



# Physics Teaching Methodology for Non-Physical Bachelor's Degrees of Higher Education

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## KEYWORDS

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nature and their  
laws.

## ABSTRACT:

Today, in the age of physics and technology, High School of education teaches students the work of electric current old, electro montage, one of the main tasks of physical and Technological Sciences is to raise its content awareness to the level of development of Science and technology in the modern era. We need to organize extracurricular physics and technology circles in secondary education schools and create opportunities for students to make electrical circuits (in Physics Laboratory rooms or using a virtual laboratory) with their slaves in practical clarity in addition to their theoretical knowledge. In a simple example Tariq, we can do the work below.

## Introduction

Physics and astronomy is a science that teaches the phenomena and phenomena of nature and their laws. Man is also a part of nature, in direct connection with it. It is carried out in order to know the secret of my phenomenon in nature, to determine their laws, mainly in order to improve the living conditions of a person. Without this, it was possible to use the achievements of physics and astronomy to radically change nature.

Because physics and astronomy occupy a special place within the natural sciences, it is said to form the foundation of all natural science. Because physics has made and adds its worthy contribution to the achievements of all natural sciences.

Examples of this include Physical Chemistry, Chemical Physics, Biophysics, physics, geophysics, and other disciplines. It is no secret that even in medicine today, the role of physics and astronomy is incomparable, since its contribution originally began with X-rays, while today the use of ultrasound and lasers continues, through computed tomography.

Moreover, even in saving humanity from an energy crisis, physics is making and contributing its worthy contribution through the use of atomic and nuclear energy.

In the educational system, the terms "physics", "astronomy", "physics course", "General astronomy course" are again found. Their content includes the

following. Physics has its place in the history of mankind along with science. Its creators are natural scientists. At present, there is still a great deal of research in this area. Of physics and astronomy

Our great thinkers Rozi, Farabi, Berani, Ibn Sina, Mirzo Ulugbek, Umar Hayyom and others made a worthy contribution to its emergence and development as a science. A program, textbook and teaching aids reflecting the content of the physics and astronomy course are compiled and written by Methodists. These are students who study at different stages of teaching, gaining a certain level of knowledge from physics and astronomy.

Physical knowledge is the reflection in the mind of a person of physical phenomena in nature, their application in legal life. Factors that have a positive effect on improving student knowledge include:

- The high intellectual potential of students, in other words, their interest in reading and their creative approach to it;
- The fact that my teacher has sufficient scientific potential and professional skills;
- Full compliance of the content of the educational programs and educational books used with didactic requirements;
- full provision of the training process from information and communicative and methodical interaction;



- The presence of a material and technical base that needs training;
- adequate financial provision of sanitary and hygienic safety, the presence of social and psychological conditions, the provision of knowledge, necessary for the effective organization of training;
- Satisfaction of the material and spiritual needs of teachers;
- Not to violate the right of students and to be treated humanely to fulfill their obligations;
- The implementation of the process of giving knowledge in a democratic principle, etc.

From the above, it is not difficult to notice that the implementation of the teaching of physics and Astronomy in the system of continuing education at the level of modern requirements is one of the pressing scientific and methodological problems of the teaching methodology of physics and astronomy. The requirements of the law "on education" and the "national program for training personnel" adopted in the Republic also emphasize the need to strengthen the focus on teaching physics and improving its quality at different stages of training and introduce the younger generation to its content and achievements. Of course, the physics teacher takes the main place in the implementation of all this. It follows that this tutorial describes how physics and astronomy teaching should be carried out in the preparation of future physics and astronomy teachers in higher schools. Because, to what extent the future "modern natural-scientific landscape of the universe" is formed in physics teachers, to such an extent it is passed on to the future generation, the implementation of which is a very responsible task. In order to adequately carry out this task, it is necessary that the physics teacher has deep knowledge, acquired the skills and skills of teaching it, is aware of modern pedagogical and information technologies, and is able to apply in his practical activities.

Today, it is assumed to carry out the teaching of physics in secondary schools, academic lyceums and vocational colleges, higher schools at the level of the requirements of times and society.

Of course, to solve this problem, first of all, it is necessary to further strengthen the theoretical and practical training of physics teachers, which is being prepared in higher schools. To do this, in order to further improve the courses

of General Physics and astronomy, theoretical physics and Astrophysics and methods of teaching physics and astronomy, which are taught in higher schools, the following are?

Implementation is necessary:

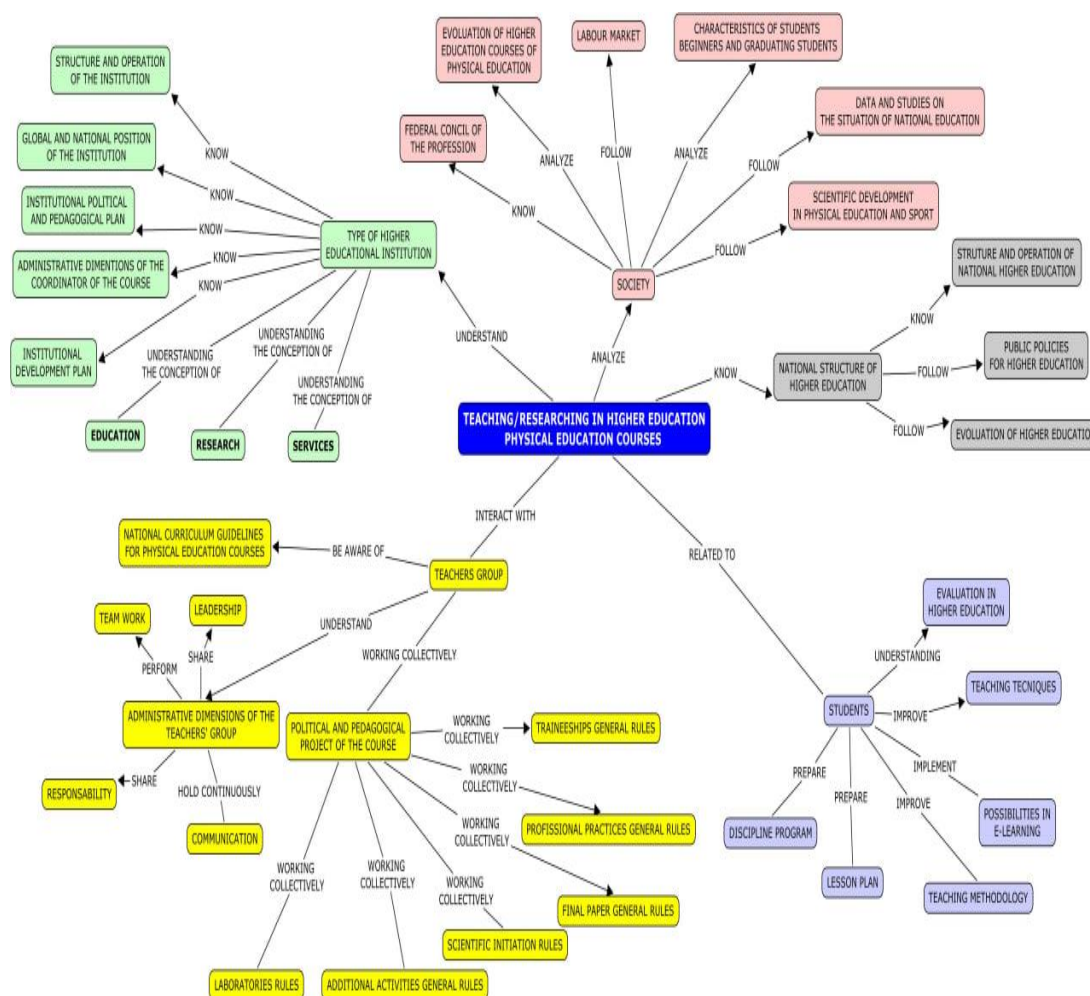
- improving the content of the physics and astronomy courses being taught, taking into accounts the achievements of modern physics and astronomy;
- implementation of the content of the above physics and astronomy courses, the lecture on them and the practical classes conducted using new pedagogical and Information Communication Technologies;
- Higher educational institutions need to strengthen the professional direction of physics and astronomy courses.

Since this tutorial is the first book aimed at students of undergraduate educational areas "methodology of teaching physics and astronomy", it is unlikely that there will be shortcomings in it. The shortcomings of this tutorial, which are indicated in terms of structure, composition and content

We accept diligently, and in this we express gratitude to colleagues in advance. The purpose of the science of theory and methodology of teaching physics and astronomy is to teach students the methods of teaching physics and Astronomy in secondary schools, academic lyceums, professional colleges, the most effective and optimal ways to achieve knowledge, qualifications and skills in this science.

This course will alert students from the methodological instructions for working with the curriculum in physics and astronomy of secondary schools, academic lyceums and vocational colleges, its analysis, distribution of course content by hours and teaching.

The organization of the various forms of the lesson according to the circumstances, as well as the correct way to interest students in the basics of science, gives them a number of positive tips on how to use different methodological approaches to activating the lesson.



**Figure 1.** Provides clear instructions on the organization of independent work of students in the classroom, extracurricular activities, conducting extracurricular activities (clubs, Olympiads, excursions, evenings and conferences).

It also provides an excellent overview of the aesthetic, environmental aspects and methodological foundations of physical and astronomical education. prepares specialists both theoretically and methodically for the teaching of the physics and astronomy course;

Students should get acquainted with the programs of secondary schools, academic lyceums and physics and astronomy.

Requirements for the knowledge, skills and qualifications of students in science for 40 years. Requirements for the knowledge of the student in the subject" theory and methodology of teaching physics and astronomy": Bachelor in the framework of issues carried out in the course mastering:

- must be able to analyze the programs of the science of physics and astronomy;
- It is necessary to know the content of the physical and astronomical concept, the law, the magnitudes mentioned

in the program, and to be able to teach students during the study practice;

- Each student can teach as a teacher to the students of the course he is studying in the seminar classes on the subject of physics and astronomy teaching methodology;
- They must have the skills to be able to do practical activities;
- Students must have the skills to be able to show all demonstrative experiences, to be able to perform laboratory work.

Interrelationships with other disciplines and is stylistically continuous. The science of theory and methodology of teaching physics and Astronomy in all its departments: it is interconnected with pedagogy, psychology, theoretical physics, astronomy, Astrophysics and is inextricably linked with higher mathematics, computer science and natural-scientific disciplines such as information technology, biology, geography, and also requires the



student to have sufficient knowledge and skills from these disciplines.

#### The role of Science in education

A student studying the subject "theory and methodology of teaching physics and astronomy" teaches physics and Astronomy in secondary schools, academic lyceums and professional colleges, performs laboratory work, shows demonstration experiments, solves issues, as well as,

The whose knowledge of modern physics and astronomy, applies new information technologies and applies the knowledge gained in his pedagogical and scientific activities.

Modern information and pedagogical technologies in the teaching of science The teaching of the subject "theory and methodology of teaching physics and astronomy" uses a set of electronic posters, handouts, electronic textbooks and manuals, virtual laboratories, internet data, various training on the local network, a set of data on the control of scientific knowledge. Teaching of science is carried out by pedagogical methods such as independent education, seminars, mental attack, solving situational problems, discussion, role-playing games, writing abstracts.

In the development of trivialization of the XXI century, has a special significance, and science is characterized as a period of rapid development of techniques.. Our President Sh. M. Mirziyoev said that "we mobilize all the strength and capabilities of our state and society so that our youth have independent thinking, high intellectual and spiritual potential and can mature, be happy as people who do not empty in any sphere to their peers on a global level" [1] the dep said. Therefore, in our country, a great emphasis is placed on the science and pedagogical staff. Today, in the age of physics and technology, Osmium High School of education teaches students the work of electric current old, electro montage, one of the main tasks of physical and Technological Sciences is to raise its content awareness to the level of development of Science and technology in the modern era. We need to organize extracurricular physics and technology circles in secondary education schools and create opportunities for students to make electrical circuits (in Physics Laboratory rooms or using a virtual laboratory) with their slaves in practical clarity in addition to their theoretical knowledge. In a simple example Tariq, we can do the work below. In addition to Dastan, we must understand the students' free time by doing various practical things necessary to apply in our daily routine in order to make it meaningful and transferable. One such practical work is the electro montage electro montage work. When teaching electro montage work, we must first

give them insights into the role of electricity in human life, whether we need to save it to deliver it to future generations, as software energy sources are decreasing.

Simple methods are shown to solve the theoretical and practical problems of students. In order to make the students' free time meaningful, using information communication technologies (ICT) to increase the students' interest in physics by taking the lesson in an animation style, the instructions are given. Keywords: practice, application to increase creative etiquette, teach computer literacy. In the development of trivialization of the XXI century, has a special significance, and science is characterized as a period of rapid development of techniques.. Our President Sh. M. Mirziyoev said that "we mobilize all the strength and capabilities of our state and society so that our youth have independent thinking, high intellectual and spiritual potential and can mature, be happy as people who do not empty in any sphere to their peers on a global level" [1] the dep said. Therefore, in our country, a great emphasis is placed on the science and pedagogical staff. Today, in the age of physics and technology, High School of education teaches students the work of electric current old, electro montage, one of the main tasks of physical and Technological Sciences is to raise its content awareness to the level of development of Science and technology in the modern era. We need to organize extracurricular physics and technology circles in secondary education schools and create opportunities for students to make electrical circuits (in Physics Laboratory rooms or using a virtual laboratory) with their slaves in practical clarity in addition to their theoretical knowledge. A simple example is that we can carry out the work below in tariqas [3]. In addition to, we must understand the students' free time by doing various practical things necessary to apply in our daily routine in order to make it meaningful and transferable. One such practical work is the electro montage electro montage work. When teaching electro montage work, we must first give them insights into the role of electricity in human life, whether we need to save it to deliver it to future generations, as software energy sources are decreasing. When teaching students the work of electromontage, it initially blurs as intended if we start by assembling a simple electrical circuit. Usually the electrical circuit is performed in the form of a drawing. Drawings showing the connection styles of elements in an electrical circuit are called an electrical circuit.



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