«APPROVED»
Member of the Board- vice-rector
for academic affairs
NJSC «Al-Farabi KazNU»
_____ Kazmagambetov A.G.
«___» _____ 2025

The program of
the entrance exam for the group of educational programs of the Faculty of Geography and Environmental Sciences
PhD degree
for foreign citizens to study on a paid basis

1. General Provisions

1.1 The program was drawn up in accordance with the Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018, No. 600 «On approval of the Model Regulations for admission to studies in educational organization, implementing educational programs of technical and vocational education» (hereinafter – the Standard Rules).

1.2. In Al-Farabi KazNU for educational programs of postgraduate education (doctoral studies) are admitted persons who have mastered educational programs of postgraduate education. The admission to the doctoral program is allowed to applicants who have a "Master's" degree.

1.3. Entrance examinations according to Annex 2 to the Standard Rules are held **in the format of an interview** for the following groups of educational programs:

- ✓ 8D05202 – Geography
- ✓ 8D07304 – Land management
- ✓ 8D05203 – Hydrology
- ✓ 8D05204 – Meteorology
- ✓ 8D07301 – Geodesy
- ✓ 8D07302 – Geoinformatics
- ✓ 8D07303 – Cartography
- ✓ 8D05206 – Natural and technogenic risks
- ✓ 8D11101 – Tourism
- ✓ 8D11102 – Tourism and Hospitality
- ✓ 8D05207 – Ecology

1.4 For the organization and conduct of entrance examinations for admission of a foreign applicant by the decision of the rector of Al-Farabi Kazakh National University is creating an examination committee for the period of examinations.

The commission of entrance examinations for admission of a foreign applicant to KazNU includes employees of the Internationalization and Recruiting Department (hereinafter referred to as the Department) and the professor-teaching staff of KazNU.

1.5 In case a foreign applicant who meets the above requirements has no possibility to come to the University for an entrance interview, he has the opportunity to take it online.

1.6 Entrance exam in the form of oral conversation (interview) for admission to a foreign applicant are evaluated on a 100-point system. When enrolling on a paid basis, 75 points are counted.

1.7 Based on the results of the entrance exam, an interview protocol is drawn up in the prescribed form according to the requirements of the Department. The interview record is signed by the chairman and all members of the commission present and submitted to the Department.

1.8 The decision on admission is made by the University Admissions Committee on the results of the interview. The results of the entrance exam are announced on the same day.

1.9 Retaking the entrance exam is not permitted.

1.10. An appeal based on the results of the interview is provided within 24 hours.

2. Conducting the entrance exam in 2025

2.1 The interview is conducted in Russian, Kazakh and English. The oral interview also contains questions aimed at revealing the ability to learn, creative activity and critical thinking, personal qualities of the applicant.

2.2 An indicative list of interview topics:

1. Urbanization: concept, indicators, scale of modern processes of urbanization in the worldurbanization processes. The specifics of urbanization processes in Kazakhstan.
2. The role of geography in the scientific substantiation and practical provision of rational nature management and nature protection.
3. The use of traditional and new methods of geographical science for the search, processing, and presentation of geographical information.
4. Planning and organization of rational use of lands and their protection
5. Distribution curves used in hydrology and their characteristics.
6. Possibilities of application of computer technologies in modeling and forecasting of hydrological processes.
7. Natural hazards and disaster risk reduction.
8. Climate modeling.
9. Python programming language for processing large amounts of data.
10. Geoinformation systems in the prevention of natural and man-made risks.
11. Remote sensing methods in solving agricultural problems.
12. GIS in solving the problem of industries.
13. Describe the stages of the tourism planning process: study of all elements, analysis and synthesis in order to identify the main opportunities and problems or constraints for tourism development.
14. The main stages in the history of tourism development and trends in international tourism of the 21st century.
15. Key scientific problems and areas of researches in tourism and hospitality.
16. Network information and communication systems in the hospitality industry.
17. Protection of water resources and main physico-chemical methods of water purification.
18. Biogeochemical cycles of substances in the biosphere.

19. Environmental problems of "green" technologies usage.
20. Utilization of production and consumption waste in achieving environmental safety of the country.

2.3 List of recommended literature for preparation:

1. Geography of the world economy. Textbook. Ed. N.S.Mironenko. - M.: Publishing house "Travel Media International", 2012. -352 p.

2. Geography of the population and social geography / Questions of geography. Collection 135. Ed. A.I. Alekseev, A.A. Tkachenko. M.: Publishing house "Kodeks", 2013. –552 p.

3. Domanski R. Economic geography: dynamic aspect. Transl. with full text. - M.: Novyi khronograf, 2010. - 376 p.

4. Geographical foundations of the study of human development of the Republic of Kazakhstan: socio-demographic aspects: collective. monograph / KazNU named after al-Farabi; [G. N. Nyusupova (ed.), A. A. Tokbergenova, B. T. Kozhakhmetov, et al.]. - Almaty: Kazakh University, 2018. - 123 p.

5. Volkov, S. N. Design and economic assessment of measures to improve soil fertility in on-farm land management of agricultural organizations: / S. N. Volkov. - M .: GUZ, 2017. - 216 p.

6. Kyrykbaev Zh. K., Ospanova A. A. Otarlyk mal sharuashylygy aymagyndagy zherge ornalastyru. - Almaty, "Evero", 2017, 80b.

7. Volkov, S. N. Land management: textbook. manual: in 9 volumes / S.N. Volkov. – M.: Kolos, 2001–2009 Volume 1: Theoretical Foundations of Land Management. – 496 p. Volume 2: Land Management Design. Intra-farm Land Management. – 645 p. Volume 3: Land Management Design. Inter-farm (territorial) Land Management. – 450 p. Volume 4: Economic and Mathematical Methods and Models – 696 p. Volume 5: Economics of Land Management. – 479 p. Volume 6: Computer-Aided Design Systems in Land Management. –328 p. Volume 7: Land Management Abroad. – 408 p. Volume 8: Land Management during the Land Reform (1991–2005). – 450 p. Volume 9: Regional Land Management. – 707 p. 8. Ovtsinov V.I. Economic and mathematical methods and modeling in soil-agrochemical research, land management and cadastre: guidelines for independent work. - Barnaul: RIO AGAU, 2014. - 37 p.

9. Rajib Maity Statistical Methods in Hydrology and Hydroclimatology. Textbook. Springer. 2018, 444 p.

10. Extreme Hydrology and Climate Variability: Monitoring, Modelling, Adaptation and Mitigation. Edited by: Assefa M. Melesse, Wossenu Abtew and Gabriel Senay Elsevier. 2019.

11. Fernando I. Rivera Emerging Voices in Natural Hazards Research. Book. 2019.

12. Antronico Loredana; Marincioni Fausto Natural hazards and disaster risk reduction policies. 2021.

13. Ken S. Carslaw Aerosols and Climate. Book. 2022

14. Hugues Goosse Climate System Dynamics and Modeling. 2015.

15. Dieckmann, U. Mapping the Unmappable?: Cartographic Explorations with Indigenous Peoples in Africa (Book), 2021, pp. 343.

16. Remmel, T.K., Perera, A.H. Mapping forest landscape patterns (Book), 2017, pp. 326.

17. Leick, A., Rapoport, L., Tatarnikov, D. GPS Satellite Surveying: Fourth Edition (Book),

2015, pp. 807.

18. Grafarend, E.W., You, R.-J., Syffus, R. Map projections: Cartographic information systems (Book), 2014, pp. 935.

19. Xu, G. Sciences of geodesy - I: Advances and future directions (Book), 2010, pp. 487.

20. Papadimitriou, F. Spatial complexity: Theory, mathematical methods and applications (Book), 2020, pp. 298.

21. Rai, P.K., Nathawat, M.S. Geoinformatics in health facility analysis (Book), 2016, pp. 231.

22. Chandrappa, R., Das, D.B.Environmental health - theory and practice: Volume 2: Coping with environmental health (Book), 2021, pp. 279.

23. Handbook on tourism development and management / Ed. Kerry Hayden Collins. – New York: Nova Science Publishers Inc., 2015. – 260 p.

24. Brymer Robert A., Brymer Rhett A., Cain Lisa N. Hospitality: An Introduction. – Kendall Hunt Publishing, 2019. – 428 p.

25. Ponkin I.V., Redkina A.I. Methodology of scientific research and applied analytics: textbook. – M.: Buki Vedi, 2020. – 365 p

26. Balabanov, I.T. Electronic Commerce.- St. Petersburg: Piter, 2020.

27. Kogalovsky, M.R. Promising technologies of information systems.- M.: IT Company; DMK Press, 2013.

28. The Climate Promise. URL: https://climatepromise.undp.org/

29. Cunningham W., Cunningham A.M. Principles of Environmental Science: Inquiry & Applications. – McGRAW-HILL,9th, 2019 (English).

30. Singer F.D. Ecology in Action. - Cambridge University Press, 2016 (English).

31. Tazhibayeva T.L., Voronova N.V., Tanybayeva A.K. Ecologicall safety: educational and methodological textbook.-Almaty: Kazakh University, 2021 (Kaz., Rus., Engl.)

32. Engineering ecology. Textbook / Ed. V.T. Medvedev. - M .: Gardariki, 2002. - 687 p.

33. Integrated Water resource management in Kazakhstan. Almaty: Qazaq university, 2014.

3. Scale and assessment criteria of the entrance examination for admission to the doctoral program for foreign citizens on a fee-paying basis:

Number of points	Compliance criteria
90–100 points «Excellent»	Demonstrates knowledge of the fundamental processes within the studied subject area; depth and completeness of addressing the issue; logically and sequentially expresses own opinion on the discussed problem; possesses conceptual-categorical framework, scientific terminology; logical coherence of the answer, adherence to the norms of contemporary scientific language.
80–89 points «Good»	Competent use of scientific terminology; mastery of conceptual-categorical framework; problem-oriented presentation of formulated questions; occasional errors in presenting factual material; incompleteness in presenting scientifically established facts within

	the scope of questions; logical coherence of the answer, adherence to the norms of contemporary scientific language.
75–79 points «Satisfactory»	Insufficient use of scientific terminology; inadequate mastery of conceptual-categorical framework; ability to address only one of the problems formulated in the questions; errors in presenting factual material; superficial knowledge of the subject area; violation of logical coherence in the answer, norms of contemporary scientific language.
0–74 points «Unsatisfactory»	Absence of necessary scientific terminology in the answers; descriptive presentation of discussed issues, inability to identify and present problems; gross errors in presenting factual material; lack of knowledge of historiography of the studied subject area.