REPUBLIC OF UZBEKISTAN

MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATION

KARSHI STATE TECHNICAL UNIVERSITY

"APPROVED"
Rector of Karshi State Technical University
_____ Sh.K.Nematov
"12" 08 2025

ECONOMICS OF ENVIRONMENT AND CLIMATE CHANGE

MODULE GUIDE

Field of knowledge: 400000 - Business, management and law
Field of education: 41000 - Business and management
Direction of education: 60410100 - Economics

Module links

Module name:	Economics of environment and climate change
Code (if applicable)	AIIO1505
Courses (if applicable)	2
Module teaching semesters	4
Language	Uzbek
Curriculum relevance	Compulsory subject
Type of teaching, contact hours	Lecture, practical
Workload	Total workload: 150 hours, Auditory hours: 60 hours; Lecture: 30 hours, laboratory: 30 hours, Self-study: 90 hours
Credit points:	5
Recommended previous subjects	Economics theory, Statistics and ecology

Module objectives / expected learning outcomes	Teaching students the theoretical foundations of environmental economics and climate change, environmental problems and economic causes and consequences of climate change, basic concepts and categories of external influences and environmental policy, as well as forming the ability to apply these knowledge and approaches in practice. Goals allow students to learn: • knowledge and understanding of basic terms, concepts, and theoretical approaches to the economy of the environment and climate change; • analysis of economic mechanisms of external influences (externalities), public goods, pollution, and climate change; • use of analytical tools, cost-benefit analysis, carbon pricing, tax and quota mechanisms used in environmental and climate policy; • express ideas on environmental economics and climate policy in a logical and clear form in writing, and in a coherent and understandable form in oral form; • express ideas on environmental economics and climate policy in a logical and clear form in writing, and in a coherent and understandable form in oral form; • Application of concepts on environmental economics and climate change in existing economic research and practical political and economic decisions. Expected results from teaching the module. 1. Theoretical knowledge and concepts. Students will understand the basic concepts of environmental economics, economic causes of environmental problems, externalities, public goods, sustainable development, climate change, and greenhouse gas emissions. Gains the ability to correctly use scientific terms and interpret theoretical ideas. 2. Analytical skills. Students learn to analyze economic processes related to pollution, resource use, climate change, and environmental policy. Empirical data, indicators (emissions, energy consumption, resource use) 3. Use of research and analysis tools. Students develop skills in experimental and empirical analysis methods used in environmental economics, cost-benefit analysis, comparison of policy options, and working based on graphs and tables. Learn how to apply environmental and climate policy models in practical situations.

	4. Students will have the ability to clearly, logically, and consistently express scientific and practical ideas on the economics of the environment and climate change in written and oral form. Through the correct use of scientific and methodological language, they learn to justify their views on environmental and climate policy. 5. Students can apply the concepts of environmental economics and climate change to solve real economic problems (pollution, overuse of resources, energy policy, climate risks). Studies existing economic and environmental research and experience, draws theoretical and practical conclusions from them, uses economic approaches in the development of policy recommendations and practical solutions for climate adaptation and mitigation.
Content	This subject is one of the modern trends in economics and aims to explain to students the economic causes and consequences of environmental problems and climate change. The science of environmental economics and climate change teaches the relationship between the use of natural resources, pollution, external influences, greenhouse gas emissions, and environmental policy, and forms approaches to making economic decisions based on the principles of sustainable development.
Study and exam requirements	a) for a score of 90-100 points, the student's level of knowledge must meet the following requirements: - fully cover the essence and content of the subject; - maintaining scientific and logical accuracy in the presentation of topics in science, avoiding scientific errors and confusion; - having a clear idea of the theoretical or practical significance of the subject materials on the subject; - can demonstrate the ability to think independently within the framework of the subject; - can answer the questions clearly and concisely; - thoroughly prepared for the summary; - complete and accurate completion of independent assignments;

	- has fully mastered laws and other regulatory legal acts related to the subject; - published a scientific article on one of the topics related to the subject; - can interpret historical processes; b) for a score of 70-89.9, the student's level of knowledge must meet the following requirements: - understanding the essence and content of the subject, avoiding scientific and logical confusion in the presentation of scientific topics; performs assigned tasks and assignments within the framework of the curriculum; - can correctly answer questions on the subject; - has carefully formed a synopsis of the subject; - fully completed independent assignments in the subject; - has mastered laws and other regulatory documents related to the subject. c) for a score of 60-69.9, the student's level of knowledge must meet the following requirements: - having a general understanding of the subject; - if there is some confusion in the narrow coverage and presentation of topics in science; - if the presentation is not fluent; - obtaining vague and confusing answers to questions on the subject; - if the text on the subject is not well formulated. d) with a score of 0-59.9 in the following cases, the student's level of knowledge may be assessed as unsatisfactory: - no preparation for classes in the subject; - does not have any knowledge of the subject; - copying texts on the subject from others

Exam formats	Oral, written, test
Means used	Complete subject assignments and successfully pass current, midterm, and final tests.
List of educational literature	Tietenberg. Tom and Lynne Lewis. Environmental and Natural Resource Economics, (11th Edition). Publisher. Routledge. 2. "Environmental and Natural Resource Economics" (10th edition) by Tom Tietenberg and Lynne Lewis. Routledge.
Editors	S.N. Khamraeva - Head of the Department of "Innovative Economics," Doctor of Economic Sciences, Professor. Kh. Mukhiddinov - Professor of the University of Economics and Pedagogy, Doctor of Economic Sciences
Confirmed place and time	Developed and approved by Karshi State Technical University (Report No. 1, 26.08.2025)