

**KAZAKH NATIONAL UNIVERSITY  
named after AL-FARABI**

**FACULTY OF LAW**

**DEPARTMENT OF CUSTOMS, FINANCIAL AND ENVIRONMENTAL LAW**

**FINAL EXAM PROGRAM**

**DISCIPLINE 97087/ Legal regulation of nuclear energy**  
7M04212 Marine and energy law (BSU)

The number of credits - 5

The final exam program was compiled on the basis of educational program in the specialty 7M04212 “Marine and energy law” by Ph.D., lecturer Nakisheva M

Considered and approved at a meeting of the Department of custom, financial and environmental law

"29" 08 2024, Protocol No. 1

Head of the Department,  
Doctor of Law, Professor



G.A. Kuanalieva

"02" 09 2024, Protocol No. 1

Chairman of the Academic Committee  
on the Quality of education and Training



A.A. Urisbayeva

"02" 09 2024, Protocol No. 1

Presented at the Academic Council of the Faculty  
Academic Secretary



G.M. Atakhanova

## **Introduction**

Studying in the master's program is carried out in accordance with the State Standard of Compulsory Education of the Republic of Kazakhstan and academic policy, the study of the discipline ends with a final exam, which consists of passing the exam. Only undergraduates who have scored the appropriate points upon completion of the educational process in the discipline in accordance with the curricula and working curricula of the master program are allowed to the examination and final control. The exam is held on the dates specified in the Academic calendar and the working curriculum.

Undergraduates who have received an unsatisfactory grade, passing the final control for this period is allowed only with the payment of the loan and re-training. An appeal is possible. A graduate student who received an unsatisfactory grade on the exam results is registered for re-training by order of the university, if he received 25 points for the exam, then FX retake. Documents for health reasons issued after receiving an unsatisfactory grade are not considered. Retaking an exam to encourage grades is not allowed.

Final exam on “Legal regulation of nuclear energy” will be held in verbal form online, in according to exam schedule.

### **Description of the forms of conducting final control (exam).**

1. For admission to the exam, you must score at least 50 points for the current performance in the discipline (Level control 1, intermediate control, arithmetic mean, level control 2).
2. Master students studying on a paid basis for admission to the exam should not have debts in tuition fees.
3. The exam is conducted verbally. The form and schedule of the exam are indicated in the Univer system.
4. During the exam, it is strictly forbidden to use or receive cheat sheets, mobile phones, smart watches and other means for transmitting information, communicate with other students and strangers and / or make other identification records in response.
5. The use of additional information during verbal examination is strictly prohibited.
6. The undergraduate does not have the right to open a ticket in front of the examining teacher to take the exam.
7. The exam is held online via service on the corporate Microsoft Teams platform of Al-Farabi KazNU or in case of technical problems, external ZOOM resources. During the oral examination, video recording is

mandatory. The examination score can be canceled in case of violations this procedure by the undergraduate.

8. At the end of the exam, the points scored by students within 48 hours are put on the certification sheet.

### **Guidelines for taking the oral exam online**

1. Final control (exam) will be held in the service on the corporate Microsoft Teams platform of Al-Farabi KazNU or in case of technical problems, external ZOOM resources. The process of passing an verbal exam by a student involves the automatic creation of an examination ticket, to which the student must answer verbally by the examination committee. During the verbal examination, video recording is mandatory.

2. Duration of the exam: The preparation time is decided by the examiner or the examination board. The response time is decided by the examiner or the examination committee. Recommended 15-20 to answer all ticket questions.

3. Exam tickets in IS Univer are generated automatically.

4. 30 minutes before the start of the exam, ALL students of the group enter the video conference room organized by the teacher or members of the commission according to the link specified in the rules of the final exam (sent by the teacher / members of the commission in case of disruption of the video communication service).

5. 30 minutes before the start of the exam, they check the possibility of entering the Univer.kaznu.kz system through any browser, but preferably through Google Chrome (in case of losing the login and / or password, the student must contact the curator-adviser before the start of the exam). After verification, they log out of the account pending an invitation from the commission.

6. When the start time of the exam comes, the student, who is called by the commission, shows his identity card (identity card or passport. It is forbidden to take the exam by ID-card) on the camera. Includes screen sharing. Logs into your account in IS Univer goes to the "Exam Schedule" page selects the current exam - by clicking on the "Pass oral exam" button. After clicking on the link "Pass the oral exam" a window will open where the student will see the questions of his examination card. The student shows the screen with the ticket questions, reads them aloud. Transfers the display of the videoconferencing service to the camera and prepares for the answer and after preparation for the period of time set by the teacher or the commission answers the ticket questions.

7. If for technical reasons (power outage, disconnection or low Internet speed) a student who has already opened his ticket is absent from the online exam for more than 10 minutes, then his answer will be canceled. The exam is postponed to another date in agreement with the Department of Academic Affairs.

8. The examination committee and the teacher certify the participants of the exam. They put points in the final sheet in IS Univer. Time for setting points in the attestation sheet for the oral exam is 48 hours. Exam rules: To pass the testing exam, students must first familiarize themselves with all the requirements for conducting an oral exam.

All instructions are uploaded:  
[https://drive.google.com/file/d/1u\\_TOKL2MZiJsE3EJluDNNv\\_68WXb4rG/view?usp=sharing](https://drive.google.com/file/d/1u_TOKL2MZiJsE3EJluDNNv_68WXb4rG/view?usp=sharing) With the date and time of the exam, students must

### Assessment policy:

Criteria-based assessment: assessment of learning outcomes in accordance with descriptors, checking the formation of competencies (learning outcomes) at intermediate control and exams.

Examination answers are evaluated on a 100-point scale, taking into account the degree of completeness of the undergraduate's answer:

Grade	Criteria
Excellent	1. Correct and complete answers to all theoretical questions are given; 2. Completely solved practical task; 3. The material is presented correctly in a logical sequence; 4. Demonstrated creativity.
good	1. Correct but incomplete answers to all theoretical questions are given, minor errors or inaccuracies are made; 2. The practical task was completed, but a minor mistake was made; 3. The material is presented correctly in a logical sequence.
Satisfactory	1. Answers to theoretical questions are in principle correct, but incomplete, there are inaccuracies in the wording and logical errors; 2. The practical task has not been fully completed; 3. The material is presented correctly, no logical sequence
Unsatisfactory	1. Answers to theoretical questions contain gross errors; 2. The practical task has not been completed; 3. In the presentation of the answer, grammatical and terminological errors were made, no logical sequence

Letter grade	Digital equivalent	Scores in percentage (%)	Grade under traditional system
A	4	95-100	Excellent
A-	3,67	94-90	
B+	3,33	85-89	good
B	3,0	80-84	
B-	2,67	75-79	
C+	2,33	70-74	
C	2,0	65-69	

C-	1,67	60-64	satisfactory
D+	1,33	55-59	
D-	1,0	50-54	
FX	0,5	25-49	unsatisfactory
F	0	0-24	

### Themes

1. The concept of nuclear energy - reveal and justify the pros and cons. Rating of countries with nuclear energy.
2. Formation of nuclear legislation. What accidents (cases) caused the formation of nuclear legislation. Name the first laws in this area and in which countries they were adopted.
3. Legislation of Azerbaijan and Kazakhstan in the field of nuclear energy. Arrange them in hierarchy. Conduct a comparative analysis, describe what issues have been resolved and what gaps there are in the legislation.
4. International legal regulation of nuclear energy. Reveal what international documents and conventions exist in the field of nuclear energy and what issues they regulate.
5. Prospects for nuclear energy in Azerbaijan (pros and cons). What strategies and measures are being taken, what risks exist? Justify your position: does Azerbaijan need nuclear energy?
6. Prospects for nuclear energy in Kazakhstan (pros and cons). What strategies and measures are being taken, what risks exist? Justify your position: does Kazakhstan need nuclear energy?
7. Reveal the process of the nuclear fuel cycle. Describe the legal regime for each process, from the uranium mining process to the disposal of radioactive waste or spent material.
8. State regulation in the field of nuclear energy. The system of government bodies in the field of nuclear energy and their competencies.
9. Licensing in the field of nuclear energy. Conditions and terms for obtaining a license, types of license. Termination of license.
10. Expand the concept of nuclear safety. Name the mechanisms for ensuring nuclear safety. Expand the concept of nuclear security and its relationship with nuclear safety.

11. Code of Conduct for the safety and security of Radioactive Sources by IAEA. The meaning and significance of this Code. Are Kazakhstan and Azerbaijan a party to this IAEA document?

12. Expand the concept of radiation safety. Mechanisms for its provision. Radiation hazard categories.

13. Legal regime for the examination of nuclear safety and radiation safety, objects of examination. Accreditation of organizations performing nuclear safety and radiation safety examination.

14. State accounting of nuclear materials and sources of ionizing radiation. Disclose the accounting procedure in accordance with the relevant orders of the Ministry of Energy of the Republic of Kazakhstan (dated February 12, 2016 No. 59 and dated February 9, 2016 No. 44

15. Disclose the procedure for exporting and importing in the field of atomic energy use. Transportation of nuclear materials, radioactive substances and radioactive waste. Management of radioactive waste and spent nuclear fuel.

16. Expand the concept of ensuring environmental safety in the field of nuclear energy. Name the legal mechanisms for ensuring environmental safety.

17. Legal responsibility for violations in the field of nuclear energy. Classification of offenses and responsibility for nuclear damage.

18. Expand the regime of international legal responsibility for transboundary damage caused as a result of an accident at a nuclear power plant. Name the conventions or any international documents regulating the issues of responsibility in this field.

19. Expand the regime of civil liability of the operator of a nuclear installation for nuclear damage caused. Terms and conditions of liability, limits of liability.

20. Expand the legal mechanism for compensation for damages under the Vienna Convention on Civil Liability. Give examples from practice when this convention was applied.

---

21. The legal problems of carrying out activities in the territories of former nuclear test sites and other territories contaminated as a result of nuclear tests.

22. International nuclear law regarding the peaceful use of the atom. Formation and improvement of international legislation in the field of peaceful uses of atom.

23. Reveal the correlation and interaction of Climate change and Nuclear energy. The role of nuclear energy in mitigating climate change.

24. Nuclear energy regulation: features and contradictions. Hard law and Soft law in the field of nuclear energy – give examples.

25. Case Law in the field of Nuclear energy. Analyze of one case in this field.
26. Reveal the concept and principles of international nuclear law, its relationship with national law. Reveal the implementation of international principles into national law.
27. Reveal the content of Convention on Early Notification of a Nuclear Accident (1986) and Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (1986).
28. Reveal the problems of legal regulation of the management of radioactive waste and spent nuclear fuel. Give the characteristic of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.
29. Reveal the content of the Convention on Nuclear Safety (1994). The obligation of participants of Convention.
30. Expand the role of the IAEA in regulating nuclear energy. Cooperation of Kazakhstan and Azerbaijan with the IAEA.

### **References:**

1. Russian nuclear law. Textbook / A. I. Grishchenko. M.: Publishing House "Lawyer". 2017. -150 p.
2. Romanova V. V. Problems and trends of legal regulation in the field of atomic energy use. Moscow: Yurist Publishing House. 2017 – 224 p.
3. Sarsembayev M. A. Identification and solution of problems of regulatory and legal regulation of ecology in the construction and operation of nuclear power plants in the EAEU countries // [online.zakon.kz](http://online.zakon.kz)
4. Law of the Republic of Kazakhstan No. 405-IV of February 10, 2011 "On Ratification of the Vienna Convention on Civil Liability for Nuclear Damage of 1997" (Consolidated text of the Vienna Convention on Civil Liability for Nuclear Damage of May 21, 1963, as amended by the Protocol of September 12, 1997)//<https://online.zakon.kz>
5. Convention on Nuclear Safety (Vienna, 17 June 1994) // [online.zakon.kz](http://online.zakon.kz)
6. Law of the Republic of Kazakhstan dated January 12, 2016 No. 442-V "On the Use of Atomic Energy" // [online.zakon.kz](http://online.zakon.kz)



7. Law of the Republic of Kazakhstan dated April 23, 1998 No. 219-I "On radiation safety of the population" // [online.zakon.kz](http://online.zakon.kz)

8. Resolution of the Government of the Republic of Kazakhstan dated May 11, 2016 No. 284 "On approval of the Rules for conducting nuclear, radiation and nuclear physical safety expertise" // [online.zakon.kz](http://online.zakon.kz)

9. Order of the Minister of Energy of the Republic of Kazakhstan dated February 8, 2016 No. 39 " On approval of the Rules for the organization of collection, storage and disposal of radioactive waste and spent nuclear fuel " // [online.zakon.kz](http://online.zakon.kz)

**CRITERIA-BASED ASSESSMENT RUBRICATOR OF FINAL CONTROL**  
**Discipline: Legal regulation of nuclear energy. Form: verbal (online). Platform: ZOOM.**

№	Балл	DESCRIPTORS				
		«excellent»	«good»	«satisfied»	«unsatisfactory»	
		90-100%	70-89%	50-69%	25-49%	0-24%
Criterion						
1	Understanding the general characteristics and types of alternative source of energy	Deep understanding of the nature of legal regulation of alternative source of energy. Relevant and appropriate references (citations) to primary sources.	Understanding of legal regulation of alternative source of energy. Relevant and appropriate references (citations) to primary sources.	Average understanding legal regulation of alternative source of energy. Relevant and appropriate references (citations) to primary sources.	Limited understanding of legal regulation of alternative source of energy. Relevant and appropriate references (citations) to primary sources.	Superficial understanding/misunderstanding of the legal regulation of alternative source of energy. Relevant and relevant references (citations) to primary sources are not provided.
	Understanding of the main problem of subsoil use1 legal regulation of alternative source of energy.	It very well connects the comparison of the legislation of the Republic of Kazakhstan in the field of alternative source of energy with international standards. Ideally ground arguments in evidence from empirical research (e.g., comparative legal or statistical analysis).	It very well connects the comparison of the legislation of the Republic of Kazakhstan in the field legal regulation of alternative source of energ with international standards.	Connects the comparison of the legislation of the Republic of Kazakhstan in the field legal regulation of alternative source of energy with international standards. Limited connection between the concepts of the basis of alternative source of energy and Energy law.	Limited use of empirical research evidence.	In comparison with the legislation of the Republic of Kazakhstan regulating legal regulation of alternative source of energy, the connection is insignificant or absent. Little or no empirical research is used.

			Supports arguments with evidence from empirical research.			
	Political proposal or practical recommendations /suggestions	Preparation of competent scientific and/or practical recommendations related to subsoil use.	Offers some considerations and/or practical recommendations and suggestions related alternative source of energy.	Limited practical recommendations. The recommendations are superficial, not based on a thorough analysis, and not critical.	There are few or no practical recommendations, or recommendations of very poor quality.	There are few or no considerations and practical recommendations related to alternative source of energy. recommendations has very poor quality
2	Understand concepts through theory	The general concept of the basic concepts is given	The theoretical concepts of the legal regulation of alternative source of energy is very well connected	The recommendations are superficial, not based on a thorough analysis	recommendations of a very low quality concept	there are very few practical recommendations related to the theoretical concepts of arbitration disputes in Kazakhstan
	Understand the basic questions	Offers some considerations, recommendations in legal regulation of alternative source of energy.	The general concept of the terminology of legal regulation of alternative source of energy	Discloses the content of the rights to develop rules of personal behavior to prevent unjustified initiation of cases	The main theoretical issues are moderately disclosed	The main issues o legal regulation of alternative source of energy are poorly disclosed
	Suggestion or practical suggestions/recommendations	The comparison of the legislation of the Republic of Kazakhstan regulating the legal regulation of alternative source of energy with Energy law is very well connected	Supports arguments with empirical research facts	Well demonstrates the clarity, accuracy and correctness of the legal regulation of alternative source of energy with Energy law is very	Limited use of empirical research evidence	Little or no empirical research is used.
3	Understand concepts through theory	Ideal substantiation of arguments by empirical research facts	Connects concepts with theory very well	connects concepts with theory well	Limited use of proofs in theory	They don 't use concepts at all
	Understand the basic questions	Ideal argumentation of the main issues	It connects concepts well with scientific data.	Limited use of evidence	The answers do not correspond to the main question	The basic answers are of very poor quality.
	oral, style, speech literacy	Verbally demonstrates clarity, accuracy and	Verbally demonstrates	Verbally there are some basic errors and clarity	It is unclear what is written, the questions	It is unclear what is written, it is difficult to keep up with the

		correctness. Strictly adheres to APA style.	clarity, accuracy and correctness. Basically adheres to APA style.	needs to be improved. There are errors in following APA style.	do not correspond to the answer	content. There are many mistakes in following APA style.
--	--	---	--	--	---------------------------------	--

Formula for calculating the final grade:

+Final grade (KB) = (B1+B2+B3+B4+B5+B6+B7+B8+B9+B10) / 6K, here B is the scoring criterion, K is the general assessment criterion.

### Example of calculating the final score

№	Score	«Excellent»	«Good»	«Satisfactory»	«Unsatisfactory»	
		90-100 %	70-89%	50-69%	25-49%	0-24%
1.	Criteria 1	100				
2.	Criteria 2		75			
3.	Criteria 3			60		
4.	Criteria 4				45	
5.	Criteria 5	100				
6.	Criteria 6				49	
	<b>Final %</b>	<b>200</b>	<b>75</b>	<b>60</b>	<b>94</b>	200+ 75 + 60 + 94 = <b>429</b>

						<b>429 / 6 criteria= 71,5</b>
						<b>Final score, as % = 72</b>

Based on percentage obtained during the calculation, we can compare the score with the rating scale.

**72 points** range from 70 points to 89 points, which corresponds to the “Good” category according to the grading scale.

Thus, with this calculation, the project will be rated **72 points “Good”** in accordance with the point-rating letter system for assessing educational achievements students with their transfer to the traditional grading scale and ECTS.