The objective of study programme **Ba Instrument Engineering** is to provide the condition for a full, high-quality vocational education and for professional competence in the design and operation of advanced industrial instruments and systems in the formation of:

* natural sciences, mathematics and basic knowledge underlying the professional activity of the Bachelor of techniques and technology;
* professional knowledge in solving Instrument Engineering problems;
* scientific knowledge in the methodology of the design of the industrial instruments and systems.

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| ***Learning outcomes*** |
| 1 | To demonstrate knowledge in natural sciences and mathematics |
| 2 | To demonstrate knowledge of laws and models of mechanics, electricity and magnetism |
| 3 | To demonstrate knowledge of basics of design and operation of automation systems |
| 4 | To demonstrate knowledge in the metrological provision of instruments and systems |
| 5 | To demonstrate knowledge of the legal, moral and ethical standards in professional activity |
| 6 | To demonstrate skills of the safe operation of instruments and systems |
| 7 | To have basic skills to analyze the relationship of culture, morality and religion |
| 8 | To demonstrate skills of physical training to ensure the full social and professional activity |
| 9 | To demonstrate skills in analysis of physical models and processes |
| 10 | To demonstrate skills in the use of software for computing, simulation and implementation of industrial technologies |
| 11 | To demonstrate skills of the assessment of technical condition and remaining life of the industrial equipment |
| 12 | To demonstrate skills on working in groups to create projects of automation and communication means |
| 13 | To demonstrate skills of the design and operation of electromechanical, pneumatic and hydraulic equipment |
| 14 | To demonstrate communication skills |
| 15 | Ability to apply basic techniques of marketing and management in the field of instrument engineering |
| 16 | Preparedness to use scientific-research methods in order to create new advanced instruments and systems |
| 17 | To be able to formulate the main technical and economic requirements to the projected devices and systems |
| 18 | To be able to express orally or in written form own ideas and variants of solving problems in several languages​​ |
| 19 | To be competent in the use of analog and digital, electrical and electronic technologies |
| 20 | To be competent in the field of operation and perspective development of compound electronic instruments, systems and complexes |
| 21 | To be competent in analysis and synthesis of instruments and systems |
| 22 | To be competent in the design, maintenance and operation of devices and systems of automation and telemechanics |