Course units (Topics)</i>	Course units (Topics) Outline	
2.	<i>Part 1. SEA – history and development</i>	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.	2
	<i>Part 2. SEA – plans, policies and procedures</i>	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.	2
	<i>Part 3. SEA requirements in different countries, their relation with other environment assessment procedures</i>	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	4
	<i>Part 4. SEA report</i>	Content of SEA report. Different SEA sections content description. Involvement of public and NGO – identification of public participation in the report.	4
	<i>Part 5. Application of SEA and other environmental assessment procedure</i>	Project cycle. SEA and other more traditional procedures: Environmental baseline assessment (EBA)	4

		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	
	<i>Part 6. Application of oriented graphs for SEA</i>	Theory of oriented graphs. Weights. Calculations of weights by statistic information Application of oriented graphs for planning at different scale. Application of oriented graphs for analysis and planning of large scale socio-economic -environmental systems.	4

8. Material and technical support of the discipline:

An audience equipped with multimedia equipment and a personal computer with a standard office suite.

9. Information support of discipline

When studying the discipline, traditional information technologies are used to represent the theoretical part of the material by the teacher (PowerPoint presentations).

For more details about application of different procedures of environmental support in project cycle see monograph Ledascheva T.N., Pinaev V.E. "Environmental support of projects" publ. Mir Naiki and online course "HSE management and audit" www.rudn.ru

a) software

MS Windows MS Office

b) databases, reference and search engines

www.mnr.gov.ru - website of the Ministry of Natural Resources of the Russian Federation;

<http://rpn.gov.ru/> - Federal Service for Supervision of Natural Resources Use (Rosprirodnadzor);

www.ecoindustry.ru - site of the journal "Production Ecology";

www.unep.org - website of the United Nations Environment Program;

www.wwf.ru - WWF website.

<http://burondt.ru/> - BAT website - information on the implementation of regulation based on the best available technologies

http://www.mnr.gov.ru/activity/directions/zelenye_standarty/zelenye_standarty/?sphrase_id=124597 - information on the development, application and implementation of "green standards"

http://www.mnr.gov.ru/activity/directions/natsionalnyy_proekt_ekologiya/ - information on the implementation of the Ecology National Project

www.epa.gov - United States Environmental Protection Agency | US EPA

www.eea.europa.eu - European Environment Agency's home page

<https://www.unece.org/fileadmin/DAM/env/eia/documents/legaltexts/protocolenglish.pdf>

Educational and methodological support of the discipline:

Supporting and additional sources

1. COUNCIL DIRECTIVE of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment (85/337/EEC) <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31985L0337:EN:HTML>

2. DIRECTIVE 2001/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 June 2001 on the assessment of the effects of certain plans and programs on the environment <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32001L0042&from=EN>

3. Policy, plan, and program environmental assessment in England, the Netherlands, and Germany: Practice and prospects // Article in Environment and Planning B Planning and Design March 2002 5. <http://eco-expertise.org/obshhestvennaya-ekologicheskaya-eksperti/strategicheskoy-ekologicheskoy-otsenki/>

4. https://youtu.be/KTHKqx-C_C8 - SEA video

11. Guidelines for students in the development of the discipline

Independent work of students includes:

- individual study of theoretical material on the subject of the course (links to information sources are presented in the previous sections);
- study of additional material presented in the course “Environmental standards and norms for the sustainability” (paragraph 9 of this program);
- preparation of essays on the topics specified in the program.

11.1. Self-study of additional theoretical material is carried out by students in an individual mode; The list of recommended information sources is given above.

11.2. Guidance on how to learn more about Environmental standards and norms for the sustainability is available at www.mooc

11.3. Requirements for writing essays

Academic ethics, copyright compliance. In the first lesson, students are informed about the need to comply with academic ethics and copyright during the training. In particular, information is provided:

- general copyright information;
- citation rules;
- rules for registration of links

All footnotes in the text are carefully verified and provided with “addresses”. It is not permissible to include extracts from the works of other authors in this work without indicating this, retelling someone else's work close to the text without reference to it, using someone else's ideas without specifying the source. This also applies to sources found on the Internet. You must specify the full address of the site. All cases of plagiarism should be excluded. If unjustified and incorrect borrowings are identified, the abstract is not accepted.

When preparing written works, the following must be submitted without fail: work plan; list of used literature, drawn up in accordance with the current rules of the bibliographic description of the sources used.

For the preparation of the abstract, only special relevant sources should be used. In addition to abstracts, the subject of which is connected with the dynamics of any phenomena over many years, or the historical development of scientific views on any problem, sources should be used for a period of not more than 10 years.

A prepared essay should be presented at one of the classes in agreement with the teacher. Using PowerPoint presentations (or prepared using similar licensed or freeware programs) is encouraged, but not required. Estimated time of the report is up to 15 minutes. The structure of the report and additional requirements for the quality of materials are determined by the chosen topic and are additionally discussed with the teacher.

12. Fund of assessment tools for intermediate certification of students in the discipline (module)

Materials for assessing the level of mastering the educational material of the discipline "Strategic environmental assessment" (evaluation materials), including a list of competencies indicating the stages of their formation, a description of indicators and criteria for evaluating competencies at various stages of their formation, a description of the assessment scales, typical control tasks or other materials necessary to assess knowledge, skills, skills and (or) experience of activity, characterizing the stages of the formation of competencies in the process of mastering the educational program, methodological materials that determine the procedures for assessing knowledge, skills, skills and (or) experience of activities that characterize the stages of the formation of competencies are developed in full and are available for students on the discipline page at TUIS RUDN.

The program has been drawn up in accordance with the requirements of the ES of HE RUDN University.

Developed by:

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