|  |  |
| --- | --- |
| Educational program | 8D01502 Physics |
| EP purpose | training of competitive, competent scientific and pedagogical personnel with professional competencies that meet the needs of the labor market, science and education in the field of physics and capable of self-development and social adaptation |
| EP type | New |
| Level on NQF | 8 |
| Level on SQF | 8 |
| The awarded academic degree | Doctorate |
| Period of study | 3 |
| Volume of the credits | 180 |
| Language of education | Kazakh, Russian, English |
| Date of approval of the OP at the Board meeting | 11.04.2023 |
| Professional standard |  |

|  |  |
| --- | --- |
| № | Learning outcomes: |
| 1 | Analyze and process information from various bibliographic sources; formulate and justify their own thoughts, ideas and convey them to the target audience; interpret the results of scientific research, submit them for publication; |
| 2 | To organize, design and implement the process of scientific and pedagogical research; to analyze and critically evaluate the quality and effectiveness of the selected scientific and pedagogical techniques and methods; to choose adequate methods and methods for solving experimental and theoretical problems; |
| 3 | Critically evaluate the problems, approaches and trends that reflect the current state of natural science education, design a systematic understanding of scientific information in the field of studying the main stages of development and changing paradigms in the evolution of modern physics; |
| 4 | Design management activities based on the analysis of factors of self-development and self-organization of the educational system; model, implement and evaluate the educational process; |
| 5 | Apply technologies and methods of teaching general and theoretical physics at the university, choose and use educational technologies, methods and means of teaching and education in order to ensure the planned level of personal and professional development of the student, synthesize various areas of scientific and educational-pedagogical activity in the conditions of rapid renewal and growth of information flows; |
| 6 | To justify and test the principles of organizing research activities of students in the educational process; |
| 7 | Demonstrate in-depth knowledge of fundamental branches of physics, skills of using knowledge of modern problems of physics; conduct independent scientific research in a selected field of physics; link experimental results with theoretical models. |