

Energy for students of technical specialties

Practical English Language for Technical University students

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Annotation: The article discusses the experience of the Department of Electric Power Plants in interaction with energy enterprises in the process of professional training of students.

Key words: the process of training specialists, the interaction of the university and energy production.

Energy is the basis of the country's economy and innovative development, therefore, changes in the training of heat power specialists in the context transformations in the system of higher technical education, is of particular importance. In addition, the problem with the availability of highly qualified heat power specialists is becoming more acute in the country.

For students of the profile "High-voltage electric power industry and electrical engineering", aviation and machine-building enterprises with a developed electrotechnological production are possible bases for practice.

Improving the processes of production and undergraduate practice by improving the quality of their methodological support

The Department of Power Plants has developed work programs for all types of practices. Methodical manuals for students and teachers on practical training have been published. The active use of these manuals, as well as the development of new methodological materials, including reference literature on the bases of practices, will improve the efficiency of the processes of production and scientific and production practices.

An important moment in improving the quality of vocational education can be conferences on the results of practice, at which students report the results of their practical activities at enterprises.

In many ways, the quality of classes in production depends on the qualifications and preparedness of the teacher of the department. Preparation for the lesson should include the study of the characteristics of the enterprise, electrical circuits, descriptions of equipment, regulatory literature (PUE, PTE, instructions, etc.), as well as attendance at classes in production conducted by experienced teachers of the department.

Involvement in lecturing, management of course design, management of bachelor's VKR and master's theses of leading specialists from energy and research and production organizations

At the Department of Electrical Engineering, it is traditionally practiced to involve leading specialists from energy and research and production enterprises in the educational process. Some of them give lectures on special disciplines. We believe that specialists should be more actively involved in the management of course design, the management of bachelor's and master's theses, as well as in consultations for students performing these works. The question of payment for such work to specialists from production remains open. Currently, classes with students, which require high qualifications and serious training, are carried out by specialists of enterprises almost free of charge. Organization of defenses of VKR and master's theses at enterprises and organizations that are basic for the department.

This experience shows that students who defend qualification papers at enterprises take the preparation of graduation projects and master's theses and reports very seriously. Such defenses are attended by members of the State Attestation and Examination Commissions, highly qualified specialists of enterprises. Of course, for students such defenses are a great psychological burden, but a friendly, businesslike and interested atmosphere creates a condition for good results. It is important that production specialists get a real idea about the level of

training of our graduates, about what problems the scientists of the department are dealing with, what opportunities the department has to solve production problems. In turn, the teachers of the department receive information about the problems that concern production workers, and are guided by scientific research in these areas.

Communication with enterprises where graduates of the department work.

In order to receive feedback on the quality of preparing graduates for professional activities and recommendations for improving this quality, the department seeks to establish contact with enterprises that employ graduates of the department. The effectiveness of this event is possible with its good organization, which involves the creation of certain tools (questionnaires, questionnaires, etc.) and in-depth analysis of the feedback received. Based on this analysis, regular adjustment of the educational process is possible.

Creation of basic production sites for scientific research in the areas of scientific activity of the department

Taking into account the specifics of the objects of scientific work of the department, it is necessary not only to develop a laboratory base directly at the department, but also to use the experience of operating electric power facilities, to conduct experimental work in production. Since these facilities are vital, there is practically no opportunity to interfere with the work and regimes of enterprises. Therefore, one should follow the path of creating basic production sites for conducting scientific research in the areas of scientific activity of the department.

As a result of classes at the enterprises of the power system, students of the profile "High-voltage electric power industry and electrical engineering" should know:

- principles of organization and features of the functioning of the electric power system; composition and structure of the energy system of Tatarstan;
- methods for the production of electrical energy at thermal and hydraulic power plants; block diagrams of power stations;

- types of high-voltage electrical equipment of power stations and substations, features of its operation;

- methods of transmission of electrical energy at various nominal voltages; types and circuit diagrams of substations; types and schemes of switchgears of substations;

- types and types of insulating structures of high voltage electrical equipment; ways to protect electrical installations from direct lightning strikes and lightning and internal overvoltage waves affecting the insulation;

- environmental aspects of high voltage electrical installations; issues of electromagnetic compatibility in high voltage installations; methods of labor protection and ensuring the safety of personnel when working in electrical installations.

Should be able to:

- read electrical diagrams of electrical installations, switchgears (RU) of substations, evaluate these diagrams in terms of operational reliability and safety of personnel;

- determine the types of insulation of high voltage electrical equipment; evaluate the correspondence between the levels of electrical insulation strength and the levels of acting overvoltages;

- determine and evaluate methods of lightning protection and protection against incoming overvoltage waves, methods of grounding and ensuring electrical safety in electrical installations.

Must have the skill of: behavior during classes at electric power facilities; reading electrical circuits; analysis of the design implementation of switchgear devices; determining the purpose and types of equipment in appearance. This program is currently being implemented in full.

The development of engineering and technology is happening so rapidly that the flow of new knowledge not only has time to be assimilated, but is not fully introduced into the educational process. Therefore, an obligatory component of the

training of any specialist is the ability to use a computer to solve professional problems, so students must have a system of knowledge and skills that allow them to competently use computer technology in their future professional activities.

List of used literature:

1. The Law of the Republic of Kazakhstan "On Education", the State Compulsory Standard of Education of the Republic of Kazakhstan. Higher education. Undergraduate. Basic provisions of August 23, 2012 No. 1080.

2. Лопухова Т.В. Качество подготовки специалиста и анализ структуры его деятельности // Высшее образование в России. 2019. №4. С.94-100.

3. Зацаринная Юлия Николаевна - канд. техн. наук, доцент кафедры «Электрические станции» (ЭС).E-mail: zac_jul@mail.ru.