

**Division:** *Institute of Sport, Tourism and Service*

**Academic programme:** *49.04.01 Physical Education, Artificial Intelligence in Physical Education and Sport*

**Mode of study:** *full-time*

**Programme length:** *2 years (full-time)*

**Programme level:** *Master's degree*

**Language of instruction:** *Russian*

**Programme description:** *The aim of this Master's degree programme is to train multi-skilled specialists in the field of physical education and sports training, who can develop and implement modern technologies and use artificial intelligence technologies in various types of physical education. This programme is focused on coaching, pedagogical and analytical activities in various types of institutions related to physical education and sports, ensuring the formation of methodological knowledge, skills and abilities of applying modern technologies to training athletes; organization and management of the educational and training process, the implementation of its accounting and control; assessment of various body conditions, development of new technologies; use of artificial intelligence technologies in the practice of the training process. An obligatory section of the Physical Education programme is the implementation of scientific developments on the topic of the Master's thesis, publication of the results of experimental studies in journals and collected works, and participation in student scientific conferences.*

*Graduates of the 49.04.01 Physical Education Master's degree programme are able to perform their professional activity in professional education and continuing professional education in the field of physical culture and mass sports, training of reserve athletes, project management and research analysis.*

*The 49.04.01 Physical Education programme trains students for the following types of professional activity:*

- teaching;*
- organization and management;*
- analytics;*
- research.*

## **Main programme-specific classes:**

- *History and Methodology of Science*
- *Philosophy and Social Problems of Physical Culture*
- *Information Technologies in Science and Education in the Field of Physical Culture*
- *Fundamentals of Programming Using Python*
- *Fundamentals of Machine Learning*
- *Strategic Analysis in Physical Education and Sport*
- *Computer Vision for the Tasks of Physical Education and Sport*
- *Computer Simulation for the Tasks of Biomechanics*
- *Applied Tasks of Machine Learning and Big Data Processing*
- *Fundamentals of Neural Networks*
- *Research and Methodological Fundamentals of Planning and Scheming of Athletes Training*
- *Anti-doping Support System in Sport*
- *Management in Physical Education and Sport (Including Project Management)*
- *Technology of Research in Physical Culture*

**Programme manager:** *Vadim V. Erlikh, Doctor of Sciences (Biology), Professor, Director of the Institute of Sport, Tourism and Service*