The competence approach to designing structure and contents of educational programs in higher professional education

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Abstract
The shrinkage of time necessary to develop new industrial technologies has led to the significant divergence of employees’ educational period of time and the moment when they start using the knowledge they have got. Therefore, it becomes necessary to create the technology of modernizing the educational contents regularly updating the final goals of education in order to form a specialist capable to adapt in the conditions of changing technologies and increasing instability on the job market. This technology of forming and optimizing educational contents can be based on the following approaches:
- using the methods of engineering pedagogy connected with the designing technologies of innovative professional education system;
- structuring educational contents with remaining integrity of fundamental, interdisciplinary, professional and innovative scientific and educational material;
- integration of educational contents with science and industry;
- modularization of training material structure as the background of educational program flexibility and controllability;
- establishing links of contents with the results of education on the basis of current and intermediate control of students’ progress.

General methodology of designing and updating the educational contents can be represented as successive solution of the following tasks:
- synthesis (preliminary selection) of the contents;
- analysis (expert evaluation) of the contents;
- optimization (correction) of the contents.

The main task is to develop the competence-oriented contents of separate disciplines (modules) whose combination forms educational training program for a specialist.

Module, as a result of designing, is a systematically organized complex of documents (project) which defines its complexity, educational contents, organization forms, training and evaluating technologies, education resource providing, and is aimed at the achievement of fixed education results. The process of designing a module consists in solving the opposite task, i.e. in finding arguments of functions using the predetermined values of the functions. The solution for this sort of tasks is characterized by uncertainty. It means that the same results can be obtained by means of different educational contents, various technologies and forms of education.

Changing requirements of the job market to university graduates and, consequently, to the results of education provided by a discipline (module) should be promptly reflected by the adequate changes in educational contents.

Keywords: The competence-oriented contents, synthesis, analysis and optimization of the contents

References