NAVOI STATE UNIVERSITY

ENVIRONMENTAL MANAGEMENT AND AUDIT

COURSE SYLLABUS

Full-time study | Master's programme

1. Course Information

Item	Details
Course title	Environmental Management and Audit
Course code	EKMA1106
Academic year	2026–2027
Semester	1
Course type	Compulsory
Language of instruction	Uzbek
Programme	70520202 – Ecology
Curriculum reference	70520202 – 1.03
ECTS credits	6
Total workload	180 hours
Lectures	30 hours
Practical classes	30 hours
Laboratory classes	0 hours
Independent study	120 hours
Weekly contact hours	4
Coursework	Not specified in the source syllabus

2. Course Description

Environmental Management and Audit introduces the theoretical foundations, principles, methods and organisational structures of environmental management, including corporate and strategic environmental management, environmental policy and the economic interpretation of environmental issues. The course also covers environmental auditing, its principles, standards, forms, procedures and legal responsibilities. Particular attention is given to environmental management and audit in Uzbekistan, environmental impact and risk assessment, monitoring, resource efficiency and protection of the natural environment.

3. Course Aim

The aim is to develop students' theoretical knowledge and practical understanding of environmental management systems, environmental audit, environmental standards and legislation, environmental risk assessment, and approaches for improving environmental performance in organisations.

4. Course Objectives

- Explain the scientific and theoretical foundations of environmental management and audit.
- Develop environmental and legal awareness, environmental culture, and environmental-economic thinking.
- Build the ability to analyse environmental management and audit problems and formulate evidence-based conclusions and recommendations.
- Apply environmental management and audit approaches that reflect regional and environmental characteristics.
- Understand the role of environmental standards, monitoring, environmental assessment and audit in reducing environmental impacts.

5. Prerequisite Knowledge

- Fundamentals of Sustainable Development (BRA1406)
- Contemporary Environmental Problems (HZEM1304)
- Fundamentals of Ecology (EKA1206)
- Urban and Industrial Ecology (SSE13412)

6. Course Learning Outcomes

Outcome	Learning outcome
CLO1	Explain concepts, principles and organisational approaches of environmental management systems and environmental auditing.
CLO2	Analyse environmental impacts of enterprises and identify approaches to improve environmental safety and performance.
CLO3	Assess environmental risks in urban and industrial areas and discuss measures to protect nature and biodiversity.
CLO4	Identify relevant national and international environmental standards and analyse compliance with them.
CLO5	Apply principles of rational natural-resource use and contribute to environmental management systems in organisations.
CLO6	Describe environmental risk assessment, risk-reduction planning, and internal and external environmental audits.
CLO7	Use environmental management documentation and ISO 14001-related concepts to review organisational sustainability performance.

7. Teaching and Learning Methods

- Lectures and guided discussion
- Practical exercises and written conclusions
- Case-study analysis
- Group work and teamwork
- Brainstorming
- Student presentations

8. Independent Study

Independent study accounts for 120 hours. The source syllabus specifies the following assignments:

No.	Independent study assignment	Hours
1	Analyse prospects for using green technologies under local climatic conditions.	15
2	Work with ISO 14001, maintain environmental documentation, and assess organisational sustainability indicators.	20
3	Assess environmental risks and develop strategies to reduce them.	20
4	Study the consequences of technogenic accidents.	20
5	Study and compare international experience in environmental management.	15
6	Analyse environmental assessment and its types.	10
7	Study general principles for the environmental and legal protection of land.	20

9. Credit Requirements and Assessment

To earn credits, students are expected to master the theoretical and methodological concepts of the course, present analysis results accurately, demonstrate independent reasoning about the processes studied, complete assigned tasks and submit the written final assessment.

Grade	Score range	General performance description
5 – Excellent	Not specified	Comprehensive understanding, scientific and logical presentation, independent critical thinking, accurate answers, completed independent assignments, and application of theory in different situations.
4 – Good	Not specified	Understands course content and practical significance, answers questions correctly, and completes required assignments with generally sound knowledge.
3 – Satisfactory	Not specified	Demonstrates general understanding but provides limited explanations, with some inconsistencies or unclear answers.
2 – Unsatisfactory	Not specified	Inadequate preparation, incomplete assignments, serious errors, or inability to answer course questions.

Note: The source syllabus describes performance by grades but does not provide numerical score ranges; no ranges have been inferred.

10. Sustainable Development Goals (SDG) Alignment

The following SDGs are relevant to the course content. These are curriculum alignments, not claims that the course directly measures institutional SDG performance.

SDG	Relevant target area	Connection to the course
SDG 12 – Responsible Consumption and Production	12.2: Sustainable management and efficient use of natural resources; 12.4: Environmentally sound management of chemicals and	Resource efficiency, environmental management systems, industrial impacts, pollution prevention and environmental auditing.

	waste	
SDG 13 – Climate Action	13.2: Integration of climate measures into policies and planning	Environmental policy, risk assessment, organisational planning and environmental resilience.
SDG 15 – Life on Land	15.1: Conservation and sustainable use of terrestrial ecosystems; 15.5: Reduction of habitat degradation and biodiversity loss	Biodiversity protection, land protection, environmental assessment, monitoring and management of environmental impacts.
SDG 16 – Peace, Justice and Strong Institutions	16.6: Effective, accountable and transparent institutions	Environmental legislation, regulatory oversight, environmental audit, compliance, documentation and accountability.

11. Core and Supplementary Reading

Core Reading

- Boyirov, Z. R. (2024). Fundamentals of Environmental Management. Textbook. Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan; Karshi Engineering-Economics Institute. 366 pages.
- Boyirov, Z. R., & Kilicheva, D. I. (2024). Engineering Ecology. Study guide. Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan; Karshi Engineering-Economics Institute. 404 pages.

Supplementary Reading

- Kolesnikova, E. V. (2020). Technogenic Systems and Environmental Risk: A Teaching and Methodological Guide for Higher Education Institutions. St Petersburg: Russian State Hydrometeorological University. 124 pages.
- Buriyev, S. S., Maxkamova, D. A., & Sherimbetov, V. X. (2020). Ecology and Environmental Protection. Tashkent.
- Hufnagel, L. (Ed.). Community and Global Ecology of Deserts. Publication details not specified in the source syllabus.
- Rusak, O. N. (2016). Technogenic Hazards and Risks: Study Guide. St Petersburg: St Petersburg State Forest Technical University.
- Salimov, X. V. (2015). Ecology. Study guide. Konchi Texproekt, Navoi.

12. Information Resources

- http://www.ecology.ru
- http://www.ecolog.com
- http://www.environ.com

13. Programme Approval and Contributors

The source syllabus states that the programme was approved by the Council of the Faculty of Natural Sciences and Medicine on 30 June 2026 (Meeting Minutes No. 11) and submitted by the Department of Biology of Navoi State University (Meeting Minutes No. 11, 30 June 2026).

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Prepared in English on the basis of the source course programme.