

Project PROGRAM

Elective course 'Ecosystem services for post-war reconstruction in Ukraine : European Experience'

The term of the spring semester

The title of the course	Ecosystem services for post-war reconstruction in Ukraine: European experience
Author (s) / Developer (s)	Mariia Ruda, Khrystyna Barvinska, Alla Shybanova & Anna Hyvliud
Category (ies) of listeners	Specialties of students: 183 'Environmental protection technologies', 101 'Ecology', 263 'Civil safety', 076 'Entrepreneurship and trade', 241 'Hotel and restaurant business', 242 'Tourism and recreation', 275 'Transportation technologies', 273 'Railway transportation', and 274 'Automotive transportation'. Target group – 1
Goal	The objective of the optional course is Acquisition of knowledge by the academic audience regarding the European experience in managing ecosystem services and their further application in the professional activity of the ecologist for post-war reconstruction in Ukraine.
Course topics	The course plan is attached
Volume of the program (hours / ECTS credits)	<u>180</u> hours, <u>6</u> ECTS credits
Form (s) (live, live-online, online)	Live-online form
Abstract of the course	The course covers topics relevant to the target group. Not only issues of decision-making theory, decision-making models and methods are studied, but also practical aspects of their application in entrepreneurship, trade, tourism and other activities. European approaches to the concept of ecosystem services are analyzed to ensure the implementation of standardized typologies ecosystem services in the practice of strategic planning of regional development according to the European model.
Letter of competencies provided by the optional course program	According to the Higher Education Standard of Ukraine, field of knowledge 18 Production and Technologies, specialty 183 Environmental Protection Technologies, approved and enacted by the Order of the Ministry of Education and Science of Ukraine No. 378 of 03/04/2020, participants of the Elective course acquire the following competencies: <ul style="list-style-type: none"> ● Ability to apply knowledge in practice situations. ● Ability to control and evaluate the effectiveness of environmental protective measures and technologies applied. ● Ability to analyze the state of the environment and systematically investigate it.
Learning outcomes	students acquire skills in implementing the concept of ecosystem services for strategic planning of territorial development.
Attestation form (project, exam, testing)	Based he the Association Agreement between Ukraine and the EU, and in agreement with the EU Biodiversity Strategy to 2030 and the Global Biodiversity Framework or the period after 2020, based on a nation assessment of biodiversity and the contribution of nature that human well-being, the participants of the Elective course will become agents of change with the appropriate skills and will be able that join the development of a nature restoration policy proposed by the European Commission. This policy aims that restore at at least 20% of EU's terrestrial and marine territories by 2030 and ultimately, all ecosystems that require restoration by 2050.
The language of the course	Ukrainian, English
Document required by the elective course program (certificate)	Each participant will receive a participation certificate indicating the amount of ECTS credits and corresponding

Project Lesson plan
Elective course ‘Ecosystem services for post-war reconstruction in Ukraine: European Experience’

Topics	Number of hours	Lesson content _	Teacher	Online platform
Topic 1: Introduction and basic definitions	2	Familiarize students with the purpose and objectives of the course, as well as key definitions and key competencies. State management and administration in EU countries taking into account the concept of ecosystem services.	Khrystyna Barvinska	Moodle and Zoom platform
	4	Lectures: Topic 1. The main stages of the development of legal regulation of the concept of ecosystems provisions in the legislation of the European Union and Ukraine. Topic 2. Impact of climate change prevention regulation programs, nature protection and biodiversity on the state of the environment in the legislation of the European Union and Ukraine.	Alla Shybanova	
Topic 2: Ecosystem piles : in the EU and Ukraine	4	Lectures: Topic 1. Conceptual foundations of state policy and legislation on ecosystem services. Topic 2. The concept of ecosystem services in international treaties of Ukraine and the EU.	Alla Shybanova	Moodle and Zoom platform
	4	Lectures: Topic 1. Economy of ecosystems and biodiversity (The Economics of Ecosystems and Biodiversity, TEEB). Topic 2. Assessment of ecosystems on the threshold of the millennium (Millennium Ecosystem assessment).	Mariia Ruda	
	2	Practical work: ‘Mapping ecosystem services at the global, regional and local levels’.	Mariia Ruda	
Topic 3: Decisions of the Conference of the Parties to the CBD on the ecosystem approach (V/6), the global perspective on biodiversity and IPBES (XIII/29), SBSTTA documents	4	Lecture: ‘Decisions of the Conference of the Parties to the CBD concerning the ecosystem approach (V/6), the global perspective on biodiversity and IPBES (XIII/29), SBSTTA documents’.	Alla Shybanova	Moodle and Zoom platform
	4	Lecture: ‘European Green Deal and Biodiversity Strategy’.	Mariia Ruda	
	6	Lecture: CMS and international instruments concluded within its framework, the Ramsar Convention, the Convention on Desertification, the Framework Convention on Climate Change, etc.’ Practical work: ‘European experience of ecosystem service assessment tools’.	Anna Hyvliud	

Topic 4: Ecosystem services in the system of stimulation sustainable development of territories	6	Lectures: Topic 1. European experience of the payment mechanism for ecosystem services. Topic 2. Application of the practice of interterritorial (within the country) payments and compensations for the provision, restoration and support of ecosystem services. Topic 3. Identification of donor regions and recipient regions of various types of ecosystem services.	Mariia Ruda	Moodle and Zoom platform
	6	Practical work: Topic 1. Calculation of financial private relations of conservation of ecosystem services on the example of the company 'Hennit' (Switzerland). Topic 2. The project of the formation of the National Register of Ecosystem Services (state, local) with the provision of open access of the population to it (similar to the Register of Carbon Units: EU).	Anna Hyvliud	
Topic 5: Formation of the interregional balance of ecosystem services and strategic planning of territories	4	Lecture: 'Formation of the interregional balance of ecosystem services and strategic planning of territories: setting the task and the main idea of the project'. Practical work: 'Problem-program situation in territorial and spatial planning'.	Mariia Ruda	Moodle and Zoom platform
	6	Lectures: Topic 1. Territorial and spatial planning systems in individual EU countries and Ukraine. Topic 2. Development directions of territorial and spatial planning taking into account ecosystem services in Ukraine. Topic 3. Possibilities of implementing the best European practices of territorial and spatial planning, taking into account the concept of ecosystem services.	Mariia Ruda, Alla Shybanova	
Classes that are formed on the basis of and concepts problem- oriented learning and the case method:				
Topic 6: Formation of the Action Plan	4	Lecture: 'Strategic Vision Formulation'.	Alla Shybanova	Moodle and Zoom platform
	4	Lecture: 'European principles of classification of ecosystem services'.	Khrystyna Barvinska	
	4	Practical work: 'Determining ecosystem services in a certain UTC'.	Anna Hyvliud	
	4	Lecture: 'The relationship between ecosystem services in international classifications and Ukrainian legislation'.	Mariia Ruda	
Topic 7: Action plan in my community	5	Lecture: «'Integration' ecosystem services in planning and development».	Mariia Ruda	Moodle and Zoom

Topic 7: Action plan in my community	4	Practical work: ‘Fragmentation of landscape complexes’.	Alla Shybanova	platform
	6	Lecture: ‘The main parts of the Community Development Strategy and the Plan for its implementation, taking into account ecosystem services, have been completed. What's next?’	Mariia Ruda	
Topic 8: Impact assessment (individual project work)	4	Lectures: Topic 1. Indicators of ecosystem services. Topic 2. Strategic goals of ecosystem adaptation to climate change.	Anna Hyvliud	Moodle and Zoom platform
	2	Lecture: ‘Monitoring the implementation of the Strategic Plan’.	Mariia Ruda	
	4	Lecture: ‘Multifactoriality in determining ecosystem services’.	Alla Shybanova	
Topic 9: Impact assessment (identification of weak "points" of the project)	4	Lecture: ‘European experience of taking into account ecosystem services, as the development of a system of integrated natural resource and economic accounting’.	Khrystyna Barvinska	Moodle and Zoom platform
	4	Lecture: ‘Approaches to Mapping Ecosystem Services’. Review of results of practical work, work with real cartographic materials of UNEP World Conservation Monitoring Center.	Mariia Ruda, Alla Shybanova	
	4	Practical work: ‘Formation of a questionnaire for community residents’.	Mariia Ruda	
Topic 10: Impact assessment (risk assessment)	4	Lecture: Topic 1. Assessment of sustainability and risks of loss of ecosystems. Topic 2. Ecological potential of terrestrial ecosystems.	Mariia Ruda	Moodle and Zoom platform
	6	Lecture: ‘Evaluation of ecosystem services provided by the forests of Ukraine’.	Alla Shybanova	
Topic 11: Impact assessment (making management decisions during project implementation)	4	Lecture: ‘Degradation of ecosystem services of nature conservation areas in urbanized areas’.	Alla Shybanova	Moodle and Zoom platform
	4	European experience in determining the stages of the environmental management decision-making process.	Mariia Ruda, Alla Shybanova	
	4	Business game ‘making managerial decisions’.	Mariia Ruda	
	3	Practical work: ‘Comprehensive assessment of ecosystem services’.	Mariia Ruda	
Topic 12: Impact assessment (bug work)	4	The practical work is devoted to the discussion of the results of the individual task, typical mistakes and prospects of practical implementation in the strategic plan of development of UTC.	Mariia Ruda, Alla Shybanova, Khrystyna Barvinska,	Moodle and Zoom platform

Topic 12: Impact assessment (bug work)		The practical work is devoted to the discussion of the results of the individual task, typical mistakes and prospects of practical implementation in the strategic plan of development of UTC.	Anna Hyvliud	
	6	Lecture: ‘The specifics of the cost measurement of the value of ecosystem services when determining damage from pollution of the natural environment’.	Anna Hyvliud	
Topic 13: Impact analysis	4	Lecture: ‘Innovations in sphere ecosystem services: monitoring for sustainable development and security regions’.	Anna Hyvliud	Moodle and Zoom platform
	4	Lecture: «‘Territory zoning’ by the level of anthropogenic load with the involvement of remote technologies probing the earth from space and geoinformation systems».	Mariia Ruda	
	4	The use of normative decision-making models in conditions of uncertainty.	Mariia Ruda, Alla Shybanova	
Topic 14: Exchange of information	6	Presentation of individual works.	Mariia Ruda, Alla Shybanova, Khrystyna Barvinska, Anna Hyvliud	Moodle and Zoom platform
	4	Practical work: ‘UFO- toolkit – a new generation i-tool’.	Mariia Ruda	
Topic 15: Summary results	4	Preparation of projects for the state regional development fund	Mariia Ruda	Moodle and Zoom platform
	4	Practical work: ‘European express assessments of ecosystem services in strategic planning’.	Mariia Ruda	
	4	Lecture: ‘Ecosystem services as a basis for the development of recreational activities’.	Anna Hyvliud	
	3	Final testing.	Khrystyna Barvinska	