

## **The formation of future engineer personality on the basis of interdisciplinary ecological projecting method**

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The development of engineer education is defined as an innovative contemporary education. The education innovation is marked by new requirements of informational society to a future engineer. The main aim of such education is training and up-bringing not only of an intelligent, highly professional, creative personality, but also a professionally mobile engineer. The new society requires for another kind of a personality: mobile, active, ready for any changes, self-dependent, and initiative.

The educational institutions put their goals the following:

- development of practical educational programs which respond to the requirements of students and employers;
- perfection of educational methods, especially for engineers;
- supporting of usage of technical and multimedia means of education;
- deep integration of humanitarian subjects (especially foreign languages) into the course of engineers' training;
- management training of engineers;
- assistance in protection of environment.

The investigations showed that one of the effective methods used in the process of engineer personality formation is interdisciplinary ecological projecting method which allows integrating students' knowledge from different scientific spheres around solving professional problems.

During training with the help of above mentioned method the students acquire new knowledge, abilities, and skills and also master the complex of professional and special competences. Active creative work is a powerful stimulus for new ideas' appearance, foundation for the main types of thinking development and a push to performing of independent professional activity.

In the background of the method lies specially worked out professionally integrative and intensively communicative technology of training future engineers.

The target aspect of technology is to stimulate an interest to regional ecological problems through self-research activities, performing of creative tasks with the use of knowledge received while studying different subjects.

The planned result is the formation of professionally important personal and intellectually-logical abilities of a future engineer while performing different projects directed to the solving of global, socially-vital ecological problems.

The technology is based on three components: knowledge, actions, subjectivity. The content of technology corresponds to the requirements of a contemporary engineer. The characteristic features of the technology are variety of the training stages (theoretical, practical, moral-psychological) and conditions which influence the effectiveness of education, and also simultaneity, providing the use of methods, forms and means of several pedagogic technologies at a time, which help to form a personality of a future engineer [1].

The intensive potential of the technology consists in the following:

- professionally integrative content is informationally deeper than a content of a particular subject and is directed to formation of thinking by categories abilities (Okolepov O.P.);
- professionally integrative content possesses resources to critical thinking formation as it allows the students to appreciate independently facts, affairs and helps to find new ways of solving problems (Ledenev Ju. I.);
- educational process organized on the integrative basis provides the development of an ability to see more behind the processes of different nature and character (Lavrentiev G.V.);
- integration of humanitarian and special subjects' content takes its aim to dialectical thinking development of students due to problem situations use and solving interdisciplinary tasks of different levels;
- integration of training contents increases notional interest, stimulates personal and professional motivation of studying of an integrative subject [1].

The interdisciplinary ecological projecting method requires participation in realization of projects in joint activity and dialogic interaction. Being without usual informative base on the already known facts, every participant of a project tries to find and select means and ways of solving the pointed in the project problems, build a number of adequate acts to contribute his possibilities into the creation of a qualitative project. It is the so-called creative process during which spontaneous storing of information takes place, the algorithm of scientific research is learned, the outlook different fields is strongly broadened.

So, the use of interdisciplinary ecological projecting method helps to fulfill the requirements for engineers' training. The development of knowledge during the creation of personal professional projects encourages creative self-realization, self-perfection, self-development. General and professional competences of future engineers are formed and successfully developed.

### **Literature**

1. Kaplina S.E. Professional mobility: basis, concepts, technologies. – LAP LAMBERT Academic Publishing GmbH& Co.KG, Saarbrucken, Germany, 2011– 490 p.

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