

**" Mukhamedzhan Tynyshpayev ALT University» JSC**

**Department of «Rolling Stock»**

**APPROVED**  
**Chairman of the AC ALT University**  
**S. Amirgaliyeva**

**Decision of the Academic Council of ALT University**  
**dated "30" 08 2024 (protocol No. 9)**

**ADMISSION EXAM PROGRAM  
(INTERVIEW) FOR APPLYING TO  
POST-GRADUATE EDUCATION PROGRAMS**

Educational program  
7M07145 - Rolling stock of railways, profile direction

**Almaty, 2024**

**Admission exam (interview) program** discussed and received a positive decision at a meeting of the department of «Rolling Stock», protocol No. 9 dated May 13, 2024.

**Head of the department «Rolling Stock»**  **Ashirbayev G.K.**

**The admission exam (interview) program** was reviewed and recommended at a meeting of the Council of the Institute of «Transport Engineering», protocol No. 4a dated May 27, 2024.

**Chairman of the CI «Transport Engineering»**  **Abdreshov Sh.A.**

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## **1. The purpose of the entrance exam for a group of educational programs**

Admission of foreign citizens to study in to JSC «ALT University named after Mukhamedzhan Tynyshepayev» on paid basis is carried out based on the results of an interview conducted by the admissions committee V during the calendar year.

Goals entrance exam (interview) for the Educational program 7M07145 - Rolling stock of railways, is the definition of theoretical and practical preparedness of an applicant for a master's degree, level of compliance with knowledge, skills and skills to the requirements of master's studies in the field of preparation.

## **2. Regulations for conducting an entrance exam (interview) for a master's program in a group of educational programs**

The duration of the entrance exam (interview) is 30 minutes, during which the applicant is interviewed and answers questions from a commission approved by the President-Rector, consisting of 3 members.

At the applicant's choice, entrance The exam (interview) is taken in Kazakh, Russian or English.

Persons who did not appear at the entrance exam (interview) for a valid reason (illness or other circumstances, confirmed by documents), are allowed to participate on other days in accordance with the approved interview schedule.

The interview is conducted in person/remotely with the mandatory use of video communication. The video recording is stored in the archive for no more than three years.

During the interview process, to clarify the knowledge of the candidate/applicant, additional questions may be asked both on the content of the interview question and on any sections of the subject within the program.

The interview protocols are submitted to the executive secretary of the admissions committee immediately after the completion of the interview.

All controversial issues related to the interview are resolved in accordance with the established legislative procedure of the Republic of Kazakhstan.

## **3. Interview assessment criteria**

The interview procedure is documented in a protocol of the established form, in the form according to Appendix No. in which are fixed questions to incoming and interview results.

Evaluation of candidates/applicants is carried out according to the system adopted by the University according to Table 1. Passing the point is the commission's decision on the sufficient level of candidates/applicants for further training V master's degree Each interview decision is signed by the committee members.

Protocol interviews enrolled in the university is kept in their personal files.

**Table 1 – Interview assessment criteria**

<b>Criteria</b>	<b>Descriptors</b>	<b>Level</b>
<b>Motivation</b>	Argumentation of motives for doctoral studies in the chosen EP and admission to a specific university. Vision of prospects for professional and personal growth upon completion of training	sufficient/not sufficient
<b>Research competence</b>	Possession of the research skills and experience necessary for research activities in a specific subject area	sufficient/not sufficient
<b>Creativity</b>	Non-standard thinking, creative and alternative approaches to solving problems and situational tasks	sufficient/not sufficient
<b>Communication skills</b>	The ability to briefly, representatively, logically, and reasonably express one's point of view, make generalizations and conclusions. Language skills	sufficient/not sufficient
<b>Commission decision</b>		<b>sufficient/not sufficient</b>

#### **4. Interview questions**

1. The use of alternative fuels in the operation of transport equipment.
2. The structure and functions of the main components of a freight car, as well as their technical characteristics.
3. The design and technical characteristics of the passenger car, including its main elements.
4. The main components and technical features of diesel locomotives.
5. The design and technical characteristics of electric locomotives, including the role and functions of their main elements.
6. Classification of locomotives and wagons according to various criteria, including their purpose and technical characteristics.
7. Requirements for the crew of locomotives and wagons.
8. The role and structure of electrical equipment on locomotives and passenger cars.
9. Organization of service and maintenance, repair of railway rolling stock (locomotives and wagons).
10. Technical aspects of fitting rolling stock in curved sections of the track.
11. Basic requirements for braking equipment on railway rolling stock.
12. Experience in organizing maintenance of locomotives and wagons abroad and advanced service methods.
13. Factors affecting fuel efficiency and energy consumption of locomotives.

14. Types of failures on the example of various types of transport equipment: diesel locomotives, electric locomotives, wagons.

15. Reliability of railway rolling stock in the process of movement along the way.

## **5. Recommended reading**

### **5.1 Main literature**

1. Абдуллаев С.С., Аширбаев Г.К., Бақыт Ғ.Б. Локомотивы: Учебник. – Алматы, АЛит, 2023. -354 с.

2. Кажыгулов А.К., Оразхан Ш. Устройство и ремонта тепловоза СКДбе. Алматы – 2014. – 135 с.

3. Сулеева Н.З. Вагонное хозяйство: учебное пособие. – Алматы, КазАТК, 2019. – 149 с.

4. Токмурзина Н.А., Маханова А.К. и др. Подвижной состав и тяга поезда. учебное пособие, – Алматы, КазАТК, - 2017 г.

5. Подвижной состав железных дорог. Учебное пособие. Д.Я.Носырев и др. -М: ФГБОУ «Учебно-мегодич. центр по образованию на ж.д.транспорте», 2018. -193с.

6. Высокоскоростной железнодорожный транспорт. Общий курс. В 2-х томах [Текст]. Т. 1: учебное пособие / Под ред. И.П.Кисилева,- М.: ФГБОУ "Учебно мегодический цнтр по образованию на жслезнодорожном транспорте", 2014.-308с.

6. Устройство и эксплуатация высокоскоростного наземного транспорта. Учебное пособие для специалистов. Д.В.Пегов и др. - М: ФГБОУ «Учебно-методический центр по образованию на ж.д.транспорте» 2014. - 267с.

7. Общий курс транспорта, Учебное пособие, Т.Н.Каликина и др., -М.: ФГБУ ДПО «Учебно-методический центр по образованию на ж.д.транспорте», 2018,-216 с.

8. Троицкая, Н.А. Общий курс транспорта: учебник / Н.А. Троицкая.- М.: Академия, 2014.- 176с.

9. Инфраструктура железных дорог: учебно-методическое пособие. /Маханова А.К. 2021ж.

10. Абдуллаев С.С., Бақыт Ғ.Б. Устройство и работа электровоза ВЛ80С: учебное пособие. - Алматы: КазАТК, 2014.- 214 с.

11. Тепловоз ТЭ33А производства АО «Локомотив құрастыру зауыты». Назначение устройств, узлов и агрегатов. – Учебное пособие / Абдуллаев С.С., Бақыт Ғ.Б. Алматы: КазАТК, 2015. – 254 с.

12. Байтанаев, А.А., Абдуллаев, С.С., Бақыт Ғ.Б. Электрический подвижной состав: учебное пособие. - Алматы: КазАТК, 2020. - 222 с.

13. Ибраев Ж.С. Современные методы диагностики подвижного состава: Учебное пособие Алматы. КазАТК им. М.Тынышпаева -2017.-125с.

## 5.2 Additional literature

1. Общий курс железных дорог: Учебник. Под ред. В.Н. Соколова - М.: УМК МПС России, 2020. -296 с.
2. Высокоскоростной железнодорожный транспорт. Общий курс. В 2-х томах, Учебное пособие / Под ред. И.П.Кисилева. - М.: ФГБОУ «Учебно методический центр по образованию на ж.д.тр», 2014. -372с.
3. Токмурзина, Н.А. Основы расчета конструкции локомотива: учебное пособие / Н.А. Токмурзина.- Алматы: КазАТК, 2016.- 126 с.
4. Шалабаев М.К., Утепова А.У. Автоматические тормоза локомотивов: учебное пособие / М.К. Шалабаев, А.У. Утепова, - Алматы: КазАТК, 2019. – 154 с.
5. Киреев А.Н. Киреева М.А. Техническая диагностика подвижного состава: Учебник (электронная версия) / Луганск: Изд-во ЛНУ им. В.Даля, 2019. – 193 с.
6. Буйносов А.П. Эксплуатация подвижного состава: Учебное пособие. – Екатеринбург: УрГУПС, 2017. – 148 с.