

**IMPROVING THE METHODOLOGY OF TEACHING PHYSICS
"MECHANICS" AT SCHOOL IN INTERDISCIPLINARY
SYNCHRONOUS AND SYNCHRONOUS COMMUNICATION.**

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Annotation: This article provides some information about effective methods of teaching physics to school-age students, as well as the mechanics of physics.

Keywords: Classical mechanics, molecular kinetic theory, material point, soil mechanics, law of inertia, trajectory, magnetic hydrodynamics, aeroelasticity theory

The school physics course is structured around four basic physical theories: classical mechanics, molecular kinetic theory, electrodynamics, and quantum theory. The theoretical core of the school physics course incorporates four basic theories tailored specifically for the school course. "This will allow us to highlight the general directions of the teaching and methodological direction of the physics course, as well as the formation of all the materials. Such generalization of educational material allows to provide students with the formation of sufficient ideas about the structure of modern physics and the implementation of the theoretical method of teaching ...

Mechanics is a branch of physics that, with its rigid and logical structure, contributes greatly to the development of students' thinking. Successful study and understanding of other sections of a physics course depends on the degree to which mechanics has been mastered. Because they widely use the concepts of mechanics (speed, acceleration, mass, force, work, energy, etc.). The content of the physics course in the education system and the reason why its study begins with

mechanics: mechanical motion is more visual among all forms of motion of matter, and modeling of physical phenomena in classical physics often reflects the structure of physical systems and the mechanical image of the processes occurring in them. is related to the creation.

Improving the teaching of theoretical mechanics against the background of modern problems of education is a task that will be relevant for many years and has various approaches and solutions. Weak school preparation of applicants in mathematics and physics, reduction of hours for class work with students, inability of many of them to work independently often poses additional tasks for first-second year teachers to develop interest in educational activities, to a specific academic discipline, to form guidelines for independent work over the course

Theoretical mechanics is a fundamental natural science discipline that underlies modern science and technology. The study of theoretical mechanics greatly contributes to the formation of a system of fundamental knowledge that allows a future specialist to scientifically analyze the problems of his professional field, to put into practice the basic knowledge he has acquired, independently, using modern educational and information technologies, to master the new information that he will encounter in production and scientific activity.

In applied mechanics, methods of controlling the motion of a mechanical system are considered on the basis of the general laws and principles of theoretical mechanics, and ways to obtain the appropriate properties of a mechanical system are determined. Applied mechanics play an important role in the control of control systems. The object of control is mechanical objects, such as self-propelled and flying machines (ships, planes, rockets and helicopters), various machines (machines, turbines, electric and electronic machines, combustion and rolling machines) and test mechanical devices, adjusters, jet engines and another is seen. The motion of deformable solids and gaseous liquids is studied in the mechanics of contiguous media. The theory of elasticity and plasticity, hydrodynamics and aeromechanics, gas and wave dynamics are the most advanced fields of the

mechanics of contiguous media. In the mechanics of contiguous media, the structure of solids, liquids, and gases is considered to be a continuous structure, and each element of the volume of the contiguous medium interacts with neighboring elements. Magnetic hydrodynamics, aeroelasticity theory, and cracking theory are areas of mechanics of contiguous media.

Mechanics is a key factor in solving many problems. Some of them are: reduction of resistance to objects moving in water at high speeds (100 m / s and above); creation and storage of plasmas with a temperature of one million degrees; to determine the properties of materials under the influence of high pressures and temperatures, the effect of explosive power on structures; explanation of air circulation; weather forecasting; study of mechanical processes in plants and living organisms; Mechanics of variable bodies, space flight dynamics, plasma magnetic field motion, and many other issues related to stellar evolution and solar phenomena are considered in classical mechanics, quantum mechanics, statistical physics, electrodynamics, and others.

The phenomena of a system moving at high speed cannot be explained by the laws of classical mechanics. These phenomena are considered in the relativistic mechanics of A. Einstein. The phenomena of the atom and the nucleus are presented in quantum mechanics, which deals with methods for converting mechanical problems into mathematical problems. However, any problem in mechanics cannot be solved mathematically. In such cases, the problems are roughly solved on the basis of various mechanical hypotheses and intuitions. Under the influence of mechanics, a number of branches of mathematics developed. In the field of mechanics in Uzbekistan, economic research is conducted in the fields of machines and mechanisms, strength of structures, seismodynamics of buildings, multi-phase and multi-component environments, fabric strength, parachute theory, mechanisms of the cotton complex, shell theory, economic cybernetics, environmental mechanics and others.

The study of mechanics begins with the kinematics of a material point. To classify mechanical motion, it is necessary to introduce the concepts of material point motion trajectory. The notion that a line formed by any point on an object during motion is called a trajectory is not complicated. This concept is illustrated by specific examples: the trace of chalk on the board, and so on. The concept of material point is very abstract. Therefore, the introduction of this concept should be explained to students in sufficient detail. It is important to understand the need for and use of this concept in the study of certain types of motion of objects. We solve many kinematic problems using the modeling method in the study of the mechanics of physics. For example, to learn to write the forward motion of an object, it is enough to know the laws of motion of a point. Therefore, in the study of the motion of an object, it can be modeled and explained as a material point.

Synchronous distance learning occurs when teachers and students interact in different places at the same time. Students admitted to synchronous courses usually need access to a computer at least once a week. Synchronous distance learning can include multimedia components such as group conversations, webinars, video conferencing, and phone calls. Synchronous learning is usually good for students who plan scheduled days and times for study. works. People who like students' noisy structured courses usually prefer synchronous learning.

In order for students to master the ability to determine the position of an object by its coordinates, they should be asked to record several different positions of a moving object and to determine the coordinates of the position relative to the chosen number system.

To do this, a number of areas of the school mechanics course are deliberately complicated. For example, the law of inertia is expressed in the general physics textbook and school textbook for universities by D.V .Sivukhin:

In many school physics classes, the first law was expressed as simple, close to Newton's tariff. In particular: "Anybody maintains its initial state in a temporary or linear straight motion until it is affected by other objects and removed from it."

Mechanics is an integral part of both classical physics and modern physics. Almost all important branches of modern physics are based on the laws of classical mechanics. The study of mechanics in general secondary education solves part of the main problem of many general education. In this section, students will be introduced to the concepts needed to master the entire physics course. These concepts include material point, coordinate system, number system, displacement, velocity, average and instantaneous velocity, acceleration, velocity and its projections. Also, in this section, students are introduced to the concept of the theory of relativity of motion, which is necessary to master the whole course of physics. The concepts formed on this topic are widely used in other sections of the physics course. Therefore, it is important to master these concepts.

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