

Head of the department:

Kholmedov Khamid Makhkamovich

Reception: Tuesday - 14:00-16:00, Friday - 12:00-16:00

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The Department of Physics was established in August 1955 on the basis of the combined Department of Higher Mathematics and Physics. At that time, the department was part of the faculty of telephone-telegraph communication, and then automatic and multi-channel electrical communication. In 1970-2001, the Department of Physics has been operating as part of the Faculty of Multichannel Electrical Communication, in 2002-2005 as part of the Faculty of Basic Sciences, in 2005-2013 as part of the Faculty of Radio Engineering, Radio Communication and Television, and since 2013 as part of the Faculty of Television Technologies.

Candidate of Physics and Mathematics, Associate Professor I.S.Andreev (1959-1961), Doctor of Technical Sciences, Professor B.V.Yakovlev (1961-1982), Candidate of Technical Sciences, Associate Professor V.I.Zhukov (1982-83), Doctor of Physics and Mathematics , professor, academician of AS Uz M.S.Yunusov (1983-1986), doctor of physics and mathematics, professor M.G.Xaliulin (1986-1998), candidate of physics and mathematics, associate professor P.A.Tojiboev (1998-1999), candidate of physics and mathematics , Associate Professor U.Egamov (1999-2000), Doctor of Physics and Mathematics, Professor A.H.Kosimov (2001-2002), Doctor of Physics and Mathematics, Professor K.P.Abdurakhmanov (2003-2013), Associate Professor O.E.Tigay (2013-2015)), V.S.Hamidov, Senior Lecturer of the physics department (2015-2016), K.P.Abdurakhmanov, doctor of physics and mathematics, professor (2016-2017). Since 2017, candidate of physical and mathematical sciences X.M.Kholmedov has been working as the head of the department.

Candidates of science, associate professors, M.M.Lerner, P.I.Shulgin, T.I.Rudenko, V.I.Zhukov, T.A.Lisovsky, I.M.Ishenko, M.I.Ismoilov, X.X.Khafizov, S.Ye.Yartseva, Ye.G.Merkulova, I.S.Sultonov, D.Yu.Yusupova, Ye.V.Berter, Yu.Abdurakhmanov, V.V.Soloveva, X.X.Tokhirjanov, S.X.Khaydarova, N.F.Kharitonova, Ye.A.Stepanova, A.R.Suncheleva, L.A.Kovaleva, X.K.Kuchkarov, V.K.Kanaki, A.A.Fattakhov, U.Egamov, K.Khaydarov, A.T.Abdujamilov, N.Ochilova teachers like worked effectively.

The teachers of the department are giving physics lessons to the students of all faculties of the university.

UNDERGRADUATE EDUCATION TEACHING PHYSICS:

- 60310500 - Digital economy (by sectors and sectors);
- 60320400 - Library and information activities (Information library technologies);
- 60412800 - Electronic commerce;
- 60 540300 - Mathematical engineering (in the fields of production);
- 60610300 - Information security (ICT and service);
- 60610500 - Computer engineering (" Computer engineering ", "IT service", "Information security", "Multimedia technologies ");
- 60610600 - Software engineering;
- 60610700 - Artificial intelligence;
- 60611000 - Telecommunication technologies (" Telecommunications ", "Broadcasting", "Mobile systems");
- 60611100 - Television technologies ("Audiovisual technologies", "Telestudio systems and applications");
- 60611200 - Economics and management in the field of ICT;
- 60611300 - Vocational education in ICT;
- 60611400 - Postal communication technology;

- 60611500 - Radioelectronic devices and systems (by networks);
- 60612000 - Information communication engineering;
- 60612100 - Cyber Security Engineering;
- 60710600 - Electric power industry (by networks and directions);
- 60711500 - Mechatronics and robotics;

Currently, 22 full-time professors and 3 part-time teachers are working in the physics department.

TEACHERS OF THE DEPARTMENT.

- Kholmedov Khamid Makhkamovich - Ph.D; head of the department;
- Abdurakhmanov Kahar Pattokhovich - DSc., Professor;
- Imamov Erkin Zunnunovich - Ph.D., Professor;
- Akhmedova Nodira Amindzhanovna – Ph.D., docent
- Rakhmatullaeva Mokhirakhan Faizullaevna - Ph.D., docent;
- Ganiev Abror Sattarovich - D., docent;
- Bakhronov Hayot Nurovich - Ph.D., docent;
- Ochilova Ozoda Odilovna – Ph.D., docent;
- Mukhammedaminova Lola Mannapovna - Senior Lecturer;
- Tahirov Ulug'bek Kholmiraevich - Senior Lecturer;
- Haydarov Kamoliddin Baratovich - Senior Lecturer;
- Karimov Hasan Narzullaevich - Senior Lecturer;
- Tulyaganova Shakhnoza Abdurakhimovna - assistant;
- Ashirbaeva Almagul Gurbanbekovna - assistant;
- Alilov Sarvar Samadovich - assistant;
- Shaira Isajanovna Abdullayeva - assistant;
- Absalyamova Ilmira Ildarovna - assistant;
- Nazirov Kamoliddin Khusnutdinovich - assistant;
- Khalilova Nozliya Samadovna - assistant;
- Khalikov Kamaluddin Abduganievich - assistant
- Karimova Nozliya Nabijan kizi-intern teacher;
- Akhmadov Majidjon Ashraf ugli- intern teacher

In recent years, the department has been carrying out large-scale work on fulfilling the requirements of the Law of the Republic of Uzbekistan "About Education", improving the quality of the educational process, applying ICT and modern pedagogical technologies to the educational process . In accordance with the state educational standard of the Republic of Uzbekistan, modern textbooks, electronic training manuals, methodical manuals, multimedia lectures were created in physics, corresponding to the content of the model program of physics.

SCIENTIFIC METHODOLOGICAL WORKS OF THE DEPARTMENT.

- P.Abdurakhmanov, V.S.Xamidov, N.A.Akhmedova. "PHYSICS" Textbook. Tashkent. 2018;
- T.Vetrova . A collection of problems from physics (translation by K.P.Abdurakhmanov et al.). Tashkent. 2021;
- P.Abdurakhmanov, U.Egamov "Physics Course" textbook, Tashkent "Educational Methodology" 2015 ;
- K.P.Abdurakhmanov, U.Egamov "Physics course " textbook, Tashkent. Contact, 2013 .
- P.Abdurakhmanov, O.E.Tigay, V.S.Xamidov. Course multimedia lexicon po Physics", training manual, in Russian, 640 pages, 40 bt;
- P.Abdurakhmanov, O.E.Tigay, V.S.Xamidov. "Collection of presentation multimedia lectures from physics course", methodical guide, in Uzbek, 45 lectures, Pdf + disk + CHM.;
- P.Abdurakhmanov, O.E.Tigay, V.S.Xamidov. "Set of presentation multimedia lectures from physics

- course, methodical guide, in Russian, 45 lectures, ; Pdf + disc + CHM.;
- M .Kholmedov, B.Ibragimov, X.N.Karimov . Methodical guide for practical training in physics. "Mechanics" part 1 . 2020 y;
 - A.S.Ganiyev, H.N.Bakhronov, I.O.Jumaniyazov . Methodical guide for practical training in physics. "Electromagnetism" part 3. 2020;
 - Kholmedov H.M., Ibragimov B., Karimov X.N. Metodicheskoe posobie k prakticheskim zanyatiyam po fizike. Chast I. _ Mechanics. Tashkent, 2020 ;
 - Ganiev A.S., Jumaniozov I.O., Bakhronov Kh. Metodicheskoe posobie k prakticheskim zanyatiyam po fizike. Chast III . Electrostatics. Electromagnetism. Tashkent, 2020;
 - Kholmedov H., Karimov X.N., Abdullaeva Sh.M etodicheskoe posobie k prakticheskim zanyatiyam po fizike . Chast II. Molecular physics and thermodynamics. Tashkent, 2021.;
 - Kholmedov H.M, Karimov X.N, Abdullayeva Sh., Khalilov S.S. Mechanics. Molecular physics and thermodynamics. Methodical manual for laboratory work in physics . Part 1. 202 1 year .
 - Kholmedov H., Karimov X.N. , Abdullaeva Sh., Khalilov S.S Laboratory practice in physics. Mechanics and molecular physics. Chast 1. Tashkent, 2021.;
 - Ismailov Sh., Khalilov S., Tulyaganova Sh. Methodical guide for practical training in physics. Part V. Optics. Fundamentals of quantum mechanics. Tashkent. 2021.;
 - Abdurahmanov K.P, Ochilova O., Tohirov U., Khaydarov K. Methodical guide for practical training in physics. Part 4. Harmonic vibrations. Mechanical and electromagnetic vibrations . Mechanical and electromagnetic waves. Tashkent 2021;
 - Abdurakhmanov K.P., Ochilova O., Tokhirov Kh. , Khaydarov K.B. Frequency 4. Harmonic oscillations, mechanical and electromagnetic oscillations, mechanical and electromagnetic waves. Tashkent, 2021 .;
 - Imamov E.Z, Rakhmatullayeva M. Muhammedaminova L. et al. Methodical guide for practical training in physics. Part 6. Physics of solids. Atomic and nuclear physics. Tashkent 2021.;
 - Imamov E., Rakhmatullaeva M., Mukhamedaminova L. i dr., Methodologically practical and practical Chast 6. Physics tverdogo tela. Atomic and nuclear physics. Tashkent, 2021
 - Khaydarov, S.V.Kormiltsev. Sbornik zadach i metodicheskie ukazaniya k prakticheskim zanyatiyam po fizike. "Kolebaniya i volny. Opti ka. Atomic physics";
 - X.Khaydarov, M.S.Haitov, H.M.Xolmedov, M.A.Turgunboyeva, Sh.I.Abdullayeva. Laboratory work and methodological instructions in physics. "Vibrations and waves. Atomic Physics";
 - P.Abdurahmanov, M.A.Abdugadirov, N.X.Ochilova, H.M.Xolmedov, S.Masharipova. Laboratory work and methodological instructions in physics. "Thermodynamics and Molecular Physics, Solid State and Nuclear Physics". Tashkent, 2013 .;
 - K.P.Abdurakhmanov, O.E.Tigay, V.S. "Set of problems and methodological instructions for practical exercises in physics", study guide, in Uzbek, 4 parts, 400 pages.;
 - P.Abdurakhmanov, O.E.Tigay, V.S.Xamidov "Set of problems and methodological guides for practical training in physics", study guide, in Russian, 4 parts, 400 pages.;
 - P.Abdurakhmanov, O.E.Tigay, V.S.Xamidov "Laboratory work and methodological instructions in physics", study guide, in Uzbek, 212 pages;
 - P.Abdurakhmanov, N.F.Kharitonova, O.E.Tigay, V.S.Xamidov "Virtual laboratory work and methodical instructions in physics", study guide, in Russian, 75 pages;
 - P.Abdurahmanov, H.M.Kholmedov, V.S.Hamidov. Methodical guide for performing virtual laboratory work in physics. ;
 - Virtual laboratory practice. Abdurakhmanov K.P., Kharitonova N.F., Khamidov V.S. "Communicator".;

In the Department of Physics, classrooms for multimedia lectures and virtual laboratory sessions, as well as auditoriums for modeling physical processes using MatLab and Matcad programs, have been created. The department has collected more than 220 GB of information technology resources, virtual laboratory work on all parts of physics, a collection of 45 multimedia lectures in Uzbek and Russian languages has

been created.

Department of Physics currently has 5 laboratory classes with modernized physics stands, 1 practical class, 1 virtual laboratory class, and 3 multimedia lecture halls. [estudy.uz](#) at the department, [my.study.uz](#) distance education systems and [media.uz](#) educational system portals are working.

On the basis of the cooperation agreement between the Tashkent University of Information Technologies named after Muhammad al-Khorazmi and the Toms State University of Management Systems and Radioelectronics of the Russian Federation (Russian abbreviation TUSUR) on the development of modern methods and technologies of teaching physics, all books of physics produced at TUSUR Multi-module physics laboratory stands with the possibility of performing 23 laboratory works were presented and introduced into the educational process.

The professors and teachers of the physics department have been conducting scientific and research work in addition to educational and methodological work, and have been achieving great results. The department conducts scientific research on the topics of physics of semiconductors, physics of superconductors, improving the technology of developing solar cells, increasing its efficiency under the influence of nanotechnological treatment of the solar cell surface.

Under the scientific leadership of professor V.V.Yakovlev, scientific works on the study of mechanical, electrical and optical properties of light industrial materials, including cotton fiber, were carried out at the Department of Physics, and the obtained results were submitted to the Central Research Institute of the Textile Industry of the Republic.

Associate Professor A.S.Ganiev conducts laboratory training.

T.S.Yuldashbaev, Doctor of Physics and Mathematics, Academician of ASRUz, scientific research work was carried out on the topic "Effect of radiation on laser elements". Under the scientific supervision of Professor M.G.Xaliulin, the economic contract was executed on the subject of "Electron accelerators".

Under the leadership of Academician M.S.Yunusov of ASRUz, in cooperation with physical-technical institutengo "physics-sun", asuz and the Institute of Nuclear Physics, academic research work was carried out on the topic "Study of electrical and optical properties of semiconductor materials". These scientific researches were later continued in the scientific research laboratory under the Ministry of Communications of the Republic of Uzbekistan under the scientific guidance of Associate Professor Yu.Yu. those who did.

K.X.Khaydarov and docent U.Egamov conducted an economic contract on the topic of "Study of the effect of nuclear radiation on laser gyroscopes" based on the order of the Ministry of Defense.

Under the leadership of professor K.P.Abdurakhmanov, according to the task of UzAAA, the contract No. 03-04 was executed on the topic of "Development of hardware for distance education - programmatic television system", the obtained results were applied to the process of teaching physics.

Under the leadership of Professor K.P.Abdurakhmanov, the economic contract No. 02-06 was executed on the topic "Development of a solar photoelectric plant for autonomous energy supply of telecommunication systems".

Under the scientific leadership of Professor K.P.Abdurakhmanov, the innovative project IDA-4 of the Science and Technology Development Coordination Committee under the Cabinet of Ministers of the Republic of Uzbekistan was carried out on the topic "Creation and small-scale production of solar chargers for batteries of mobile and stationary radio stations". As part of the innovative project, a 10-watt solar charger SZU-10 device for batteries of mobile radio stations operating in the ultra-short wave range and a 60-watt solar charger SZU-60 devices for batteries of mobile radio stations operating in a short-wave range were developed. 500 copies of the solar energy charger SZU-10 device and 120 copies of the SZU-60

device were delivered to the Ministry of Internal Affairs of the Republic of Uzbekistan on the basis of the economic contract No. 34/4-29.

Under the scientific leadership of Professor K.P.Abdurakhmanov, the innovation project of the FTRMQ No. I-09-25 under the Ministry of Foreign Affairs of the Republic of Uzbekistan was carried out on the topic "Creation of an experimental sample of small-power photoelectric plants designed to raise water from various depths". The created experimental sample of the 600-watt device that raises water from different depths with the help of solar energy was put into use at the "Kishkene Kom" farm in the Kegeili district of the Republic of Karakalpakstan.

Wide zone A³ B⁵ the fundamental scientific project of the FTRMQ under the Ministry of the Interior of the Republic of Uzbekistan No. BV-F2-005 on the topic "research of the physical basis of creating double geostructures of compounds with a very limited absorption layer and the cascade photoconverters based on them" was completed.

The international project MK-03/2010 within the framework of Uzbekistan-Korea scientific cooperation on the topic "Development of the technology of obtaining and creating semiconducting heterostructures based on gallium phosphide with inner zone radiation" was carried out under the scientific guidance of Professor K.P.Abdurakhmanov.

Under the scientific leadership of Professor E.Z.Imamov, the practical project of FTRMQ No. A-009 under the Ministry of Foreign Affairs of the Republic of Uzbekistan on the topic "Development of the scientific basis for increasing the efficiency of solar cells with nanostructured components" was carried out.

Under the scientific leadership of Professor K.P.Abdurakhmanov, the innovation project of the FTRMQ No. I-2011-6.3 under the Ministry of Foreign Affairs of the Republic of Uzbekistan on the topic "Creation of a modern educational complex in physics for bachelors of higher educational institutions in technical fields" was carried out. The results of the innovation project were implemented in Nukus, Urganch, Samarkand, Karshi and Fergana branches of Tashkent Institute of Railway Engineers, Namangan Polytechnic Institute of Engineers, Fergana Polytechnic Institute and Tashkent University of Information Technologies.

Under the scientific guidance of associate professor N.A.Akhmedova, the practical project of the FTRMQ number A under the Ministry of the Interior of the Republic of Uzbekistan on the topic "Creation and search for two-pass photoreceptors with sensitivity in the field of the ultraviolet spectrum of light" was carried out.

The fundamental project No. F2-011 was carried out under the leadership of Professor M.A.Abdukadirov on the topic "Research of the effect of concentrated rays on heterostructures with extremely limited absorption layer and step photoconverters based on them".

K.P.Abdurakhmanov, the fundamental project number F2-009 on the topic "Research of new nonlinear materials for digital optical processing" was carried out.

International project M/CRDF - 17/2013 on the topic "Optimization and characterization of contact layers in solar cells" was carried out in cooperation with Professor EZImamov, academician RAMo 'minov - UzRFA FTI.

Under the scientific guidance of Professor K.P.Abdurakhmanov "Razrabotka method i model system Management stream dannyx TIAV - discretno - nepreryvnyimi process Vospriyatiya According to the order of the State Committee of the AATK of the Republic of Uzbekistan on the subject of "informatsii", the economic contract was executed.

Under the scientific guidance of Professor K.P.Abdurakhmanov, the practical project No. A3-023 on the topic "Development of the experimental model of the laser introscope and the diagnostic technology of electrically inactive defects in semiconductors" was completed.

Under the leadership of Professor E.Z.Imamov, the practical project No. A4-001 on the topic "Creation of

technology for the development of solar elements with effective parameters based on new contact structures" was completed.

Under the leadership of Associate Professor A.S.Ganiev, practical project No. A4-005 on the topic "Preparation of a holographic collector of solar energy and creation of technology for the development of solar elements" was carried out.

BA - A 3-026 on the topic " $\text{Al}_x\text{Ga}_{1-x}\text{P}/\text{Ga}_y\text{In}_{1-y}\text{P}$ heterostructures and photosensors for spectrophotometric analysis of short-wave optical signals based on them" done.

Professor E.Z.Imamov under the leadership of Sun element to the surface nanotechnological processing to give under the influence his efficiency increase theoretical research No. BV-FZ-005 on the subject of practical project done

X.N.Karimov is training at the "Applied Physics" club

In 2015, V.S.Khamidov won the nomination "The best pedagogue who uses innovation and information technologies" of the "The best pedagogue of a higher educational institution" national competition.

In the department, all young teachers who do not have scientific potential are working on doctoral dissertations, they are assigned scientific supervisors and scientific work topics.