


«Mukhamedzhan Tynyshpayev ALT University» JSC

Department of Motor vehicles and life safety

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

Decision of the Academic Council of ALT University
dated "30" 05 2024 (protocol No. 5)

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

Educational program
7M07147 – Cars and road equipment, profile direction

Almaty, 2024

Admission exam (interview) program discussed and received a positive decision at a meeting of the department “Motor vehicles and life safety”, protocol No. 9 dated 13, May 2024.

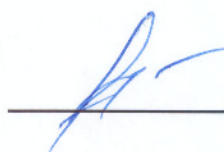
**Acting Head of the Department
"Motor Vehicles and Life Safety"**



Naimanova G.T.

The admission exam (interview) program was reviewed and recommended at a meeting of the Council of the Institute “Transport engineering”, protocol No. 5a dated May 27, 2024.

**Chairman of the council of the Institute
of 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 Tynyshpayev on paid basis is carried out based on the results of an interview conducted by the admissions committee during the calendar year.

Goals entrance exam (interview) for the Educational program 7M07147 – Cars and road equipment, 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 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

Criteria	Descriptors	Level
Motivation	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
Research competence	Possession of the research skills and experience necessary for research activities in a specific subject area	sufficient/not sufficient
Creativity	Non-standard thinking, creative and alternative approaches to solving problems and situational tasks	sufficient/not sufficient
Communication skills	The ability to briefly, representatively, logically, and reasonably express one's point of view, make generalizations and conclusions. Language skills	sufficient/not sufficient
Commission decision		sufficient/not sufficient

4. Interview questions

1. Purpose, design of the piston pin. Ways to install fingers.
2. Purpose, design of the crankshaft crank mechanism.
3. How the axial fixation of the crankshaft is ensured.
4. Which crankshaft is called full-bearing, and which is incomplete?
5. Purpose, design of the flywheel. Methods of fixing the flywheel.
6. The general arrangement and operation of the gas distribution mechanism.
7. Features of the design and operation of overhead valve timing mechanisms.
8. Purpose, design of the timing camshaft.
9. The main parameters characterizing worm gears.
10. Friction in the details.
11. Keyway connection, classification.
12. General information about gearboxes.
13. Bearing materials.
14. Materials of shafts and axles.
15. General concepts of transmissions.

5. Recommended literature

5.1 Basic literature

1. Ivanov, M. N. Machine parts: textbook for academic undergraduate studies / M. N. Ivanov, V. A. Finogenov; Bauman Moscow State Technical University (MSTU). — 15th ed., ispr. and add.. — Moscow: Yurait, 2016. — 408 p.

<https://www.lib.tpu.ru/fulltext2/m/2015/FN/fn-78.pdf>

2. Iosilevich, G. B. Applied mechanics: For students of higher education institutions : a textbook / G. B. Iosilevich, P. A. Lebedev, V. S. Strelyaev. — Moscow : Mashinostroenie, 2018. — 576 p.

<https://e.lanbook.com/book/5794>

3. Dunaev, Pyotr Fedorovich. Details of the machines. Course design : a textbook / P. F. Dunaev, O. P. Lelikov. — 6th ed.. — Moscow: Mashinostroenie, 2018. — 560 p.

<https://e.lanbook.com/book/63215>

4. Andreev, V. I. Machine parts and design principles. Course design : a textbook / V. I. Andreev, I. V. Pavlova. — St. Petersburg : Lan, 2017. — 352 p. <https://e.lanbook.com/book/12953>

5. Internal combustion engines. Theory of piston and combined engines / D. N. Vyubov, V. I. Ivin, et al. Edited by A. S. Orlina, M. G. Kruglova, - M., Mechanical Engineering, 2016.

6. Lazarev E. A. Basic principles, methods and effectiveness of means of improving the fuel combustion process to improve the technical level of tractor diesels. – Chelyabinsk, 2019.

7. Dyachenko N. H., Kostin A. K., Melnikov G. V., etc. Theory of internal combustion engines. – M. – L.: Mechanical Engineering, 2018.

5.2 Additional literature

1. Ricardo G. R. "High-speed internal combustion engines" M.: Mashgiz, 2014.

2. Chudakov E. A. Research of automobile fuels and oils. - M.: Gosizdat, 2016.

3. Abramovich A.D. Fuel and the phenomenon of detonation in automotive engines. – M. – L.: Selkhozgiz, 2017.

4. Melkumov T. M. Testing of fuels for high-speed diesels. – M. - L.: ONTI NKTP, 2016.

5. Akchurin A. K. Application of fuels and lubricants in transport vehicles. – M. –L.: ONTI NKTP, 2007.

6. Orlin A. S., Vyubov D. N. Internal combustion engines. Theory of working processes of reciprocating and combined engines. – M.: Mechanical Engineering, 2018.