

**ACHIEVEMENTS IN THE FIELD OF QUALITY**

**Department of «Mechanical Engineering and Standardization» for the 2024–2025 Academic Year**

<b>Directions</b>	<b>Achievements</b>
1 Management	16 meetings of the department were held, during which all planned issues were reviewed and resolved, including matters related to the labor discipline of the department's academic staff.
2 Educational and methodological	<p>Computer technologies are used in all disciplines assigned to the department (100%). Student attendance is 90%, and academic performance is at the level of 80%.</p> <p>2 textbooks were published: <i>Design of Metal-Cutting Tools for Hole Machining Using CAD Systems</i> (authors: A. Zh. Kassenov, T. L. Lub, G. T. Itybayeva, Zh. K. Mussina, A. Zh. Tasskarina); <i>Engineering Design in the ANSYS Program</i> (authors: R.V. Sapinov, Zh. K. Mussina).</p> <p>Teachers conducted 10 peer observations and 40 open classes. In the "Atameken" ranking, the bachelor's educational program 6B07102 – Mechanical Engineering took 2nd place. Informal group learning was carried out. Students of all groups completed online courses on the Coursera and Huawei platforms. Based on the submitted certificates, certain disciplines were transferred as completed. As part of the organization and implementation of dual training in the 2024–2025 academic year, according to orders and agreements, 8 students completed dual training at the following enterprises: JSC "Aluminium of Kazakhstan", LLP "Neftekhim LTD", LLP "KSP Steel", PF JSC "NatEX", LLP MRP "Garant-Service". Under the innovative educational program 6B07151 – Mechanical Engineering and Reverse Engineering, 8 students received micro-qualifications in working professions: Fitter (Grade II, III), Turner (Grade II) at LLP "Prom Alliance Group"; "Operator of CNC Metal-Cutting Machines" (Grade III) at LLP "KSP Steel". In April 2025, the Department of "Mechanical Engineering and Standardization" held the XVII Republican Subject Student Olympiad in the specialty B076 "Standardization, Certification, and Metrology (by sectors)" among universities of the Republic of Kazakhstan. Participating universities included: H. Dosmukhamedov Atyrau University, S. Seifullin Kazakh Agrotechnical Research University, M. Kh. Dulati Taraz University, Kazakh National Agrarian Research University (NJSC), K. Kulazhanov Kazakh University of Technology and Business (JSC), Almaty Technological University (JSC), and "Toraighyrov University" (NJSC).</p>
3 Scientific	<p>During the 2024–2025 academic year, research work was conducted under grant-funded projects: "Study of Tribotechnical Characteristics of Resource- and Energy-Saving Metal-Cutting Tools", "Development of a Set of Measures for Tool Support of Processing Industries of the Republic of Kazakhstan," Scientific supervisor: A.Zh. Kassenov; "Research and Improvement of the Quality of High-Speed Milling of Hard-to-Machine Materials Through Process Modeling and Optimization of Cutting Modes", Scientific supervisor: S.O. Tussupova.</p> <p>A total of 82 articles were published, including 8 in SCOPUS and 20 in KKSON journals. The number of publications authored by students under the supervision of department faculty members is 56.</p> <p>Number of patents of the Republic of Kazakhstan – 9, and certificates of registration of computer programs in the Russian Federation – 7.</p>



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3 Scientific	<p>In December 2024, the PhD degree in the program 8D07101 – Mechanical Engineering was awarded to G. M. Bazenov and S. M. Nurkimbaev (scientific supervisor: Professor G. T. Itybayeva).</p> <p>In the Republican Student Research Competition: For the project “Design of an Innovative High-Efficiency Mill: Analysis, Modeling, Experiment,” student M.K. Merdenov (MSiRI-302) received a 2nd-degree diploma, scientific supervisor: PhD, Associate Professor A.D. Suleimenov. For the project “Implementation of the 5S System in Tool Support of Production,” student D.A. Radchenko (MSiRI-202) received a 3rd-degree diploma, scientific supervisor: Master, Senior Lecturer A.A. Tkachuk.</p> <p>At the XVI Toraighyrov Readings in November 2024: 1st-degree diploma – Asstanova F., group SSM-401 (supervisors: Professor A. Zh. Kassenov, L. R. Mussina); 2nd-degree diploma – Dybykenova M., group SSM-401 (supervisors: Zh. K. Mussina, S. A. Miller); and Turssunbek M., Baigozhina Zh., group SSM-401 (supervisor: Z. R. Issabek); 1st-degree diploma – Madaniyatova L. (MSiRI-202), supervisor: T. L. Lub.</p> <p>At the XXV Satpayev Readings (April 2025): 1st-degree diploma – A.M. Osspanova (SSM-301). 1st-degree diploma – D. A. Radchenko (MSiRI-202). In April 2025, students participated in the XVII Republican Subject Olympiad in specialty B064 – Mechanics and Metalworking at the South Kazakhstan Research University named after M. Auezov in Shymkent. Student E.A. Tochilin (MS-402) received a 3rd-degree diploma; supervisor: Senior Lecturer R.B. Kussainov (letter of appreciation). In April–May 2025, at the Regional Professional Skills Competitions WorldSkillsPavlodar-2025 and ERG Skills PVL 2025, student M.V. Plesovsskih (MSiRI-202) received a 3rd-degree diploma (invitation for employment at 5 enterprises); supervisor: Head of Educational Laboratories A.A. Tkachuk (letter of appreciation from the rector).</p>
4 Educational	<p>Curatorial work was carried out according to the plan of educational activities. In March 2025, students of the following groups participated in the competition for the Sh. Yessenov Academic Scholarship: SSM-202 – Baltabayeva D., Dauleteldinova D., Shumkina P.; MSiRI-202 – Radchenko D.; MSiRI-302 – Zhantemirov A. Student D. Radchenko (MSiRI-302) became the recipient of the Sh. Yessenov Academic Scholarship. Student D. Romanov (MSiRI-102(s)) participated in WorldSkills Lyon 2024 – Champion – CNC Milling (September 2024, France) and received a participant certificate.</p>
5 Household	<p>According to the schedule, work was carried out to clean the territory assigned to the department at Toraighyrov University. Educational equipment for academic programs was purchased according to requests and funded by the state budget and economic contract research in the amount of 97,821,694 KZT.</p>
6 Marketing and career guidance	<p>According to the department's plan, faculty members conducted career guidance work in schools and colleges of the city and region, participated in open house days, and invited enterprise representatives to meet with graduates. For professionalism and high responsibility demonstrated during the admission campaign at Toraighyrov University, the following staff were awarded Certificates of Honor (December 2024): Department Head Zh. K. Mussina, Senior Lecturers G. M. Bazenov and A. A. Tkachuk, Lecturer (Assistant) Dashzeveg D. In 2025, the following students were admitted under the state educational grant: 14 students – state language instruction groups; 23 students – Russian language instruction groups; 4 master's students – Russian language instruction; • 2 doctoral students – Russian language instruction.</p>

Discussed and approved at the department meeting (Protocol №. 3 dated September 02, 2025)

**Head of the Department of  
Mechanical Engineering and Standardization**



**Mussina Zh. K.**

