

**Research Plan**  
**Of Mechanical Engineering Faculty**  
**2023-2024**

<i>N<sup>o</sup></i>	<i>Activities (name of work)</i>	<i>Deadlines</i>	<i>Performers</i>
<b>1</b>	<b>Research work</b> 1. Development of compositions of sand-polymer composite materials and technological support for their processing into engineering products 2. Increasing wear resistance and improving the design of tire punching machine tools 3. Creation of a universal prototype of a gear pump for hydraulic systems capable of pumping viscous liquids of various natures 4. Development of technology for obtaining a standard product from highly dispersed dust of ferroalloy production 5. Development and implementation of technology for the production of chromium anti-friction cast iron for mining production parts 6. Development and implementation of a new heat-resistant alloy and technology for producing parts for metallurgical production	June 2024  June 2024  June 2024  June 2024  December 2023  December 2023	Nikonova T.Yu.  Mussaev M.M.  Zharkevich O.M.  Isagulova D.A.  Shcherbakova E.P.  Arinova S.K.
<b>2</b>	<b>Publication of R&amp;D results:</b> <b>2.1 Publication of articles – 70</b> Including: - in rating Kazakhstan magazines – 40; - foreign magazines: (RSCI) – 10; (Clarivate Analitics and Scopus) - 20. <b>2.2 Participation in conferences – 100</b> Including: - in republican/interuniversity – 40; - international - 60	According to plan	Teaching staff of the department
<b>3</b>	<b>Inventive activity</b> Submission of 20 applications for innovative patents and 30 SIS	According to plan	Teaching staff of the department

-	<b>International activity</b> - with the Poznan University of Technology, participation in the project “Creation of a universal prototype of a gear pump for hydraulic systems capable of pumping viscous liquids of various natures” - with Obdua University - invitation of PhD, associate professor Agota Dregeli Kiss - development of the educational program “Digital Engineering” in the direction of additive technologies with participation in the international project Erasmus+ together with SbPPU Peter the Great - Training of master's students on academic mobility at MISIS - Joint publication of R&D results with professor J. Michaud (University of Lorraine, France)	june 2023  october 2023  september 2023  may 2023  During a year	Zharkevich O.M Nikonova T.Yu.  Zharkevich O.M  Yurchenko V.V.  Kulikov V.Yu.  Kvon Sv.S
5	Research work with students and undergraduates	According to the NIRSM plan	Teaching staff of the department
6	Conducting departmental seminars	According to plan	Zharkevich O.M.