



## PROBLEMS OF PROFESSIONAL COMPETENCE FORMATION OF FUTURE SPECIALISTS ON INFORMATION AND COMMUNICATION TECHNOLOGIES IN UNIVERSITIES

### ПРОБЛЕМЫ ФОРМИРОВАНИЯ ПРОФЕССИОНАЛЬНОЙ КОМПЕТЕНТНОСТИ БУДУЩИХ СПЕЦИАЛИСТОВ ПО ИНФОРМАЦИОННО-КОММУНИКАЦИОННЫМ ТЕХНОЛОГИЯМ В УНИВЕРСИТЕТАХ

**Нафiiак А. / Гафiiяк А.**

*Poltava national technical Yuri Kondratyuk university*

*Полтавский национальный технический университет имени Юрия Кондратюка*

**Annotation.** *The article analyzes and highlights the current problems of training specialists in information and communication technologies at universities. Therefore, the aim of the article is to develop a remote resource to implement the task of training specialists in information and communication technologies, namely, conducting classes (lectures, laboratories, practical, consulting), as well as Internet conferences for full-time and distance learning students in distance learning. The purpose of the article defined the tasks: to consider the main components of the professional development of higher education applicants; to explore ways and means of increasing the level of knowledge necessary in the future professional activities of specialists; to consider the components of the training system for future specialists in information and communication technologies; to develop a remote resource to implement the task of high-quality training of specialists in information and communication technologies.*

**Keywords:** *internet resource, site, web-resource, professional competences.*

**Introduction.** Current trends in education require a transition to a new system-educational educational paradigm, which, in turn, is associated with fundamental changes in the activities of a teacher implementing a new standard. Technological training is also changing, the introduction of information and communication technologies (ICT) opens up significant opportunities for expanding the educational framework for each subject in an educational institution. Today, the main features of the information society should be considered: an increase in the role of information in public life, an increase in the number of specialists employed by information technology, the growth of informatization and the role of information technology in public relations; creating a global information space that provides access to world information resources. That is why the education system in modern conditions put forward additional requirements for training future specialists in the IT industry to address non-standard tasks [1-3].

**Analysis of scientific papers.** The problem of innovative technologies in the context of professional training of specialists is studied by V. Andreev., G. Zhaldak, E. Mashbits, I. Osmolovska, Yu. Ramsky, V. Rudenko, I. Podlasy, N. Simonenko, V. Shapkin. Among foreign scholars who have studied this problem, there are: Meg Butler, Elizabeth Green, SaraDexter, Michael J. Hannafin, Eric Riedel, Janette R. Hill, Janet Macdonald. Information and communication technologies to support open education and scientific activity were considered by: S.M. Ivanova, A.F. Manako, V.M. Spirin, A.V. Yatsishy; Theoretical and methodological foundations of the formation of information educational space and the use of ICT in continuing pedagogical education - A.M. Gurzhiy, M.I. Zhaldak, T.I. Koval, a. M. Kolomiets, K. R. Kolos, V.V. Oleynik.



**Main part.** Studying the development of the information society, it should be noted that this process is based on a constant increase in the amount of information and knowledge, intellectual information technologies, and is supported by the constant growth of professional skills of future specialists. The results of these and other studies require new technologies and types of education, professional and other competencies, and support the process of continuous improvement of knowledge and skills of industry experts. Modern information technologies are the process basis of education informatization, the realization of which implies: improving the quality of learning through the full use of available information; increasing the effectiveness of the learning process based on its individualization and intensification; development of perspective means, methods and technologies of education with an orientation towards developing, advanced and personalized education; achievement of the necessary level in mastering by means of computer science and computer technology.

The system of general and vocational education, in spite of the pronounced need for wider introduction of high educational technologies, in itself is a catalyst for the society informatization process, a tool for a person information culture formation, training of a new formation professionals. In Ukraine, for a fairly short period, there have been cardinal transformations, in place of the traditional system of education, a system comes into existence, which has a setup for the formation and formation of a well-developed, creative person, capable of easily adapting to constantly changing environmental conditions, orienting in the flow of information, continuous but self-development [1, 3].

According to the "European Educational Initiative Project", posted on the website of the Ministry of Education and Science of Ukraine, starting in January 2016, a European Education Initiative project is being implemented in Ukraine. The project is aimed at developing IT education and integrating the best international practices into the system of training IT specialists. The goal of the project is to provide everyone with high-quality modern education in the field of information technology, to help IT-specialists to be competitive and guaranteed employment.

The website of the Ministry of Education and Science of Ukraine contains professional standards for the training of future IT industry professionals, including: product manager in the field of informational technologies; Project Manager in Information Technology; specialist in information resources; specialist in information systems; specialist in software development. In an era of almost complete computerization, the directions in the field of computer science are very popular among applicants in Ukraine and other countries. IT is a field of study that provides tremendous opportunities and perspectives. The educational offer of both Ukrainian and European universities in the field of information technology has significantly expanded in recent years[2, 3].

Information technologies bring the opportunity and the need to change the educational process model itself: the transition from reproductive learning to a creative model (when a life situation or process is modeled in an educational audience with the help of a new technological and technical support, students must apply their knowledge, show creative abilities for analysis of the simulated situation and develop solutions for the tasks). Experts believe that the development of



traditional and new technologies should follow the principle of additionality and adjustment, which, in turn, allows us to speak about a fundamentally new dimension of the educational environment - the global dimension that exists in real time and associates the entire set of educational technologies (Fig. 1).

SYSTEM OF FORMATION OF PROFESSIONAL COMPETENCE OF FUTURE SPECIALISTS  
IN INFORMATION AND COMMUNICATION TECHNOLOGIES

## HISTORY

### DEPARTMENT OF COMPUTER AND INFORMATION TECHNOLOGIES AND SYSTEMS

**01** The Department of Computer Technologies and Information Systems was founded based on a decision of the Academic Board of the Yuri Kondratyuk National Technical University as a graduating department within the established Faculty of Information and Telecommunication Technologies and Systems in 1998. He headed the Department of Computer Technologies and Information Systems, Ph.D., prof. Savenko R.G.

Further development of the department led to its division into the department of computer and information technologies and systems and the department of economic cybernetics. Head of the Department of Computer and Information Technologies and Systems became Ph.D., Assoc. Korh O.I.

**02**

**03** Nowadays the Department of Computer and Information Technologies and Systems is headed by Dr. Sc. Liakhov O.L. (dissertation topic is "Intellectualization of solving scientific and applied problems based on methods of computer algebra", 01.05.03 - "Mathematical and software of computers and systems", professor of the department of computer and information technologies and systems).

## CONCEPT

### PURPOSE OF CREATION AND ACTIVITY OF THE CHAIR

The conceptual basis for the creation and activity of the department is determined by the need for the development of scientific and educational areas that are focused on the training of highly qualified specialists in information technology, artificial intelligence systems, computer systems analytics, mathematical software for computers and systems.

The department has developed a specialist training model, which defines requirements for a graduate by the criteria:

- professional competence (combination of theoretical knowledge and practical training, ability to perform all types of professional activities defined by the educational standard for the profession);
- understanding of tendencies and basic directions of development of computer technologies and information systems.

The concept of activity of the department provides the solution of the main tasks: training of specialists in information technologies.

## AUTHOR

### PERSONAL SITE

**Hafiak Alla Myroslavivna**  
candidate of economic sciences, associate professor

**Field of research:**

- Research of development processes of informatization of national economy.

**Published:**  
More than 100 scientific and methodological works.

**Personal contacts:**

- 0679793650
- kits\_seminar@ukr.net

**Fig.1. Remote resource of the Poltava national technical Yuri Kondratyuk university**

The problem of using computer technologies in the students professional training of higher technical education institutions is closely related to the education informatization process. Trends in the development of modern society, its pronounced informatization explain the need for the increasing use of information technology in the education field. In this regard, the problems of innovative methods of teaching students in the conditions of the information technology development and the information technology industry and their analysis are definitely relevant.



## Conclusion.

At the same time, it is worthwhile to establish effective interaction with software developers in the field of education and give preference to proven, reliable and innovative companies that can bring real assistance in the implementation of IT projects. Currently, the rate of informatization of society is increasing, which is reflected in the penetration of modern information and communication technologies (ICT) into various areas of people's activities, acceleration of the processes of changing certain professional functions, the emergence of such professional activities that require a qualitatively new approach to the content and technology education.

## References:

1. Hafiak A.M. (2013) Osoblyvosti rozvytku rynku informaciji ta industriji informacijnykh tekhnologij v umovakh jedynogho informacijnogho prostoru [Features of the development of the information market and the information technology industry in a single information space]. Visnyk nacionaljnogho universytetu «Ljvivsjka politehnika». Serija: Komp'juterni nauky ta informacijni tekhnologiji – Bulletin of Lviv Polytechnic National University. Series: Computer Science and Information Technology, 771, 24 – 28 [in Ukrainian].
2. Simonenko N.N. (2012) Upravlenie obrazovatel'nymi uslugami s primeneniem innovatsionnykh metodov obuchenija [Management of educational services using innovative teaching methods]. Vestnik Tikhookeanskogo gosudarstvennogo universiteta – Pacific State University Gazette, 2, 201—206 [in Ukrainian].
3. Kononecz, N. V. (2016). Osnovy resursno-orientovanoho navchannia dystsyplin kompiuternoho tsyклу (z dosvidu ahrarynykh koledzhiv) [Fundamentals of Resource-Oriented Computer Cycle Education (from the Agrarian College Experience) Poltava: PUET [in Ukrainian].

Статья отправлена: 21.10.2019 г.

© Hafiak A.