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INTEGRATION OF INNOVATIVE TECHNOLOGIES INTO SYSTEM OF TRAINING OF STUDENTS OF ENGINEERING SPECIALITIES

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Summary. In article features of working out and possibility of an electronic training course "Chemistry" created on the basis of a platform of remote training Moodle for students of engineering specialities are discussed. Positive experience of integration of an electronic training course "Chemistry" in process of training of students of engineering specialities is discussed.

Key words: Innovative technologies, electronic training course.

ИНТЕГРАЦИЯ ИННОВАЦИОННЫХ ТЕХНОЛОГИЙ В СИСТЕМУ ОБУЧЕНИЯ СТУДЕНТОВ ИНЖЕНЕРНЫХ СПЕЦИАЛЬНОСТЕЙ

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Аннотация. Рассмотрены особенности разработки и возможности электронного учебного курса «Химия», созданного на базе платформы дистанционного обучения Moodle для студентов инженерных специальностей. Обсуждается положительный опыт интеграции электронного учебного курса «Химия» в процесс обучения студентов инженерных специальностей.

Ключевые слова: Инновационные технологии, электронный учебный курс.

The formation of a new system of education, what is happening in Ukraine, focused on entry into the world of information and educational space. This process is accompanied by significant changes in educational theory and practice associated with the introduction of innovative learning technologies, which should be adequate to the modern technical possibilities.

The problem of development of interactive information systems is widely discussed in the literature [1]. But today is still an open series of questions and problems related to the integration of innovative technologies in the system of teaching chemistry. Therefore, the relevance of the creation of electronic educational resources, including e-learning courses in chemistry, is beyond doubt.

The aim of this work it is the development of e-learning course "Chemistry" on the basis of distance learning platform Moodle for students of engineering specialties.

At the Department of General Chemistry, National University of Life and Environmental Sciences of Ukraine set up e-learning courses in chemistry-based distance learning platform Moodle. The distinctive feature of the Moodle platform is that it distinguishes between several types of users, such as the chief administrator, administrator, author of the course, teacher, student, visitor. It allows you to change the appearance and placement of blocks on the front page of the entire site or a separate course, back up, and has a flexible security system, supports a variety of methods for user access.

New technologies have affected and sources of information for the preparation of e-learning course. To the traditional sources, such as the specialized literature and periodicals, added new on-line sources of information [2]. Designed e-learning course contains elements of two categories: passive – include display of static information, links, images, video, text or HTML-pages, active – allow to students to interact with the course, with the results of the students are stored in the database. This presents the basic requirements for the organization and principles of formation of the content of the course, the structuring of on substantive modules teaching electronic materials(lectures and presentations to them with the elements of multimedia, laboratory work, assignments for self-study, quizzes to test knowledge and skills).

Analysis of the principles underlying the preparation of e-learning course "Chemistry" showed that the most significant of these is the principle of pedagogical expediency of application of innovative electronic resources. He is a leading educational principle, and requires a comprehensive educational evaluation of each step to create e-learning [3]. No less important is the principle of humanization, providing training is not limited rigid time frame. The peculiarity of the principle of interactivity is that it reflects a pattern of contacts not only students with a teacher, mediated through information technology, and students together. Moodle provides opportunities for communication. The system supports the exchange of files of any format - both between teacher and student and among students themselves. Distribution Service allows you to quickly inform all participants of the course, or some groups of new developments. The Forum provides an opportunity to organize discussion of the problems. Go to messages in the forum you can attach files to any format. There is a function evaluation reports - both teachers as and students. Chat allows you to organize the discussion of problems in real time. Created course allows

for all of the basic mechanisms of communication: interactive (responsible for the organization of interaction), perceptual (responsible for the perception of each other), communicative (responsible for the exchange of information).

To implement the principle of individualization of the real learning process and provides the input current control. Input control allows you to continue to not only make an individual learning plan, and conduct, if necessary, additional training for first-year students to fill in missing source of knowledge and skills necessary for successful future learning.

The principle of identification is implemented in the control of independent learning, because when you work with an electronic course provided more opportunities for fraud than traditional forms of education. Control independence in the performance of tests, essays and other control measures can be achieved by various technical means.

The principle of flexibility training is expressed in convenience for the students because they can study at their convenience. With access to web-sites with the course materials (video files, text, slides), they have the ability to repeatedly "listen" to determine the course and those doses of information that they are able to absorb all at once.

Our experience of integrating e-learning course "Chemistry" into process of training of students of engineering specialties showed that its use improves interest students' through the introduction of innovative technologies and forms of training, significantly enhances the motivation to study chemistry, increases the level of individualization and intensifies the learning process. All of this suggests that e-learning courses should not become a complement to, an independent contemporary methodological support as an integral part of a holistic educational process, greatly increases its efficiency.

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