

The syllabus
According to the educational program «7M042 – Maritime and energy law»
Fall semester 2024 - 2025 academic year
Master Program in English

Discipline's code and Title	Independent work of master students (IWMS)	Number of credits			Number of credits	Independent work of master student with teacher (IWMST)
		Lectures (L)	Practical training (PT)	Laboratory (Lab)		
97087 Legal regulation of nuclear energy	98	15	30	-	5	7

ACADEMIC COURSE INFORMATION

Form of education	Cycle, component	Types of lectures	Types of practical training	Form of final control
Online	Basic disciplines, by choice component	Classic, Problem, analytical lecture	Problem solving, situational tasks, case study	Verbal exam via ZOOM platform
Lecturer	PhD Lecturer at the Department of Customs, Financial and Environmental Law Nakisheva M.K. Seminar-PhD Nakisheva M.K.			
e-mail	makhabbat.kaznu@gmail.com			
Telephone number				

ACADEMICAL PRESENTATION ON DISCIPLINE

Aim of course	Expected Learning Outcomes (LO)* As a result of studying the discipline the undergraduate will be able to:	Indicators of LO achievement (ID) (for each LO at least 2 indicators)
To develop the ability to analyze international and national legislation in the field of nuclear energy, analyze its legal instruments, describe the nature and specifics of legal regulation of relations in the field of the use of	LO1. To demonstrate an understanding of the content of the theory of legal regulation of the use of nuclear energy, legislation and mechanisms of state regulation of relations in this area.	ID1. 1 To argue the specifics of legal regulation of relations in the field of nuclear energy use at the international and national levels. ID 1.2 Determine the place and role of norms in the field of legal regulation of the use of atomic energy in the legal system.
	LO2.To make differentiation the methods of analysis of the procedure for applying the rules on the use of atomic energy on the basis of a critical assessment of their effectiveness for the proposal of a set of measures to ensure nuclear and radiation safety .	ID 2.1 Apply methods for analyzing the conditions of application of standards, ID 2.2 Interpret the conditions for the application of certain norms regulating relations in the field of the use of atomic

nuclear energy sources.		energy. ID 2.3 Analyze the specifics of legislative consolidation of norms in the field of nuclear energy use in various practical situations.
	LO3. To analyze and identify the specifics of state regulation of relations in the field of nuclear energy use, as well as ensuring nuclear and radiation safety.	ID 3.1 Classify methods of state regulation of relations in the field of nuclear energy use. ID 3.2 Compare the methods of state regulation of relations in the field of nuclear energy use. ID 3.3 Identify the similarities and differences of state regulation and management of relations in the field of nuclear energy use and the basis for the application of these methods.
	LO4. To make recommendations to ensure the effective application of legislation in the field of nuclear energy use.	ID 4.1 Develop measures to ensure legislation in the field of the use of atomic energy. ID 4.2 Explain the reasons for the violation of the law and their elimination. ID 4.3 Develop plans to improve the enforcement of legislation in the field of nuclear energy use.
	LO5. To assess the practice of legal regulation in various spheres of relations in the field of nuclear energy use on the basis of an analysis of international and national legislation and the development of specific proposals for improving the practice of its application.	ID 5.1 Substantiate the need to apply mechanisms for regulating relations in the field of nuclear energy use. ID 5.2 Evaluate the experience of foreign countries in regulating relations in the field of nuclear energy use. ID 5.3 Assess the possibility of applying the positive experience of foreign countries in ensuring nuclear safety.
Prerequisites	EPRK 2222 Environmental GPRK2204 R law of RK Civil law of RK (General part), GPRK3206 Civil law of Kazakhstan (Special part)	
Post requisites	PEB3408 Environmental Law	
Information resources **	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 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	

	<p>5. Convention on Nuclear Safety (Vienna, 17 June 1994) // online.zakon.kz</p> <p>6. Law of the Republic of Kazakhstan dated January 12, 2016 No. 442-V "On the Use of Atomic Energy" // online.zakon.kz</p> <p>7. Law of the Republic of Kazakhstan dated April 23, 1998 No. 219-I "On radiation safety of the population" // online.zakon.kz</p> <p>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</p> <p>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</p> <p>Online resources: educational material-abstracts of lectures, as well as educational and methodological material necessary for completing homework, projects, SRS, is available on your page on the website http://adilet.zan.kz/rus/docs and www.univer.kaznu.kz, in the UMCD section.</p>
<p>Academic policy of the course</p>	<p>The academic policy of the discipline is determined by the Academic Policy and the Policy of Academic Integrity of Al-Farabi KazNU.</p> <p>Documents are available on the main page of IS Univer.</p> <p>Integration of science and education. The research work of students, undergraduates and doctoral students is a deepening of the educational process. It is organized directly in the departments, laboratories, scientific and design departments of the university, in student scientific and technical associations. Independent work of students at all levels of education is aimed at developing research skills and competencies based on obtaining new knowledge using modern research and information technologies. A research university teacher integrates the results of scientific activity into the topics of lectures and seminars (practical) classes, laboratory classes and into the tasks of the IWST, IWS, which are reflected in the syllabus and are responsible for the relevance of the topics of training sessions and tasks.</p> <p>Attendance. The deadline for each task is indicated in the calendar (schedule) for the implementation of the content of the discipline. Failure to meet deadlines results in loss of points.</p> <p>Academic honesty. Practical/laboratory classes, IWS develop the student's independence, critical thinking, and creativity. Plagiarism, forgery, the use of cheat sheets, cheating at all stages of completing tasks are unacceptable.</p> <p>Compliance with academic honesty during the period of theoretical training and at exams, in addition to the main policies, is regulated by the "Rules for the final control", "Instructions for the final control of the autumn/spring semester of the current academic year", "Regulations on checking students' text documents for borrowings".</p> <p>Documents are available on the main page of IS Univer.</p> <p>Basic principles of inclusive education. The educational environment of the university is conceived as a safe place where there is always support and equal attitude from the teacher to all students and students to each other, regardless of gender, race / ethnicity, religious beliefs, socio-economic status, physical health of the student, etc. All people need the support and friendship of peers and fellow students. For all students, progress is more about what they can do than what they can't. Diversity enhances all aspects of life.</p> <p>All students, especially those with disabilities, can receive advisory assistance by phone / e-mail – makhabbat.kaznu@gmail.com or via video link in MS Teams (link will be provided</p>

upon request).

Integration MOOC (massive open online course). If MOOC is integrated into the discipline, all students must register for MOOC. The deadlines for passing MOOC modules must be strictly observed in accordance with the schedule for studying the discipline.

ATTENTION! The deadline for each task is indicated in the calendar (schedule) for the implementation of the content of the discipline, as well as in the MOOC. Failure to meet deadlines results in loss of points (grade).

INFORMATION ON TEACHING, LEARNING AND ASSESSMENT

Score-rating				Methods of assessment															
letter system of assessment of accounting for educational achievements																			
Grade	The digital equivalent of grade	Grades in percentage	Grades in traditional form	<p>Criteria-based assessment is the process of correlating actual learning outcomes with expected learning outcomes based on clearly defined criteria. Based on formative and summative assessment.</p> <p>Formative assessment is a type of assessment that is carried out in the course of daily learning activities. It is the current measure of progress. Provides an operative relationship between the student and the teacher. It allows you to determine the capabilities of the student, identify difficulties, help achieve the best results, timely correct the educational process for the teacher. The performance of tasks, the activity of work in the classroom during lectures, seminars, practical exercises (discussions, quizzes, debates, round tables, laboratory work, etc.) are evaluated. Acquired knowledge and competencies are assessed.</p> <p>Summative assessment is a type of assessment that is carried out upon completion of the study of the section in accordance with the program of the discipline. Conducted 3-4 times per semester when performing IWS. This is the assessment of mastering the expected learning outcomes in relation to the descriptors. Allows you to determine and fix the level of mastering the discipline for a certain period. Learning outcomes are evaluated.</p> <table border="1"> <thead> <tr> <th>The Formative and Summative assessments</th> <th>The grades in percentage</th> </tr> </thead> <tbody> <tr> <td>Activity at lectures</td> <td>5</td> </tr> <tr> <td>Work in practical classes</td> <td>20</td> </tr> <tr> <td>Independent work of students</td> <td>25</td> </tr> <tr> <td>Project activity</td> <td>10</td> </tr> <tr> <td>Final control (exam)</td> <td>40</td> </tr> <tr> <td>TOTAL</td> <td>100</td> </tr> </tbody> </table>		The Formative and Summative assessments	The grades in percentage	Activity at lectures	5	Work in practical classes	20	Independent work of students	25	Project activity	10	Final control (exam)	40	TOTAL	100
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Independent work of students	25																		
Project activity	10																		
Final control (exam)	40																		
TOTAL	100																		
A	4,0	95-100	Excellent																
A-	3,67	90-94																	
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	Satisfactory																
C-	1,67	60-64																	
D+	1,33	55-59																	
D	1,0	50-54																	

FX	0,5	25-49	Unsatisfactory		
F	0	0-24			

CALENDAR (SCHEDULE) THE IMPLEMENTATION OF THE COURSE. THE TEACHING AND LEARNING METHODS

week	Topic name	Number of hours	Max. score
Module 1. General provisions of the legal regulation of nuclear energy			
1	Lec 1. The concept and content of relations in the field of nuclear energy use. Goals and objectives of the course "Legal regulation of the use of nuclear energy"	1	
1	Sem 1. Discussion seminar session. Discuss the concept and content of relations in the field of nuclear energy use	2	8
2	Lec 2. The sources of the right to use nuclear energy and the history of the formation of legislation in the field of nuclear and radiation safety at the international and national level.	1	
2	Sem 2. Discuss the sources of the right to use nuclear energy and the history of the formation of legislation in the field of nuclear and radiation safety at the international and national levels.	2	8
3	Lec 3. To reveal the legal mechanism of state regulation of the use of atomic energy.	1	
3	Sem 3. To reveal the concept, essence and principles, forms and methods of state regulation of the use of nuclear energy.	2	8
3	IWMST 1. Consultation on the implementation of the IWMS 1.		
3	IWMS 1. Convention on Nuclear Safety (Vienna, 17 June 1994) – report		15
4	Lec 4. To reveal the problems of public administration in the field of environmental safety in the Republic of Kazakhstan and the Republic of Azerbaijan	1	
4	Sem 4. To discuss the problems of public administration in the field of environmental safety in the Republic of Kazakhstan and the Republic of Azerbaijan	2	8
5	Lec 5. To discuss the legal problems of ensuring nuclear and radiation safety	1	
5	Sem 5. Disclose the range of objects and subjects of nuclear and radiation safety.	2	8
5	IWMST 2. Consultation on the implementation of the IWMS 2		

5	IWMS 2. Programs for the development of the nuclear industry in the Republic of Kazakhstan and the Republic of Azerbaijan (presentation)		15
Module 2 Organizational and legal forms of ensuring nuclear and radiation safety			
6	Lec 6. State control and supervision in the field of nuclear energy use	1	
6	Sem 6. Discuss the procedure for conducting inspections of entities operating with nuclear installations and facilities of categories I and II of potential radiation hazard	2	8
7	IWMST 3. Consultation on the implementation of the IWMS 3		
	IWMS 3. International Atomic Energy Agency (presentation)		15
7	Lec 7. Discuss the grounds and types of liability for violation of the legislation on the use of nuclear energy. Vienna Convention on Civil Liability for Nuclear Damage, 1997. Convention on Supplementary Compensation for Nuclear Damage.	1	
7	Sem 7. Discuss the specifics of liability for violation of the legislation on the use of nuclear energy. Civil liability for nuclear damage	2	7
	LEVEL CONTROL 1		100
8	Lec 8. Conditions and procedure for carrying out activities in the field of nuclear energy use	1	
8	Sem 8. Discuss the procedure and conditions for licensing activities in the field of nuclear energy use	2	7
9	Lec 9. Discuss the problems of legal regulation of the management of radioactive waste and spent nuclear fuel. Study the content of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.	1	
9	Sem 9. Conduct a comparative analysis of environmental and other requirements for the management of radioactive waste and spent nuclear fuel	2	7
10	Lec 10 To study the features of the legal regime of the nuclear fuel cycle. Code of Conduct for the safety and security of Radioactive Sources.	1	
10	Sem 10. Discuss the construction of nuclear facilities and disposal sites	2	7
10	IWMST 4. Consultation on the implementation of the IWMS 4		
10	IWMS 4. The use of nuclear energy in foreign countries (presentation)		15
11	Lec 11 Consider the problems of legal regulation of export and import in the field of nuclear energy use	1	
11	Sem 11. Discuss the specifics of transportation of nuclear materials, radioactive substances and radioactive waste	2	7
12	Lec 12 Study the procedure and conditions for the examination of nuclear, radiation and nuclear physical safety. Accreditation of organizations carrying out expert examination of nuclear, radiological,	1	

	and nuclear security		
12	Sem 12. Discuss the requirements for accreditation of organizations that carry out nuclear, radiation and nuclear security expertise	2	7
12	IWMST 5. Consultation on the implementation of the IWMS 5		15
12	IWMS 5. Case study in the field of nuclear energy (report)		
13	Lec 13 To discuss the problems of international nuclear law	1	
13	Sem 13. Discuss the concept and principles of international nuclear law, its relationship and relationship with national law.	2	7
14	Lec 14 Regional, international and intergovernmental organizations for cooperation in the field of nuclear energy Non-proliferation of nuclear weapons	1	
14	Sem 14. Discuss the activities of international organizations for cooperation in the field of nuclear energy Discuss legal issues of non-proliferation of nuclear weapons.	2	7
14	IWMST 6. Consultation on the implementation of the IWMS 6.		
	IWMS 6. 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 (Study the Agreement on Conducting international Studies of the Consequences of the Chernobyl Nuclear Power Plant Accident at the Pripyat Scientific Center») <p>The problems of emergency preparedness and response. Examine the content of the Convention on Assistance in the Event of a Nuclear or Radiological Emergency and the Convention on Early Notification of a Nuclear Accident.</p> <p>Submit in the form of presentation</p>		15
15	Lec 15 International legal support for nuclear and radiation safety.	1	
15	Sem 15. Safe transportation of nuclear materials, nuclear shipping	2	6
	IWMST 7 Exam consultation		
	LEVEL CONTROL 2		100
	Final control (exam)		100
	Total for the course		100

**SUMMATIVE ASSESSMENT RUBRICATOR
CRITERIA FOR EVALUATING RESEARCH RESULTS**

Programs for the development of the nuclear industry in Kazakhstan and Azerbaijan, written assignment (25% out of 100%)

Criteria	«very good» 20-25 %	«good» 15-20%	«satisfactory» 10-15%	«unsatisfactory» 0-10%
Understanding the programs for development of nuclear industry in KZ and AZ.	Deep understanding the programs for development of nuclear industry in KZ and AZ. Relevant and appropriate references (citations) to primary sources are provided.	Understanding the programs for development of nuclear industry in KZ and AZ. Relevant and appropriate references (citations) to primary sources are provided.	Limited understanding the programs for development of nuclear industry in KZ and AZ. Relevant and appropriate references (citations) to primary sources are provided.	Superficial understanding\Misunderstanding of the programs for development of nuclear industry in KZ and AZ. Relevant and appropriate references (citations) to primary sources are not provided.
understanding of the main issues of Nuclear energy law and nuclear legal relations.	Comparison of legislation in the field of the nuclear sector of the Republic of Kazakhstan is well connected. Excellent support of arguments based on empirical research data (e.g., comparative legal or statistical analysis).	Comparison of legislation in the nuclear sector of the Republic of Kazakhstan. The arguments are supported by empirical research data.	Limited comparison of legislation in the nuclear sector of the Republic of Kazakhstan, relationship is limited. Limited use of empirical research data.	There is little or no correlation in comparing legislation in the nuclear sector of the Republic of Kazakhstan. There is little or no empirical research.
Policy proposal or practical recommendations	Offers competent political and/or practical recommendations and proposals for the development of the nuclear sector in Kazakhstan.	It offers some policy and/or practical proposals and proposals for the development of the nuclear sector in Kazakhstan.	Limited policy and practical recommendations for the development of the nuclear sector in Kazakhstan. Recommendations are not based on thorough analysis and are superficial	There are practically no political and practical recommendations for the development of the nuclear sector and agricultural entrepreneurship, or recommendations of very low quality.
Written, APA style	Writing in the APA style demonstrates clarity, precision, and accuracy. APA style is strictly adhered to.	There are some basic errors in the letter, and clarity needs to be improved. Following the APA style has its features.	The writing demonstrates clarity, precision and accuracy. Mainly follows APA style.	The writing is unclear, the content is hard to catch. There are no following the APA style.

Dean

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Head of Department

Kuanaliyeva G.A.

Lecturer

Nakisheva M.K.