Federal State Autonomous Educational Institution of Higher Education

PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA NAMED AFTER PATRICE LUMUMBA (RUDN University)

Agrarian and Technological Institute

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

COURSE SYLLABUS

Introduction in Eco Design

course title

Recommended by the Didactic Council for the Education Field of:

35.03.09 Landscape architecture
Management and design of urban green infrastructure

field of studies / speciality code and title

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

Landscape architecture

higher education programme profile/specialisation title

1. GOAL OF MASTERING THE DISCIPLINE

The discipline "Introduction in Eco Design" is included in the master's program "Management and design of urban green infrastructure" in the direction of 35.04.09

"Landscape Architecture" and is studied in the 1st semester of the 1st year. The discipline is implemented by the Department of Landscape Design and Sustainable Ecosystems. The discipline consists of 3 sections and 7 topics and is aimed at studying the concept of ecological design and its role in architecture and urbanism, developing an understanding of ecosystem processes and their impact on design decisions, and studying methods for integrating natural systems into the design of the urban environment.

The purpose of mastering the discipline is to study the principles of eco design, nature-oriented solutions and sustainable design, for further application in the development of urban and landscape projects.

2. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

The development of the discipline "Introduction in Eco Design" is aimed at the formation of the following competencies (parts of competencies) among students:

Table 2.1. List of competencies formed by students during the development of the discipline (results of mastering the discipline)

Table 2.1. List of competencies formed by students when mastering the discipline (results of mastering the discipline)

Code	Competence	**Indicators of competence achievement** (within the framework of this discipline)
GC-1	The ability to carry out a critical analysis of problematic situations based on a systematic approach, to develop a strategy of action	GC-1.1 is able to apply systematization to solve the tasks set; GC-1.2 is capable of searching and analyzing information;
GC -3	The ability to organize and lead the work of a team, developing a team strategy to achieve a set goal	GC-3.1 is able to organize teamwork on a project; GC-3.2 is able to interact with the executive authorities to coordinate all stages of design.;
GC -4	The ability to apply modern communication technologies in the official language of the Russian Federation and a foreign language(s) for academic and professional interaction	GC-4.1 is able to prepare all the necessary project documentation in Russian and a foreign language; GC-4.2 Is able to communicate on the project in Russian and a foreign language;
GC -5	The ability to analyze and take into account the diversity of cultures in the process of intercultural interaction	GC-5.1 is able to understand the peculiarities of the social organization of society, the specifics of the mentality and the worldview of the cultures of the West and the East; GC-5.2 Is able to overcome the cultural barrier by perceiving cross-cultural differences;
GC -6	The ability to identify and implement the priorities of one's own activities and ways to improve them based on self-assessment	GC-6.1 Is able to plan its life activities for the period of study in an educational organization; GC-6.2 Is able to determine the tasks of self-development and professional growth, allocate them to long-term, medium- and short-term ones, justifying their relevance and identifying the necessary resources;

GPC -2	The ability to transfer professional knowledge using modern pedagogical techniques;	GPC-2.1 is able to transfer professional knowledge; GPC-2.2 is able to transfer professional knowledge using information technology;

Cipher	Competence	Indicators of achievement of competence (within the given discipline)
PC-10	Readiness to manage landscape architecture facilities in the field of their functional use, protection and protection	PC-10.1 is capable of managing landscape architecture facilities in the field of security and protection; PC-10.2 Is able to manage landscape architecture objects;

3. THE PLACE OF DISCIPLINE IN THE STRUCTURE OF THE HIGHER EDUCATION INSTITUTION

The discipline "Introduction in Eco Design" belongs to the mandatory part of 1 "Disciplines (modules)" of the educational program of higher education.

As part of the educational program of higher education, students also master other disciplines and/or practices that contribute to achieving the planned results of mastering the discipline "Introduction in Eco Design".

Table 3.1. The list of components of the HE education system that contribute to achieving the planned results of mastering the discipline

Code	Name of the competence	Previous disciplines/modules, practices*	Further disciplines/modules, practices*
GC-4	The ability to apply modern communication technologies in the official language of the Russian Federation and a foreign language(s) for academic and professional interaction		Data analysis and statistics; Research planning**; International Regulation in City Planning and Environmental Protection; Landscape planning and sustainable development; Urban Design; Scientific Research**; Russian Language; Russian as a Foreign Language**; Foreign Language in Professional Practice**; Scientific research work; Industrial practice;

GC-3	The ability to organize and lead the work of a team, developing a team strategy to achieve a set goal		Research work; Industrial practice; Green infrastructure urban climate and carbon neutrality; Data analysis and statistics; International Regulation in City Planning and Environmental Protection; Landscape planning and sustainable development; Urban Design; Principles of remote sensing and modeling; Advances in environmental monitoring; Urban ecology;

Code	**Name of the competence**	**Previous disciplines/modules, practices***	**Further disciplines/modules, practices***
GC-5	The ability to analyze and take into account the diversity of cultures in the process of intercultural interaction		Research work; Industrial practice; Green infrastructure urban climate and carbon neutrality; Data analysis and statistics; International Regulation in City Planning and Environmental Protection; Landscape planning and sustainable development; Urban Design; Principles of remote sensing and modeling; Advances in environmental monitoring; Urban ecology;
GC -1	The ability to carry out a critical analysis of problematic situations based on a systematic approach, to develop a strategy of action		Green infrastructure urban climate and carbon neutrality; Data analysis and statistics; Research planning**; International Regulation in City Planning and Environmental Protection; Landscape planning and sustainable development; Urban Design; Principles of remote sensing and modeling; Advances in environmental monitoring; Scientific Research**; Research work; Industrial practice;

GC-6	The ability to identify and implement the priorities of one's own activities and ways to improve them based on self-assessment		Green infrastructure urban climate and carbon neutrality; Data analysis and statistics; Research planning**; International Regulation in City Planning and Environmental Protection; Landscape planning and sustainable development; Urban Design; Principles of remote sensing and modeling; Advances in environmental monitoring; Scientific Research**; Research work; Industrial practice;

Code	**Name of the competence**	**Previous disciplines/modules, practices***	**Further disciplines/modules, practices***
GPC-2	The ability to transfer professional knowledge using modern pedagogical techniques;		Research work; Industrial practice; Data analysis and statistics; International Regulation in City Planning and Environmental Protection; Landscape planning and sustainable development; Urban Design; Principles of remote sensing and modeling;
PC-10	Readiness to manage landscape architecture facilities in the field of their functional use, protection and protection		Green infrastructure urban climte and carbon neutrality; Landscape planning and sustainable development; Urban Design;

* - filled in in accordance with the matrix of competencies and SUP of the OP HE

* * - elective subjects /practices

4. SCOPE OF DISCIPLINE AND TYPES OF ACADEMIC WORK

The total labor intensity of the discipline "Introduction in Eco Design" is "6" credits.

Table 4.1. Types of educational work according to the periods of mastering the educational program of higher education for full-time education.

Type of educational work	**TOTAL,** ac. h.		**Semester (s)**
			1
Contact work, ac.h.	*51*		*51*
Lectures (LC)	17		17
Laboratory work (**LR**)	34		34
Practical / seminar classes (**SC)**	0		0
Independent work of students, ac.h.	*139*		*139*
Control (exam/ credit with assessment), ak. h.	*26*		*26*
Total labor intensity of the discipline	**ak.h.**	***216***	*216*
	credits	***6***	*6*

5. CONTENT OF THE DISCIPLINE

Table 5.1. Content of the discipline (module) by type of academic work

Section number	Name of the discipline section	Content of the section (topics)		Type of academic work*
Section 2	Foundations of Ecological Design	1.1	Introduction to eco design	LK
		1.2	Ecosystem-Based Design	LK, LR
Section 2	Ecological Systems and Sustainable Strategies	2.1	Biodiversity and Green Infrastructure	LK, LR
		2.2	Climate Resilient Design	LK, LR
Section 3	Concepts for the development of urban areas	3.1	World experience	LK
		3.2	Development of underground space in cities	LR
		3.3	Reconstruction of the urban environment	LR

* - filled in only for **FULL** -TIME training: *LC-lectures; LR-laboratory work; SC – practical/seminar classes.*

6. MATERIAL AND TECHNICAL SUPPORT OF THE DISCIPLINE

Table 6.1. Material and technical support of the discipline

Audience type Classroom	Equipment	Specialized training / laboratory equipment, software and materials for mastering the discipline (if necessary)
Lecture	An auditorium for conducting lecture-type classes, equipped with a set of specialized furniture; a blackboard (screen) and multimedia presentation equipment.	screen or projector
Laboratory	An auditorium for laboratory work, individual consultations, routine monitoring and intermediate certification, equipped with a set of specialized furniture and equipment.	screen or projector
For independent work	An auditorium for students to work independently (it can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to EIOS.	

* - the audience for independent work of students **must be specified**!

7. EDUCATIONAL, METHODOLOGICAL AND INFORMATIONAL SUPPORT OF THE DISCIPLINE

Main literature:

1. Van der Ryn, S., Cowan, S. Ecological Design. Island Press, 2007
2. McHarg, I. Design with Nature. Wiley, 1995
3. Mostafavi, M., Doherty, Ecological Urbanism. Lars Müller Publishers, 2016

Additional references:

1. Beatley, T. Handbook of Biophilic City Planning & Design. Island Press, 2016

Resources of the Internet information and telecommunications network:

1. RUDN University EBS and third-party EBS that university students have access to on the basis of concluded contracts

- RUDN University Electronic Library System – RUDN University EBS

http://lib.rudn.ru/MegaPro/Web-EBS "University Library online"
http://www.biblioclub.ru- EBS Urite http://www.biblio-online.ru-EBS "Student's consultantwww.studentlibrary.ru
" www.studentlibrary.ru-EBS "Troitsky Bridge"

2. Databases and search engines

- electronic Fund of legal and normative-technical documentation http://docs.cntd.ru/
- search engine Yandex https://www.yandex.ru/
- search engine Google https://www.google.ru/
- bibliographic database SCOPUS http://www.elsevierscience.ru/products/scopus/

Educational-methodical materials for independent work of students in the development of the discipline/module:*

1. Course of lectures on the discipline "Introduction in Eco Design".

* - all teaching materials for independent work of students are placed in accordance with the current procedure on the discipline page **in TUIS**!

DEVELOPER:

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