THE THEORETICAL ASPECTS OF TEACHING GEOINFORMATION TECHNOLOGIES TO STUDENTS OF HIGHER TECHNICAL INSTITUTES

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Abstract: *the analysis of the curriculum on geoinformation technologies is given. The positive aspects of mastering the latest information and communication technologies in order to improve the level of training of future engineering personnel in higher technical institutes are shown.*
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The main purpose of training in geoinformation technologies is to provide the content of the training course with full theoretical content, while using the extensive capabilities of modern computer technologies. As experts point out in their scientific works, in the modern period, geoinformation systems serve as the main means of planning and organizing topographic and geodetic works. These types of work cannot be implemented without electronic geodetic instruments and computers. In this regard, there is an active transition to integrated information technology education in higher technical institutes [1, 2].

Geoinformation technologies are rather complex systems that combine technical means, software, a database of geographical data, officially established norms and rules for collecting, storing, analyzing and transmitting information about processes and phenomena that are spatially linked and distributed. The development of society and the complexity of its infrastructure require a new generation to manage resources more carefully and thoughtfully, to possess new means and methods of information processing. These are methods of processing and analyzing spatial information, methods of operational solution of management tasks, assessment and control of changing processes. Geoinformation technologies provide methods and means of information processing that ensure high visibility of the display of heterogeneous information, tools for analyzing the state of the environment [3].

In the educational process of specialists in technical specialties, both electronic textbooks and remote technologies for obtaining geoinformation education are used. That is, modern learning tools open up new opportunities for accelerated training of a future specialist in geoinformation technologies. Thus, students of geodetic specialties, when studying disciplines related to modern geodetic instruments, learn to obtain coordinates of a certain territory in electronic format. In the future, it is necessary to teach the future specialist to work with digital databases [4]. Therefore, the content of the disciplines on geoinformation technologies includes such sections as: databases and file systems, functions of database management systems.

At the moment, guidelines have been prepared in electronic form, containing examples of individual tasks. Of course, the development of electronic educational literature is a transition to a new level of methodological support. It is created in order to expand the presentation of existing knowledge and is designed to provide in-depth study of the discipline. The electronic textbook, as the main educational electronic publication, is created at a high scientific and methodological level and must fully comply with the accepted educational standard of the specialty.

Also, this type of publication ensures the continuity and completeness of the didactic cycle of the learning process, provided that interactive feedback is provided. The introduction of the discipline on geoinformation technologies has a positive effect on the assimilation of material in all technical disciplines. New information and communication technologies make it possible to integrate curricula to find common ground between general education and special disciplines, making interdisciplinary connections. That is, in higher technical education, the methodological training of a student is carried out not only in each individual discipline, but also their integration with the active use of information technologies [5].

Studying the discipline of geoinformation technologies involves students acquiring skills in using specialized software to solve issues of territorial management, solve the problem of transport accessibility, automatically build three-dimensional objects, build transport accessibility zones, calculate areas for selected areas of a digital or electronic map, analyze modeling results.

The use of geoinformation technologies the educational process, in addition to acquiring students' skills in working with modern software, allows you to systematize the knowledge gained in technical disciplines and get an idea of their practical application.

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