

## **Modern Peculiarities of Teaching Physics in The Technical University**

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At present, the progress in development of education system is largely determined by intensive introduction of modern computer and information technologies into educational process. The education of students in technical university should be directed not only to obtaining knowledge of fundamental and special disciplines, but also to the formation of professional skills in use of computer technology in future professional activities.

In this regard, the traditional forms and methods of education are undergoing significant qualitative changes. The use of modern multimedia systems, lecture presentations and other technologies, providing an opportunity to set out the information in an accessible and qualitative way, takes an increasing place in the process of teaching physics. But this does not cancel the traditional, "verbal" way of lecturing. It is the combination of these two techniques that make it possible to improve substantially the assimilation efficiency of the proposed material. Computer technologies allow us to offer a demonstration of interesting physical experiments, phenomena and processes, to give illustrative examples that contribute to a better understanding. Live communication, in turn, allows adjusting the proposed material in accordance with the level of its perception by students, checking the understanding directly during the lecture and answering the emerging questions. At the same time, lecture demonstrations and physical experiments shown by the lecturer, especially if students can take part in them, not only contribute to a more complete understanding of the topic under consideration, but also cause a natural interest in the subject as a whole.

The second priority is to teach students to solve physical problems, since this skill is the criterion for understanding theoretical material and the ability to apply the knowledge gained in practice. In practical exercises it is useful to use different types of tasks: traditional calculation tasks, qualitative questions, and computer tests.

The third important component of the learning process is the work of students in physical laboratory. To increase the effectiveness of training, it is possible to combine traditional physical experiments and measurements with computer laboratory work, especially in the cases where it is impossible to observe real processes and phenomena in a conventional laboratory.

Such methods, using traditional and modern teaching methods, are widely used at the Department of Physics of NTU "KhPI" when studying the discipline "General Physics" and special courses.