

AL-FARABI KAZAKH NATIONAL UNIVERSITY

FACULTY OF MEDICINE AND HEALTHCARE

CHAIR OF EPIDEMIOLOGY, BIostatISTICS AND EVIDENCE-BASED
MEDICINE

PROGRAM FINAL EXAM BY DISCIPLINE

Medical Ecology

6 credits

Composer: senior lecturer F.A.Iskakova

LMC OF COURSE IS APPROVED

**On Academic Council of Medicine and Public Care Faculty
Protocol N from “ “_____2024.**

**Reviewed and recommended at the meeting of
Epidemiology, Biostatistics and Evidence-Based Medicine
Department from “ “_____ 2024, Protocol N
Recommended by the faculty methodical bureau
« _____ »2024, Protocol N**

Almaty, 2024

PROGRAM OF FINAL EXAM ON DISCIPLINE "MEDICAL ECOLOGY"

Study topics for the exam: The final exam is conducted as a "case study." Thematic content covers all types of work: topics of lectures and seminars, as well as assignments for independent work of PhD doctoral students.

Learning outcomes:

1. Know the basic concepts and problems in ecology that harm public health using concepts, terms, and exposure factors.
2. Evaluate the impact of environmental factors on the human body to determine basic epidemiological indicators.
3. Design an environmental study plan.
4. Present the results of an ecological study based on informative epidemiological indicators for comparative assessment of the health status of the population.
5. Analyze a statistical study using quantitative methods and new information technologies.

List of topics to prepare for the exam

Module 1. Bases of Bioethics

- Topic 1. Global problems of ecology
- Topic 2. The subject of medical ecology as a science and field of practice.
- Topic 3. Modern concepts and trends in medical ecology.
- Topic 4. The quality of the human environment
- Topic 5. Ecological environmental factors: human influence and adaptation.
- Topic 6. Concepts of 'health risk' and environmental risk'.
- Topic 7. Environmental monitoring: biological and socio-ecological types.
- Topic 8. Assessment of the atmosphere and the impact of its polluting factors on public health.
- Topic 9. Assessment of the hydrosphere and the impact of its pollutants on public health.
- Topic 10. Evaluate the lithosphere and its polluting factors on public health.
- Topic 11. Physical environmental factors and their evaluation.
- Topic 12. Chemical environmental factors and their assessment.
- Topic 13. Environmental problems of nutrition.
- Topic 14. Environmental issues associated with the interior of buildings and their impact on human health.
- Topic 15. Climate Change.

EXAM RULES

1. Doctoral students are authorized in LMS Moodle and get access to the task "Final exam in the discipline" at the time set by the teacher.
2. Learn the topics of the instructor's essay.
3. Perform the task within 3 hours.
4. Load the completed work on the case study into the LMS Moodle, for this:
 - 4.1 PhD doctoral students are authorized in LMS Moodle,
 - 4.2 open the element "Final exam in the discipline"
 - 4.3 select the item "Add an answer to the task,"
 - 4.4 upload their works in the file upload field,
 - 4.5 click "Save."

The form of the final control (exam): WRITTEN- CASE STUDY

Form of conducting final control (exam) *.	Used platform	For whom recommend	Availability of proctoring, video recording, verification for plagiarism	Possibility Automatic generating of tickets/questions	How is done verification of works
WRITTEN: – case study	LMS MOODLE	For bachelors	Proctoring - no. Video recording at individual work - not required. Mandatory check for plagiarism in the works of doctoral students. Provided automatic check work for availability plagiarism with using 2 services: Antiplagiarism (required) and Strike Plagiarism (if necessary). 1 PPP check for 1 time of exam paper. Using Antiplagiarism system. PPP can provide possibility of checking work for a PhD student - 1 attempt configures in system teacher).		1. Teacher discipline gets ready files / responses in LMS Moodle. 2. Evaluates the work, checks on the presence of plagiarism. 3. Puts points in LMS MOODLE. 4. Transfer points to IS Univer statements.

Typology and approximate content of exam tasks:

Case- study of Ecological Accidents related to Air, Water, Ground, Nutrition and Indoor Environment Pollution

Final assessment of the two stages of the exam: report assessment	Numerical assessment	Scores (%)	Traditional assessment	Requirements
A A-	4,0 3,67	95-100 90-94	Excellent	Full understanding of course topics. Use of cognitive, systemic, and functional competencies. Critical thinking, analysis, and application of knowledge and skills.
B + B B- C +	3,33 3,0 2,67 2,33	85-89 80-84 75-79 70-74	Good	Understanding of course topics with few inaccuracies. Using cognitive, systemic, and functional competencies, as well as standard critical thinking, analysis, and application of knowledge and skills.
C C-	2,0 1,67	65-69 60-64	Satisfied	Incomplete understanding of course topics. Students do not use cognitive, systemic, and functional competencies to the full extent. Standard critical thinking, poor analysis, and incomplete application of knowledge and skills.
D + D- F X	1,33 1,0 0,5	55-59 50-54 25-49	Unsatisfied	There is a lack of understanding of course topics. The student does not use cognitive, systemic, and functional competencies. There is no critical thinking, and there is poor analysis and application of knowledge and skills.

References:

Literature: main and additional.

1. Ecological Medicine, 2nd Edition: The Antidote to Big Pharma and Fast Food by Dr. Sarah Myhill and Craig Robinson.-2023.- 512 p.
2. Environmental Medicine. J.Fowles, Ph.Weinstein, Ch-H Tseng. DOI:10.1007/978-94-007-4375- 5_24
3. Ecological Medicine 2ND Edition: The antidote to Big Pharma and Fast Food . By Sarah Myhill and Craig Robinson, 2023. -526 p.
4. Environmental and Health Impacts of Air Pollution:A Review Ioannis

Manisalidis, Elisavet Stavropoulou, Agathangelos Stavropoulos and Eugenia Bezirtzoglou//Frontiers in Public Health, 2020.- 1-13 pp. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://com-mendeley-publicsharing-pdfstore.s3.eu-west-1.amazonaws.com/1e1a-CC-BY-2/10.3389/fpubh.2020.00014.pdf?X-Amz-Security-Token=IQoJb3JpZ2luX2VjEO%2F%2F%2F%2F%2F%2F%2F%2F%2F%2F%2FwEaCWV1LXdlc3QtMSJ prod-

Research infrastructure

1. Auditorium Internet resources
1. Kaznu Library
2. MOOC / video lectures, etc. 3. www.who.org
4. www.cdc.gov
5. https://pubmed.ncbi.nlm.nih.gov/ Software (optionally)
1. IBM SPSS – 26 version
2. Excel program