

Objectives and Learning Outcomes of the Master's Program

Purpose of the EP	Learning outcomes
<p>To train highly qualified, multilingual and competitive specialists in the field of information systems and technologies with research and teaching skills; possessing advanced knowledge in the field of IT-technologies.</p>	<p>LO1 To analyze the philosophical problems of the development of civilization; freely use foreign languages for interpersonal and professional communication, independently acquire, develop skills in applying knowledge of an interdisciplinary and professional nature to solve non-standard problems, master social and psychological management technologies</p> <p>LO2 To form professional and pedagogical skills and culture of scientific and pedagogical thinking in higher education; develop the professional competence of the teacher; have the skills to work with methods and forms of training in the preparation of future specialists; application of modern educational technologies, including DOT</p> <p>LO3 To be able to analyze and manage the states of informatization, business processes, IS, the operating environment of the organization, to develop and support all types of support for IT projects of the organization</p> <p>LO4 Conduct security audit of computer systems and software; have the skills to develop recommendations for improving the management of processes and systems. Develop utilities for managing IC peripheral devices; have the skills to control the operation of devices through the I / O ports</p> <p>LO5 To develop a mathematical model of a process or phenomenon (tasks of science, education, technology, economics and management); formalize this model in the form of mathematical relationships. Build a computer model based on a mathematical model and conduct a computational experiment, checking its adequacy using factor analysis</p> <p>LO6 To practically work with mathematical applications Maxima, SciLab; with functional and logical programming tools for solving scientific and applied problems (including artificial intelligence and parallel computing problems, based on MPI and OpenMP technologies): program in Scheme, F #, and also define a functional approach in C ++ programming languages and C #.</p> <p>LO7 Develop, maintain and document software components and software applications of the IS; to develop software systems for solving applied problems of mobile devices; offer options for developing products, services and solutions using data mining methods based on big data.</p> <p>LO8 To develop services based on big data analytics; develop and implement new methods and technologies for using big data; visualize data; be able to reverse engineering the organization's business processes; have the skills to manage IT projects, apply the PERT analysis</p>

	<p>methodology</p> <p>LO9 demonstrate ability to organize and conduct independent research in the field of ICT; argue and develop sound recommendations; develop new models and methods for solving problems in various subject areas using information technologies; evaluate scientific, applied (professional) information and present it in the form of an analytical review.</p> <p>LO10 Apply methods of search engine optimization; have the skills to work effectively with a content management system (CMS); to recommend mathematical models and methods for use in the formalization and optimization of control problems; build models of applied problems, solve decision-making problems, optimize their results</p> <p>LO11 Possess the skills of computational experiment technology; optimization methods; approaches and methods used in solving artificial intelligence problems; apply skills and abilities in programming neural networks in pattern recognition tasks; skills in working with the main tools for building data mining.</p> <p>LO12 To choose the necessary research methods; carry out scientific research and experimental work; process the results obtained, analyze and present them in the form of completed research projects; master modern issues in the field of ICT</p>
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