

TCTI SIP REPORT 2021



TASHKENT CHEMICAL-TECHNOLOGICAL
INSTITUTE

UNITED NATIONS PRINCIPLES FOR RESPONSIBLE EDUCATION

Sharing information on
Progress Report
2020-2021



Dear UN PRME team,

*Tashkent Chemical-Technological Institute (TCTI)
presents its commitment to the UN Principles for
Responsible Management Education.*

*We are proud to be a PRME signatory and hereby express
our continued commitment by submitting the SIP report.*

Yours faithfully,

Dr. B.Usmonov

Rector

4/5

Dear friends and colleagues!

Tashkent Chemical-Technological Institute is one of the leading educational institution of the Republic of Uzbekistan, which trains highly skilled and competitive specialists for the chemical, oil and gas processing, constructional materials and foodstuff industrial enterprises.

Due to its short 30-years period activity Institute made a worthy contribution in the development of powerful scientific, intellectual and spiritual potential of our country. The main task of the Institute is to strengthen this potential, to improve the physical and spiritual prosperity of young generation, to provide them with deep fundamental and special knowledge, to bring



them up for making a special contribution to the further development of economical and spiritual power of our country.

According to the Presidential Decree of the Republic of Uzbekistan from May 6, 1991 Tashkent Chemical-Technological Institute was founded on the basis of Chemical technology and Engineering technology faculties in the staff of the former Tashkent Polytechnic Institute.

Over the past period more than 17000 highly skilled engineer technologists have been trained at Tashkent Chemical-Technological Institute for the chemical, oil and gas processing, constructional materials and foodstuff industrial enterprises and other branches of agriculture. Besides that, on the basis of the results of large-scale scientific and research studies conducted at the existing 23 departments and scientific research laboratories were prepared more than 60 Doctors of Science, 150 Candidates of Science, 100 PhDs.

There is a complete multilevel system of continual education at the Institute. In accordance with the requirements of the State program on training Bachelor and Master degrees nowadays at the institute are studying 6746 bachelor students in 23 educational directions and more than 696 master students in 23 master specialties.

Tashkent Chemical- Technological Institute (TCTI) became a signatory to the UN Global Compact

Principles of Responsible Management Education (PRME) in 2020. It is guided by six key principles to give future leaders of the economy and industries the skills needed to achieve sustainable development goals, coordinates institution with the global activities of the United Nations. In accordance with the principles of PRME, over the past two years, academic disciplines and research projects have been developed that orient scientists and students to the values of global social responsibility, reflected in the international initiatives of the UN.

Respectfully,
Botir Usmonov,
Rector
Tashkent Chemical-
Technological Institute

MINISTRY OF HIGHER AND SECONDARY SPECIALIZED
EDUCATION OF THE REPUBLIC OF UZBEKISTAN



TASHKENT

CHEMICAL-TECHNOLOGICAL

INSTITUTE



Welcome to TCTI

The history of institute is directly connected with the development the chemical, oil and gas, food industries, and also manufacture of building materials in Uzbekistan. In 1934 in the chemical-technological branch of chemical faculty of the former Central Asia State University experts on the specialties "Technology of silicates" - 5 experts, "Technology of oils" - 7 experts, «Technology of leather-tanning extracts» - 3 experts were trained for the first time, 192 engineer-technologists were trained till 1939.

5 faculties

15 bachelor directions

20+ master's degree specialties

40+ cooperation with foreign Universities

500+ flats in student's dormitory

500+ professors and teachers

7500+ students



<http://www.tkti.uz>

History of the institute

The history of Tashkent chemical-technological institute began in 1940 with signing the Decree about the organization of chemical-technological faculty.

In the conditions of modernization of economic sphere, proceeding from prospects of social and economic development of the country, society requirements, scientific and technical, technological and cultural achievements, world tendencies of personnel training, with a view of creation of necessary conditions for introduction in the maintenance of higher education of requirements of consumers of personnel, a harmony of the state educational standards with the academic standards of the international practice, and also their continuity work on the development of projects of the state educational standards, requirements for qualification, curricula and general programs a working group has started working on the branches provided on "the qualifier of the higher educational directions and specialties".

The special attention is being paid to the development of teaching staff's knowledge on modern pedagogical, information-communication technologies and foreign languages, and also wide application of the gained experience in the educational process.

With the aim of execution of the decision by the Cabinet of the Republic of Uzbekistan №190 on September 10th, 2007 "About measures on the further perfection and increase of efficiency of master's activity in the system of higher education of the Republic of Uzbekistan", a conversation with first-year and second-year students of master's degree department about their research works, pedagogical technologies and pedagogical skill, foreign languages proficiency and computer literacy was spent by a working group of the



Administrative building of Tashkent Polytechnical Institute located in the Navoiy street



The process of the defense of pre-diploma practical report in the Department of Silicate Technologies (1975 y.)

Five graduates of institute are Academicians of the Academy of Sciences of the Republic of Uzbekistan.

If early personnel training was on 3 specialties, and at present bachelors are trained in more than 30 directions and masters in more than 35 directions. Particular attention is focused on supporting and encouragement of the gifted youth at the institute. The talented students possessing good indicators in studies take an active part in the Republican competitions on the nominal grants by the names of the President of the Republic of Uzbekistan and great scholars Abu Raykhon Beruniy and Mirzo Ulugbek.



Historical building of the TCTI.

Graduates of our institute conduct their successful labour activities as leading experts in such companies as SSC "Uzkimyosanoat", NHC "Uzbekneftegaz", the holding company "Uzmevasabzavotuzumsanoat", the companies "Uzyogmoytamakisanoat", "Uzdonmahsulot", "Uzkurilishmateriallari", the complex "Shurtangazkimyo" and the gaschemistry complex "Ustjurtgazkimyo".



Professors of the Department of Winemaking Technology were carrying out research.

For the past 26 years, number of students of the institute became holders of the scholarship after named of the President of the Republic of Uzbekistan, more than 30 students - holders of the state scholarship named Abu Raykhon Beruniy and holders of state scholarship named Mirzo Ulugbek.

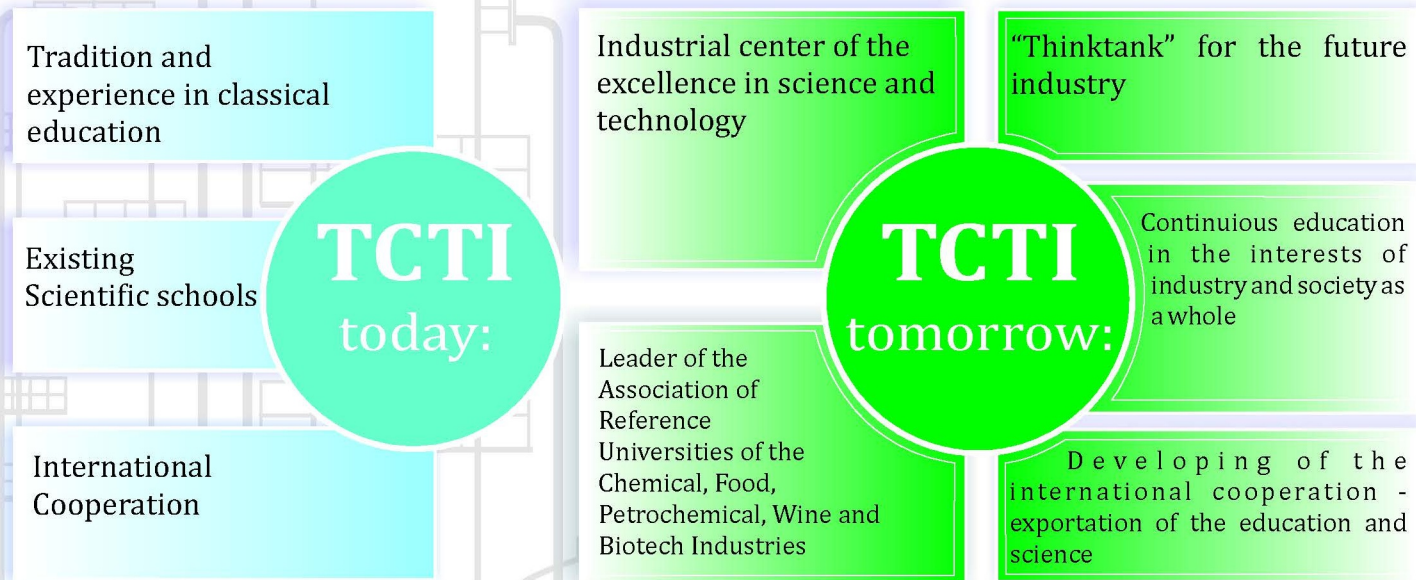


Current building of the TCTI

Development strategy of the Institute until 2025



Formation of the conditions under which TCTI will become the key industry institution of higher education - the center of excellence for scientific and technological consortia and the reference university in project-based learning systems.



Strategic directions

Chemical, foodstuff and oil production for the future	
Vital quality	
Genome materials	
Ecologically pure and green technologies	
Multipurpose Technologies	
Education for the future	

Faculties

FACULTY OF THE CHEMICAL TECHNOLOGY OF FUEL PRODUCTION AND ORGANIC COMPOUNDS

Educational departments of the faculty:

- Technology of high molecular compounds and plastics;
- Organic chemistry and heavy organic synthesis;
- Chemical technology of oil and gas processing;
- Technology of cellulose and wood processing;
- Physics and electrical engineering.

Directions of education (bachelors and masters)

- Chemical Technology of basic organic synthesis;
- Chemical Technology of high molecular compounds, plastics and elastomers
- Technology of paper-cellulose and wood processing industry;
- Technology of oil and gas chemical industry;
- Refining Oil and oil-gas;
- Production of rubber technic products.

Dean of the faculty **Abdullaev Alisher** PhD, Associate professor

At the faculty on the basis of local and utilized raw materials scientific schools which conduct researches on the following directions have been created:

- organic chemistry;
- physics and electrical engineering;
- synthesizing of chemical active polymers;
- studying of the properties of natural polymers;



Contacts:

Phone: +998712441972;

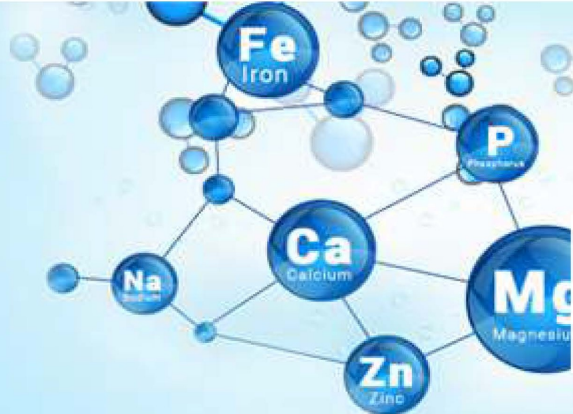
Fax: +99871 2447917

E-mail: tcti_yobktf@tcti.uz

36, Navoi str., Tashkent, Uzbekistan, 100011

- processing of plastics;
- processing of oil and gas;
- studying of physical and chemical properties of similar natural fuels;
- technology of basic (heavy) organic synthesis.





Faculties

Faculty of Chemical Technology of Inorganic Substances

Dean of the faculty
Safarov Yodgor
PhD, Associate professor

At the faculty on the basis of local raw materials and waste products on the following field creative researches are being carried out:

- production of new types of mineral fertilizers;
- obtaining binding materials;
- creating ceramics, glass and glass ceramics;
- production of china products;
- synthesizing efficient anticorrosive inhibitors;



- on the basis of chemistry and properties of rare and noble materials -obtaining new chemical class compounds;
- implementing non-polluting technologies into industrial enterprises.

Educational departments of the faculty:

- Chemical technology of inorganic substances;
- Analytical, physical and colloidal chemistry;
- Technology of silicate materials and rare, noble materials;
- Chemical technological processes and machines;
- General and inorganic chemistry.

Directions of education (bachelors and masters)

- Chemical Technology of Inorganic Substances
- Chemical Technology of silicates and constructional materials;
- Chemical Technology of rare and noble materials;
- Processes and equipments of chemical Technology.

Contacts:

Phone: +998712684706;

Fax: +99871 2447917

E-mail: nmtf@tcti.uz

41, M.Ulugbek str, Tashkent, Uzbekistan,
 100011



Faculties

THE FACULTY OF THE TECHNOLOGY OF FOODSTUFF PRODUCTS

Educational departments of the faculty:

- Technology of the production of foodstuff products;
- IT, automation and Control;
- Basics of mechanics, Machineries and Equipments of foodstuff Industry;
- Foodsafety.

Directions of education (bachelors and masters)

- Technology of foodstuff productions (by kinds of production);
- Technological machines and equipments of food production;
- Automation and Control of Technological Processes and Production;
- Foodsafety.

Contacts:

Phone: +998712449235;

Fax: +99871 2447917

E-mail: oomtf@tkti.uz

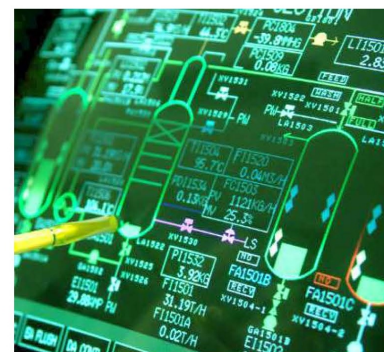
32, Navoiy str., Tashkent, Uzbekistan, 100011

Dean of the faculty Baltabaev Ulugbek PhD, Associate professor

The first professional training on technology of foodstuff was carried out in 1940 at chemical-technological faculty of Central Asian Polytechnical Institute.

In the structure of faculty on the basis of using agricultural products and their secondary raw materials scientific schools have been working in the following directions:

- studying biocatalytic bases of manufacturing canned products;
- biochemistry and biotechnology of foodstuff products;



- catalyst modification of plant oils;
- developing foodstuff machines and equipment;
- drying agricultural products, creating non-waste products technologies of obtaining juice and concentrations;
- automation of production processes; -development of devices by definition of humidity of loose materials and liquids



“SPECIAL CORRESPONDENCE BRANCH” OF TCTI UNDER THE KUNGIRAT SODA PLANT

Joint Faculty with Belarus State Technology University

Double Degree Diploma

Over the execution of measures over the formation of the system of professional development of engineering staff of the plant and the creation of enough facilities for the objective preparation of highly qualified personnel and staffing the Kungiratsoda factory, on the Decree by the President of the Republic of Uzbekistan, № PD-49 on April 13, 2005 the special correspondence branch of TCTI was founded.

According to the Decree PD-1667 by the President of the Republic of Uzbekistan, on December 27, 2011 "About measures on the organization of construction and financing the project "Construction of Ustyurt gas chemical complex on the base of the Surgil mine with putting the mine into operation" 4 bachelor directions in the full-time education in this branch were established for the purpose of intended preparation of high-qualified specialists; and at present the objectives outlined are being fulfilled with all responsibilities.



Directions of education (bachelors and masters)

- Chemical Technology;
- Technology of oil refining, oil and gas;
- Technological machines and equipment;
- Automation and Control of Technological processes and production;
- Engineering and constructional communications;
- Electrical engineering, electrical mechanics and electrical technology.

Monthly courses of advanced training and retraining of personnel are organized in this branch of the institute. This branch is located directly on the territory of Kungiratsoda Plant.

Contacts:

Phone: +99861 3151060;

Fax: +99871 2447917

E-mail: msb@tcti.uz

Pos. Elobod, Kungrad Region,

Karakalpakstan Rep., Uzbekistan, 230614



TALENTED STUDENTS OUR FUTURE

More than **4500**
students



Government Scholarships

- Presidential Scholarship;
- Scholarship named after I.Karimov;
- Scholarship named after Beruni
- El-yurt umidi;

Nominal Scholarships

- Scholarship named after Z.S.Salimov;
- Scholarship named after H.R.Rustamov;
- Scholarship named after A.I.Glushenkova;
- Scholarship named after T.M.Mirkomilov;
- Scholarship named after K.S.Akhmedov.

International Scholarships

- Erasmus Plus;
- Korean Government
- Scholarship Program;
- Japan Government
- Scholarship Program;
- ITEC и др.
- Posco Int., Mitsubishi Int. scholarship

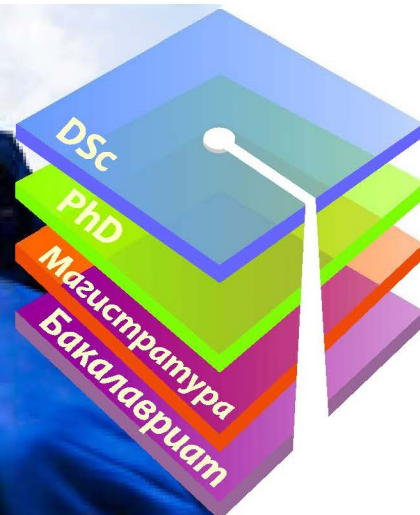


Over the past period, the scientific and creative society of students predetermined tasks and formed a database of gifted students studying at the institute in order to strengthen their knowledge and skills as well as meaningful leisure time for students at the institute 19 scientific and creative circles, 2 "Preparations for Life and career guidance", 5 spiritual and educational, and 8 sports clubs.

In more than **20** educational and scientific circles
more than **200** students have been studying



PERSONNEL TRAINING



Specialties for bachelor's degree

Full-time education

5111000	Professional education
5230200	Management
5310900	Metrology, standardization and product quality management
5311000	Automation and control of production and technological processes
5320300	Technological machines and equipment (by branches)
5320400	Chemical technology (by type of production)
5320500	Biotechnology (by industry)
5321000	Food technology (by product type)
5321300	Technology of oil and gas processing
5321400	Technology of petrochemical industry
5321800	Manufacture of rubber materials
5610100	Services (catering and service)
5630100	Ecology and environmental protection
5640100	Life safety

Part-time education

5230200	Management
5310900	Metrology, standardization and product quality management
5320300	Technological machines and equipment (by branches)
5320400	Chemical technology (by type of production)
5320500	Biotechnology (by industry)
5321000	Food technology (by product type)
5321300	Technology of oil and gas processing
5630100	Ecology and environment protection
5640100	Life safety

The institute provides training at the bachelor, master, PhD (basic doctoral) and DSc (PhD) levels, covering 15 types of bachelor's directions and 22 types of magistracy specialties. For the award of a PhD and DSc degree studies are conducted in all areas, including manufacturing and other engineering specialties.





SPECIALTIES FOR MASTER'S DEGREE

The educational process in this degree for the relevant areas of education (the specialty of master's degree) is organized on the basis of developed by a leading higher education institution, examined by the State Test Center under the Cabinet of Ministers, discussed in the coordination commission on the activities of the educational and methodical management in educational areas of higher and secondary specialized education of the Higher Educational State Standard of the Ministry of Higher and Secondary Special Education and on the basis of curricula.



- 5A230201** Management (by types of industries)
- 5A310901** Product safety and certification
- 5A310902** Metrology, standardization and quality management
- 5A311001** Automation of technological processes and production
- 5A320305** Machines and equipment for chemical production and building materials
- 5A320306** Pulp and paper production technology and processes
- 5A320307** Wood technology and wood science
- 5A320401** Chemical technology of inorganic substances
- 5A320402** Chemical technology of organic substances
- 5A320404** Chemical technology of silicate and hard materials
- 5A320405** Chemical technology of high-molecular compounds
- 5A320407** Processes and devices of chemical technology
- 5A320501** Biotechnology (by type of product)
- 5A321001** Technology of production and processing of food products (by type of products)
- 5A321003** Food safety
- 5A321302** Chemical technology and oil and gas processing
- 5A321303** Processes and equipment for oil and gas processing
- 5A321401** Chemical and petrochemical industry technology
- 5A321801** Manufacture of rubber materials
- 5A610101** Service sector (catering)
- 5A630101** Environmental protection (by industry)
- 5A640101** Occupational Safety and Health. Safety of technological processes and production (by branches)



The TCTI cooperates with the following HE institutions of the world:

- Austria, Technical University of Vienna
- Austria, University of Vienna
- Bulgaria, Sofia University of Chemical Technology and Metallurgy
- Germany, University of Magdeburg;
- Germany, Technical University of Munich;
- Germany, University of Gottingen Georg-August;
- Italy, University of Padova;
- Latvia, University of Latvia;
- PRC, Lanzhou University of Technology;
- PRC, Institute of Biology at the Shandong Academy of Science;
- PRC, Institute of Automation at the Shandong Academy of Science;
- Poland, Silesian University of Technology;
- Poland, Warsaw University of Life Sciences;
- Poland, University of Science and Technology;
- Republic of Belarus, Belarusian State Technological University;
- Republic of Belarus, Mogilev State University of Food Technologies;
- Russia, Moscow State Academy of fine chemical technology named after M.V. Lomonosov;
- Russia, Russian chemical-technological University named after D.I..Mendeleev;
- South Korea, Changwon National University;
- South Korea, Kumoh National Institute of Technology;
- South Korea, University of Sogang;
- South Korea, University of Ulsan;
- Spain, Universidad de Cantabria;
- Spain, Universidad de Santiago de Compostela;
- Spain, Universidad de Granada;
- UK, Open University.

OUR PARTNERS



O'ZBEKOZIQOVQATXOLDING
XOLDING KOMPANIYASI



Uzkimyosanoat



UZBEKNEFTEGAZ



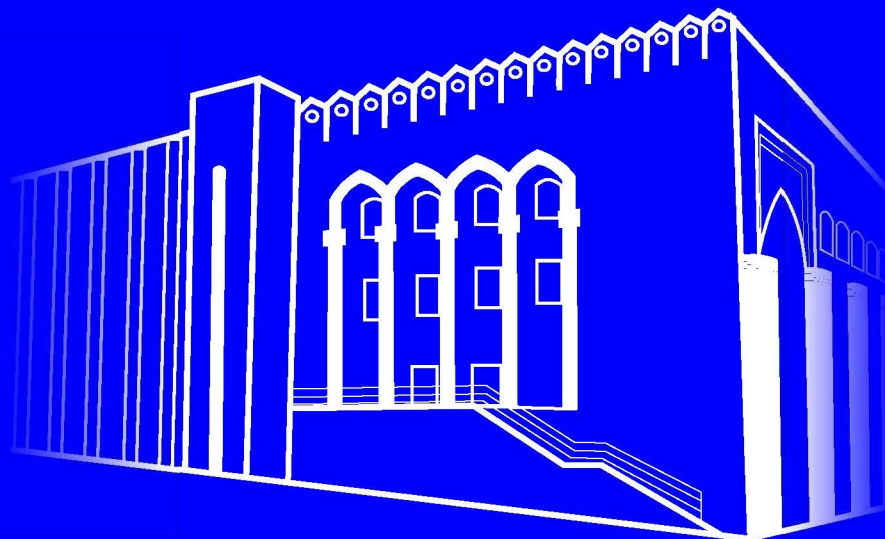
«O'ZQURILISHMATERIALLARI»
AKSIYADORLIK JAMIYATI



BEKABAD CEMENT



Education - Science - Innovation



**TASHKENT CHEMICAL-
TECHNOLOGICAL INSTITUTE**

Hotline: (+99871) 2447824

32, Navoiy str., Tashkent, Uzbekistan, p/o: 100011

Phone: +99871 2447920

Fax: +99871 2447917

E-mail: info@tcti.uz

www.tcti.uz

Role of Universities in Ensuring Sustainable Development

Program of sustainable development of Uzbekistan for the period up to 2030

The relevance of the philosophy of sustainable development of modern society has imposed a certain responsibility on the education sector as one of the main factors in the transformation of public consciousness in the context of social and economic self-fulfillment as a tool for forming an integrated approach to the problems of environmental safety, social equality and economic development of the world community.

In accordance with the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan № 841 dated October 20, 2018 "On measures to Implement National Goals and Objectives in the Field of Sustainable Development until 2030" and UN General Assembly Resolution № 70 adopted in September 2015 at the UN General Assembly, one of the main goals of the Global Agenda is the Goals of Sustainable Development of society.

National goals and objectives in the field of sustainable development of Uzbekistan for the period up to 2030:

- ❖ Widespread reduction of the level of poverty of the population (goal No. 1);

- ❖ Strengthening food security, improving nutrition and promoting sustainable agricultural development (Goal No. 2)
- ❖ Ensuring a healthy lifestyle and promoting well-being for everyone at any age (Goal No. 3);
- ❖ Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all (Goal No. 4);
- ❖ Ensuring gender equality and empowering all women and girls (Goal No. 5);
- ❖ Conservation and rational use of water resources for sustainable development, ensuring their availability and the development of sanitation for all (Goal No. 6);
- ❖ Ensuring access to affordable, reliable, sustainable and modern energy sources for all (Goal No. 7).
- ❖ Promote sustainable and inclusive economic growth through increased productive employment and decent work for men and women (Goal No. 8).
- ❖ Building resilient infrastructure, promoting inclusive and sustainable industrialization and innovation (Goal No. 9).

- ❖ Reducing inequality in all its manifestations within the country (Goal No. 10).
- ❖ Ensuring the openness, security, resilience and environmental sustainability of cities and human settlements (Goal No. 11).
- ❖ Ensuring the transition to rational consumption and production models (Goal No. 12).
- ❖ Taking urgent measures to combat climate change and its consequences (Goal No. 13).
- ❖ Protection and restoration of terrestrial ecosystems and promotion of their rational use, rational forest management, combating desertification, stopping and reversing the process of land degradation and stopping the process of loss of biological diversity (Goal No. 15).
- ❖ Promoting a peaceful and open society for sustainable development, ensuring access to justice for all and creating effective, accountable and participatory institutions at all levels (Goal No. 16).
- ❖ Strengthening the means of implementation and strengthening the work of the Global Partnership for Sustainable Development (Goal No. 17).

In order to fulfill these goals and objectives, the Tashkent Chemical- Technological Institute became a signatory to the UN Global Compact Principles of Responsible Management Education (PRME) in 2020 (<https://www.unprme.org/tashkent-chemical-technological-institute>).

Tashkent Chemical- Technological Institute is a member of PRME (Principles of Responsible Management Education) and is guided by six key principles to give future leaders of the economy and industries the skills that they need to achieve

PRME Principles for Responsible
Management Education

an initiative by the  **United Nations**
Global Compact

sustainable development goals, coordinates the academic institution with the global activities of the United Nations.

Working group for the implementation of PRME principles was developed at the Institute according to TCTI Rector's order No. 157 on 29.03.2021 and June 3, 2021, the Institute's Council discussed measures to implement the "Principles of Responsible Management Education" (PRME) at the Institute and adopted an action plan.

Currently, on the basis of a plan which was based on international experience, the course "Sustainable Development" was added in the undergraduate curriculum as an optional subject. Based on the tasks of the Council, attention was paid to the media coverage of the "Principles of Responsible Management Education" (PRME). The tasks set in the reporting period are carried out in a timely manner in accordance with the plan.

On May 25, 2021, the electronic version of the state newspaper "Yangi Uzbekistan" published an article "Tashkent Chemical-Technological Institute became a member of the new International Association" about the goals and objectives of the Institute for the development of responsible management education. **By this TCTI declare its support to UN initiatives and provide UN principles of responsible education and sustainable development goals in its education and research activities.**



SUSTAINABLE DEVELOPMENT GOALS

1 NO
POVERTY



2 ZERO
HUNGER



3 GOOD HEALTH
AND WELL-BEING



4 QUALITY
EDUCATION



5 GENDER
EQUALITY



6 CLEAN WATER
AND SANITATION



7 AFFORDABLE AND
CLEAN ENERGY



8 DECENT WORK AND
ECONOMIC GROWTH



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



10 REDUCED
INEQUALITIES



11 SUSTAINABLE CITIES
AND COMMUNITIES



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



13 CLIMATE
ACTION



14 LIFE
BELOW WATER



15 LIFE
ON LAND



16 PEACE, JUSTICE
AND STRONG
INSTITUTIONS



17 PARTNERSHIPS
FOR THE GOALS



SUSTAINABLE
DEVELOPMENT
GOALS

Tashkent Chemical-Technological Institute as an educational organization involved in the training and development of current and future managers in the field of production, economics, business and science, implements 6 basic principles in its activities

Principle 1 | Purpose



To train students as future producers of values for business and society, as well as to develop their ability to work for the benefit of an inclusive and sustainable global economy.



The Institute enrolls 6746 undergraduates, graduate, and doctoral students in 23 bachelor's degree programs, 696 students in 23 master's degree programs, and 114 students in 10 doctoral programs.

Tashkent Chemical-Technological Institute today:

- ✓ It is the leading chemical and technological university of Uzbekistan. The Institute trains specialists for enterprises of chemical, oil refining, biochemical industry, food and building materials industry, porcelain-faience, furniture, woodworking, oil-fat, flour-

molar, canning, meat and dairy industry, exchange, standardization and metrology.

- ✓ The main areas of scientific activity are: energy and resource-saving technologies, construction, finishing and decorative materials, composite and structural materials, technology of wood plastics based on thermoplastic polymers, chipboard technology, MDF technology, technology of production of materials for medicine and healthcare, materials for electronics, petrochemistry and oil refining, mineral fertilizers, biotechnology, winemaking, alcohol technology, food preservation technology, meat technology - milk and vegetable oils, rare and dispersed metals methods of cybernetics in chemical technology, chemistry and technology of polymers, plastics, information systems and technologies, integrated environmental studies, varnishes and paints, economics, organization and management of entrepreneurship.

Tashkent Chemical-Technological Institute tomorrow:

- ✓ World class university that contributes to society through the pursuit of education, learning and research at the highest international levels of excellence.
- ✓ Accelerating progress in sciences, engineering, social sciences and business, providing lifelong learning and education for all.
- ✓ Close relationship between teaching, research and industry.
- ✓ Opportunities for innovative partnerships with business, associations and foundations.
- ✓ Concern for sustainability and the relationship with the environment.

Principle 2 | Values



We will incorporate into our academic activities, curricula, and organizational practices the values of global social responsibility as portrayed in international initiatives such as the United Nations Global Compact.



Education is recognized as the most important mechanism for ensuring sustainable social and economic development.

The wide recognition of the education and closely related upbringing and enlightenment as a decisive factor has made it necessary not only to consider the main issues related to the ecology and social responsibility in the process of training of engineers but also foster the sustainable development mindset of the students.

The concept of sustainable development embraces three aspects – economic, social, and ecological, and is determined as “development that meets the needs of present generations without jeopardizing the ability of futures generations to meet their own needs”.

The key role in understanding and preventing the challenges of the environment, i.e. “the sustainable development”, can be played by the education, and in particular, the engineering education, through fostering corresponding behavior and actions, for instance, on research and development of new solutions, products and technologies allowing to reduce the use of energy and gas, CO₂ emission, soil erosion, etc.

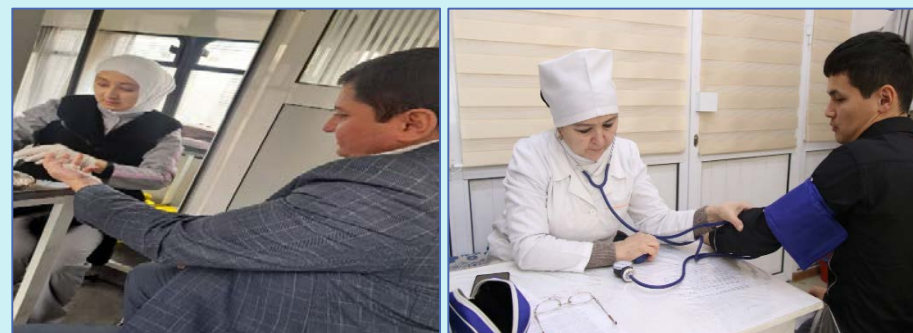
Professional actions of engineer’s influence directly the quality of life of the mankind; therefore, the actions of engineers require honesty, impartiality, justice and efficiency.

The Tashkent chemical-technological institute has a variety of values and activities to ensure the solidarity of society and the institute's staff and students in the social sphere.

Volunteers activity



Every year we hold a charity blood donorship drive "I am a donor."



Among the talented active students studying at the institute, there are many volunteers for projects in the regions, in particular:

On December 30, 2021, the Tashkent chemical-technological institute with the active students of the primary organization of the Youth Union of Uzbekistan visited and prepared food for the needy families living in Khadra mahalla of Shayhantahur district.



During February 2022, the Tashkent Institute of Chemical Technology together with active students of the Youth Union of Uzbekistan IBT and volunteers of the charity foundation "ISHONCH" visited the "Karatash" farm in Shayhantahur district, preparing food for needy families. February 28, 2022, the long-awaited charity event of volunteer students of the charity foundation "ISHONCH" was held for children with social needs. Volunteers presented gifts, toys, books and school supplies and made children and their parents happy.

Youth forums and campaigns

Over the years, students of our institute took an active participation in the "Debate" and various competitions held in the "Youth" town as part of the campaign "Improving the political knowledge and legal culture of young people."



Culture

Tashkent Chemical-Technological Institute in cooperation with IKSAD – Institute of Economic Development and Social Researches organized the 9th International Conference on Culture and Civilization was held online on March 15-16, 2021.

The conference was attended by representatives of foreign countries cooperating with the IKSAD (Turkey, Azerbaijan, Morocco, the Philippines, Nigeria, Pakistan, South Africa, Mexico, Ukraine, Kazakhstan, Kyrgyzstan and Kyrgyzstan), as well as professors and teachers of the departments of humanities and socio-political



A total of 117 participants, including 53 participants from the Tashkent Institute of Chemical Technology, the number of foreign participants - 104.

The Chairman of the Congress, Rector of Tashkent Chemical-Technological Institute Botir Shukurillaevich Usmanov spoke about the educational and scientific activities of the institute, projects implemented in international cooperation, areas of specialization and joint programs.

Science is an important field that determines the present and future of any country. The land of Uzbekistan, which is known and famous as one of the major centers of the Eastern Renaissance, has made an invaluable contribution to human civilization since ancient times, to a certain extent determined the direction of development of world science and culture.

A prominent scholar and researcher of Uzbekistan in the field of pedagogy - *Abdullah Avloni*, and well-known enlightened writer who founded the schools in Middle Asia in the beginning of 20 Century, said, "Education is for us a matter of life or death, *salvation or destruction, happiness or disaster*." He made a significant contribution to the development of Uzbek pedagogical thought, reflecting in his works the best traditions, problems of the Uzbek people, important issues of education, among others, a new style for Uzbek children.

Today, the Republic of Uzbekistan is undergoing rapid reforms in the field of science, education and innovation. For a quarter of a century after gaining independence, we have been engaged in national revival, but now we have moved from national revival to national ascent, and the president of our state Sh.M.Mirziyoyev defined it as a strategic task to achieve the third Renaissance.

Principle 3 | Method



Creating educational frameworks, materials, processes and environments that enable effective learning experiences for responsible leadership.



Tashkent Chemical-Technological Institute trains specialist for almost all Engineering fields: Chemical Engineering, Mechanical Engineering, Oil and Gas Technology, Food Science and Technology, Machines and Apparatus of Chemical and Food industries, Automation and Control, Ecological Engineering and other fields.

Fostering a socially-oriented mindset and behavior of future engineers requires from the educational organizations and educational process to implement adjustments in order to introduce the principles of sustainable development into the training process of engineers.

Introduction of the competence-based approach to the designing of educational programs is a necessary, but not sufficient condition required to guarantee the expected level of future specialists' competences of social responsibility within the educational process. The pivotal factors ensuring the formation of required competences within the educational

process are the teaching and learning methods and conditions for their implementation (including the potential and qualification of faculty) and the specific university environments that support fostering of competences.

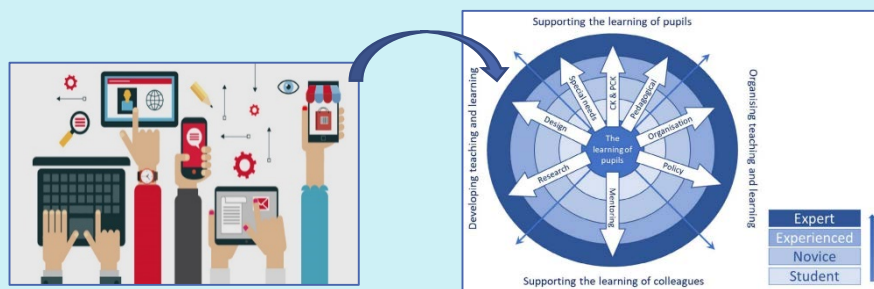
Research and surveys of stakeholders-consumers of personnel (industrial enterprises, firms and organizations) have shown that in modern industries great demands are placed on the practical skills and abilities of institute graduates. In this regard, measures were taken in 2020-2021 to improve curricula using the best foreign experience of the world's leading universities:

- ✓ In order to create an effective environment for teaching engineering disciplines at the Institute, the curriculum was modernized in 2020 based on the calculation: theory - 40%, practice - 60%. Classroom lessons make up 40%, self-study (independent work of student) - 60%.
- ✓ Practical and laboratory classes in the disciplines of the specialty are organized on the basis of educational and research centers at industrial sites, employees of enterprises of the industry are involved in teaching process, in development of educational curriculum and methodological documentation.

The main goals and objectives for improving the educational frameworks, materials, processes and environment at the institute were identified:

- ❖ Ensuring knowledge transfer based on the widespread introduction of digital learning technologies;
- ❖ Forming an individual learning trajectory for each student;
- ❖ Expanding education-science-industry integration;

- ❖ International accreditation of academic programs;
- ❖ Increasing the interest of young generation in chemistry, biology and engineering sciences.



Development of education and organization processes

In order to ensure the educational process and training in accordance with international standards and norms, to provide transparency and accessibility of information, in recent years the institute has been carrying out large-scale work on digitalization.

- ✓ **The credit-modular system of teaching was introduced at the Institute in the 2021-2022 academic year.** Two digital platforms - HEMIS and Google was used for digitalization of educational processes.
- ✓ Formation of the credit-module system on the Google platform - at the initiative of the educational-methodical department of the institute significant work has been done and the system has been fully digitized.
- ✓ Subject content (syllabus) was fully formed in Moodle LMS. At the same time, students in each subject were provided with handouts in electronic form.
- ✓ In the spring semester of 2020-2021 academic year, classes were organized based on student selection and

individual lesson schedules. This event will improve the attitude of students to study and their activity.

- ✓ At the end of 2020-2021 academic year, a summer semester was organized. Students were re-educated and have another possibility to pass the exam.

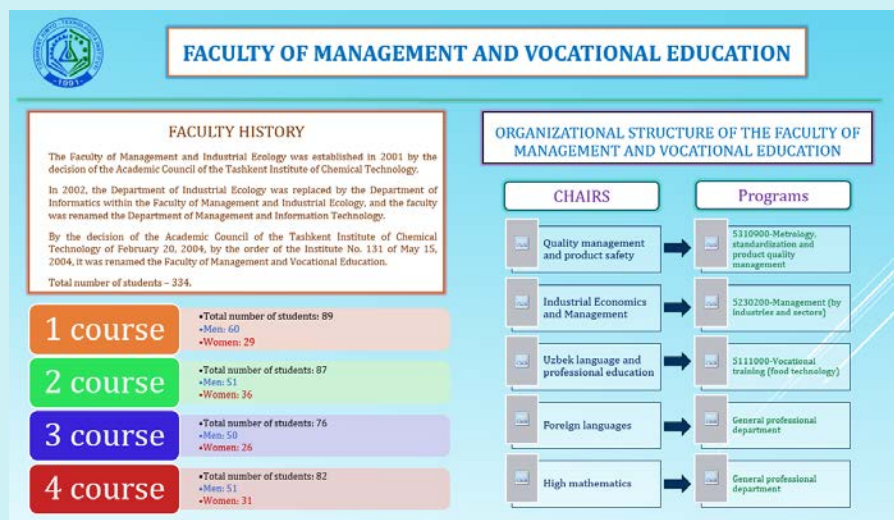
In the 2021-2022 academic year, measures to implement the credit-module system were implemented in accordance with the Roadmap: qualification requirements, curricula and science programs was formed in a digital system. This measure significantly reduced errors and allowed work to be completed quickly. However, since it was the first experience, it was very difficult to form a Google spreadsheet platform. Now this system is being further improved.



- ✓ Admission quotas, student contingent, academic groups are formed in a digital system. The digitization process prevented duplication of work and drastically reduced workload. Although it was a bit difficult for the deans to adapt to this system, now the work is organized on the basis of an integrated system.
- ✓ 1-2 year courses in the curriculum are formed in the "foundation" system. This means that after another year, their workload will begin to decline.
- ✓ As a result, a transparent monitoring system has emerged, making it easier to monitor and evaluate the work being done.

Faculty of "Management and Vocational Education".

"Management and Industrial Ecology" faculty was founded in 2001. Faculty consist of chairs "Economy of food industry and management", "Industrial economy", "Foreign languages", "Physics" and "Mathematics". Nowadays the faculty name was changed due to the introduction of educational program "Professional Education" by the decision of Scientific Council of Tashkent Chemical-technological institute from February 20, 2004. According to the decree №131 from May 15, 2004 the faculty was renamed to the faculty "Management and Professional Education".



There are 5 chairs in the faculty: Quality management and product safety, Industrial economics and management,

Uzbek languages and Professional Education, chair "Foreign languages", and "Higher Mathematics".

Number of students: 334.

81 staff persons are carrying academic and scientific activity as professors and teachers, including 9 doctor-professors, 23 candidates of science-docents, 65 senior teachers and assistants.

Professor-teaching staff of the faculty in the conditions of new social-political relations, on the basis of international standards and requirements taking an active participation in teaching and educating of multilaterally developed, highly qualified specialists in the field of quality management, metrology, standardization and management of quality production, professional training, managers in production, specialists on technology production of fuel and organic compounds, chemistry and chemical technology, technology of silicate materials, technology of rare and precious materials, environment protection, biotechnology and technologists of food industry.



In order to achieve these goals and discover talented students, the student creative society "Leader Youth" was established at the Faculty in 2021.

A room for the activities of the student creative society "Leader Youth" has been allocated and renovated in high-tech style. The Student Creativity Society "Leader Youth" brought



together a number of students and implemented a number of media and entertainment projects.



DEPARTMENT OF INDUSTRIAL ECONOMICS AND MANAGEMENT



The Department of Industrial Economics and Management was opened at the former Tashkent Polytechnic Institute in 1968 and provided lectures and practical classes in economics for all faculties of the institute.

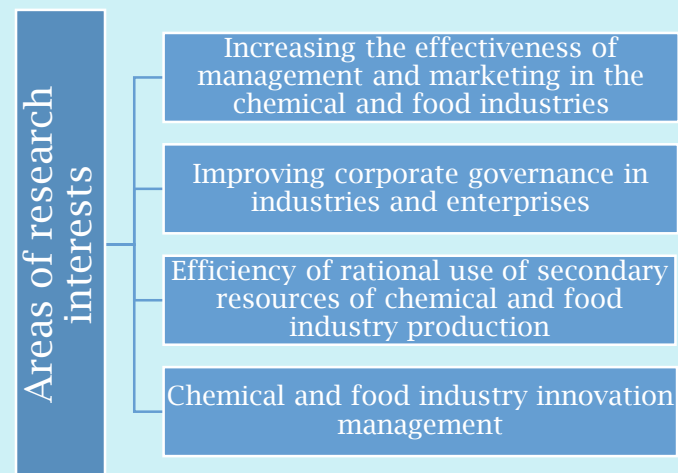
Nowadays department prepares specialists –bachelors and master students according educational programs “Management” under the leadership of the head of department Dr. Sultonhojayev O.A., PhD in economics .

All teachers of the department are improving their skills at Tashkent State University of Economics and Tashkent State Technical University. The teachers of the department trained at the Center for Corporate Governance of the Higher School of Business under the Academy of State and Social Construction under the

President of the Republic of Uzbekistan and at the South Korean State University in Italy under the TACIS program, an employee at the University of Santiago de Compostella in Spain as a laureate of the European Erasmus Mundus Foundation. In addition, 4 employees of the department improved their skills at the International Academy EDNET and received 6 international certificates.

The department has good relations with industry and business. Students of the department undergo internships at Uzkimyosanoat SJSC, Uzneftegaz SJSC, Uzdonmahsulot JSC, Uzbek food-oil industry JSC, Uzvinosanoatholding FE. Employees of the Department of "Industrial Economics and Management" work hard to train well-educated, courageous, selfless, highly qualified specialists in the chemical and food industries of the Republic on the basis of our National Program.

Research work



The department conducts research in the state budget on "Efficiency in the use of secondary resources of the chemical and food industries." The results are used in the educational process, as well as discussed during the scientific conferences, in writing of scientific articles.

Work with talented students. A number of talented students of the department became members of the "Young Manager" circle organized by the department. They are assigned scientific topics and supervisors, and conduct their research in the laboratory of the department. Students actively participating in a scientific and technical conferences.

4 students of the department received state scholarships named after A.R. Beruni, 3 students received state scholarships named after M. Ulugbek, 10 students received scholarships from the Mehr Nuri Foundation and more than 10 students received scholarships named after famous scientists of Uzvinosanoatholding and TKTI.

Educational and methodical work

In addition to specialty disciplines, the department offers courses in "Fundamentals of Management", "Finance and tax" for bachelors and "Economics and Management of Higher Education" for master students in all fields of technical sciences.

In recent years, teachers of the department created more than 76 textbooks, published over 200 scientific articles. Employees of the

department are actively involved in the development of state standards and educational programs on the basis of the National Program.

"Department of Industrial Economics and Management"

Currently, the department prepares bachelors in the direction:

60411200-Bachelor of Management (Chemical and Food Production)

In this direction, bachelors study such disciplines as:

1. Management
2. Marketing
3. Microeconomics
4. Macroeconomics
5. Human resource management
6. Organization of production of chemical and food industries
7. Introduction to the specialty
8. Theory of economics
9. Financing innovative projects
10. Economics and management of the enterprise
11. Accounting
12. Economic analysis
13. Finance and Tax
14. World economy and international economic relations
15. Small business and the basics of entrepreneurship
16. Statistics
17. Innovation management
18. Organizational holding
19. Strategic management
20. Production management of the chemical and food industries

Duration of study is 4 years. The teaching process in the full-time education system is conducted in Russian, Uzbek and English.



At present, the department has a master's degree, and those who have completed the bachelor's degree with honors and want to continue their scientific and pedagogical work are admitted to the master's degree on a competitive basis.



70411201-Master of Management (Chemical and Food Industry)

The duration of study for a master's degree is 2 years, the following subjects are taught:

1. Management research methods
2. Operational management
3. System management theory
4. Corporate management
5. Financial management



In the 2nd stage of the study process, masters conduct research and defend their dissertations.

Principle 4 | Research



We will engage in conceptual and empirical research that advances our understanding about the role, dynamics, and impact of corporations in the creation of sustainable social, environmental and economic value.



The Institute carries out scientific projects in cooperation with leading enterprises of Uzbekistan's industries in the amount of 3.22 trillion. sum, economic contracts in the amount of 945 million sum (2021) aimed at the development of energy- and resource-saving technologies in the chemical, food, oil and gas industries, the use of industrial waste, the development of food technologies, ensuring food safety, solving environmental problems.

Modern research laboratories and facilities.

- ✓ There are 2 interdisciplinary research laboratories: **"Nutrition and food products"**, **"Physico-chemical research"** with modern research equipment and methods.
- ✓ **2 scientific and practical centers was open in 2021:** "Production of functional nutrition products",

"development, improvement and analysis of oil and gas industry technologies".

- ✓ "IT incubation center" is planned to open in 2022.

TCTI research projects.

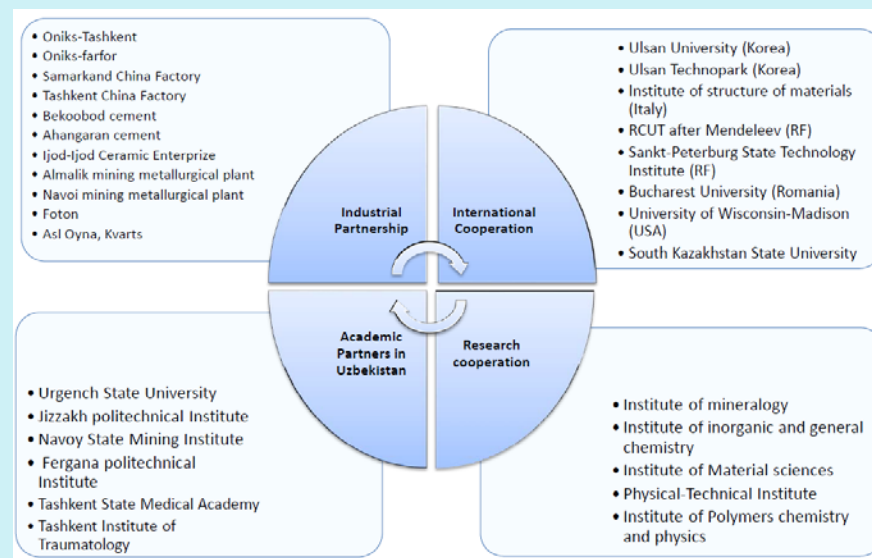


The total volume of research work performed at the institute is 3776 mln. 583 thousand soums (~330000 USD). Of these, the total volume of research funded by the state budget is 3457 million. 811 thousand soums - funded on the basis of economic contracts. Research work was carried out on 12 topics, the total volume of which is 709.0 million soums. soums, 318.772 mln. soums.

Among 9 research projects included in the State Program in 2021, research has been conducted: 5 as practical research (amount - 2256.452 million soums), 3 as innovative project (amount - 728.159 million soums) and 1 commercialization project (amount - 473.200 million soums).

Research scientific projects were carried out in accordance with the pressing problems of the industry of Uzbekistan and were aimed at solving problems of a technological, environmental, and innovative nature. In particular, projects were carried out to develop composite sorbents of photocatalysts for water purification on the basis of activated coal matrices, development resource and energy efficient technologies of chemical products, portland cement, porcelain, glasses, polymers, disposal of industrial waste and production of ceramic materials based on them, Innovative approaches in olive oil extraction process, New food products from food industry waste, Recipes of gluten-free bread and confectionery, Innovative technologies to reduce the turbidity, color and acidity of pomegranate juice, New natural cosmetic products from industrial waste.

Cooperation activities of the Departments



Almost 363 professors and teachers, 19 doctoral students, 4 independent doctoral students, 12 bachelors and 9 masters are involved in research work. In their work on the subject, they conducted course and diploma projects in temporary work teams, linking them to research work. At the leading departments, students, together with each teacher and researcher, carried out research work on the basis of special plans.

The results of 9 research works have been applied to the industrial sector and the expected economic effect is 9637.191 mln. soums.

DEPARTMENT OF INDUSTRIAL ECOLOGY



The department of Environmental Protection and Wastewater Treatment was established on the initiative of Academician of the Academy of Sciences of the Republic of Uzbekistan Akhmedov K.S. in 1980. Since this time over 8,5 thousand students, specialist and bachelors have been trained in the field of environmental protection.

A number of scientific studies are being carried out at the Department of Industrial Ecology aimed at improving waste-free technological processes, cleaning industrial wastewater, and cleaning atmospheric air from toxic gases. Under the scientific guidance of Professor Nazirova R.A., Professor T.T. Tursunov, scientific research is being carried out on the

synthesis of ion-exchange polymers based on furan compounds and the search for specific objects of their application. As a result of research of Doctor of Chemical Sciences Pulatov Kh.L., Doctor of Chemical Sciences, Professor Mutalov Sh.A. on the topic “Obtaining ion-exchange polymers based on local raw materials and their application in the field of environmental protection” ion-exchange polymers based on local raw materials were obtained. Currently, these polymers are used in industrial wastewater treatment to replace ion-exchange polymers imported from abroad, which makes it possible to achieve economic efficiency. As a result of the use of polymers synthesized at the department for wastewater treatment at the Salar aeration station of SUE Suvsoz, the enterprise receives 106 million tons per year. amount of economic benefit. Taking advantage of the huge opportunities created in our country for the development of all areas, the staff of the department has set ambitious goals for the future.

Supreme goal is to use modern scientific achievements in the process of teaching students, to develop the integration of science and production, and to contribute to the work carried out in our country to protect the environment.

Research center for sustainable development and environmental protection.

Research center for sustainable development and environmental protection has been established at 2020 at the Department of Industrial Ecology of the Institute.

The research center conducts research on the following topics:

- Introduction of dust suppression technology and strengthening of road fibers on intra-quarry roads of the Navoi Mining and Metallurgical Combine;
- Developing ozone-friendly refrigerants to replace ozone-depleting freon-12;
- Developing technology for obtaining flocculants used in wastewater treatment based on local raw materials;
- Producing ion-exchange polymers used in wastewater treatment from heavy metals, based on local raw materials;
- Developing effective technologies for the treatment of colored wastewater from the textile industry;
- Developing an effective technology for the treatment of biological wastewater;
- Using of new synthesized ion-exchange polymers in the softening of hard water.

Educational programs on ecology and sustainability.



We prepare specialists on several educational programs and degree courses directly related to environmental sustainability:

Undergraduate programs

- ❖ 5630100-Ecology and environmental protection (by industry)
- ❖ 5640200- Occupational safety and technique security (by branches and industries)

Master's specialty programs

- ❖ Environmental protection and using natural resources wisely (by branches and industries)

Doctoral specialization programs

- ❖ 11.00.05- Environmental protection and use natural resources wisely use

110 bachelor's and 14 master's students study at the Department of Industrial Ecology in the field of "Environmental Protection" (March, 2022 y.).

Research - industry cooperation.

Directions of scientific research: solving environmental problems at a number of industrial enterprises, mainly obtaining new flocculants, ion-exchange polymers based on local raw materials, studying their physical and chemical properties and using them in the treatment of wastewater generated at industrial enterprises.

Department of Industrial Ecology currently cooperates with the **State Committee for Ecology and Environmental Protection of the Republic of Uzbekistan and Ecological Party of Uzbekistan.**

"Support to MUYNAK" project (Help Aral Sea)

Professors and students of the department took part in the environmental charity cycle marathon **"Support to MUYNAK"** in the Republic of Karakalpakstan in 2021, in the international conference dedicated to the International Environment Day on June 5, 2021 in Nukus. During the visit, an excursion to the Aral Sea region was organized for students.



Participants of the environmental charity cycling marathon "Support to Moynak" traveled in the direction of Nukus - Khojayli - Shomanay - Kanlikul - Kungrad - Moynak.

Volunteers and activists of the institute took part in the environmental charity cycling marathon "Support to Moynak" organized by the Ecological Party of Uzbekistan.

The Lower Amudarya Biosphere Reserve contains 20% of the Central Asian tugai forests and 74% of all tugai forests in Uzbekistan. The total area is 68,717 hectares. These tugai forests are home to rare animals such as the Turan tiger, the Hongul, the Central Asian cat, and the blackbird, which were killed in 1968.

Students are members of education-research group **"Ecologist"** for students and participate in a number of research projects and projects.



"Clean air" project

In the "START-UP" projects competition, organized by the Ministry of Innovative Development of the Republic of Uzbekistan in 2021, our students won prizes on **"Improvement of equipment SKRUBBER, used for cleaning the air from toxic gases and dust, its installation in urban areas"**. As this project is supported by the ministry, work is currently underway on this project. (A project has been submitted to create tree-type

scrubbers and use them to clean the city air. To date, scrubbers are used only in industrial plants).

The current demand for industrial enterprises is not only the production of goods, the achievement of economic prosperity, but also the fact that in the process does not harm the environment is one of the most important issues. At the Department of Industrial Ecology of the TCTI a number of scientific researches are carried out aimed at improving waste-free technological processes, treatment of industrial wastewater, purification of atmospheric air from toxic gases.



"Industrial waste water treatment" project (Clean Water)

At present, a number of works are being carried out at our institute to clean up the waste generated at industrial enterprises. In particular, the Uzbek-British joint venture ALUTEX (the company produces profiles, profiled steel products) conducts research on the basis of economic contracts

for desalination of industrial waters, treatment of waste generated during the dyeing of products. In addition, cooperation is underway to clean the sediments formed at the city's sewage treatment plants.

The department conducts research on "Synthesis of ion-exchange polymers based on furan compounds and the search for specific sites for their application", "Production of ion-exchange polymers based on local raw materials and their application in the field of environmental protection." Most of the ion-exchange polymers for industrial wastewater treatment are imported to the country. This has a negative impact on the cost of production. As a result of scientific research conducted at the Department of Industrial Ecology, ion-exchange polymers based on local raw materials were obtained. At present, these polymers are used in the treatment of industrial wastewater instead of ion-exchange polymers imported from foreign countries, and economic efficiency is achieved.

As a result of scientific research, 8 candidates of sciences, 4 doctors of sciences have successfully defended their dissertations at the department and are currently working effectively in senior positions in the system of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan.

The department also conducts research on "Wastewater treatment in the pulp industry." Taking advantage of the vast opportunities created in our country for the development of all areas, the team of the department has set great goals for the future. Our highest goal is to use current scientific achievements in the process of educating students, to develop the integration between science and industry, to contribute to the ongoing work on environmental protection in our country.

Nationwide project "Green Space"

At the initiative of the President of the Republic of Uzbekistan Shavkat Mirziyoyev, a nationwide project "Green Space" was launched. The project plans to plant 200 million trees and shrubs a year around our country. Tashkent chemical-technological institute students and staff took an active participation in this project.

April 3, 2021 active students of the Youth Union of Uzbekistan of TCTI opened the campaign "Green Zone" by planting about 200 seedlings of fruit trees and about 100 seedlings of various flowers.

On September 18, 2021, TCTI together with the Ecological Party of Uzbekistan held an action under the slogan "We are not indifferent to you - Mother Nature" in the Central Ecopark of Tashkent on the occasion of September 18 "World Sanitation Day". As part of the campaign, interesting questions and answers and various competitions were held.



November 24, 2021, teachers of the department of "Industrial Ecology" and students of the "Ecologist" research group of the department in cooperation with the Ecological Party of Uzbekistan planted a tree in the territory of the "Ahangaron" landfill in Tashkent region took part in the planting campaign.



November 26, 2021, teachers of the Faculty of Chemical Technology of Fuel Organic Compounds held a tree planting campaign on the territory of the faculty in the framework of the national project "Green Space".



December 8, 2021 at the initiative of professors, under the leadership of Vice-Rector A.Khasanov and deans of faculties on

the land attached to the institute in Yukori Chirchik district within the national project "Green Space" a total of 200 bushes tree seedlings were planted.



December 18, 2021, about 750 fruit and ornamental trees were planted on the land attached to the institute in Yukori Chirchik district within the framework of the national project "Green Space".

Principle 5 | Partnership



We will interact with managers of business corporations to extend our knowledge of their challenges in meeting social and environmental responsibilities and to explore jointly effective approaches to meeting these challenges.

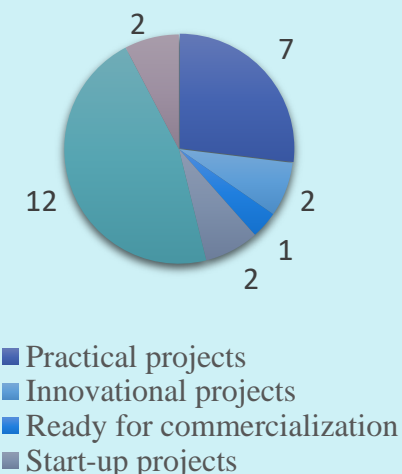


In order to effectively ensure integration between education, production, and the business community, an Innovation Center was established in 2010 at the Institute. Its main tasks are to coordinate the creation, testing, implementation, industrial development and commercialization of promising scientific developments.

Innovation Center - unit to promote close cooperation between education, industry and the business community

Functioning purpose of the Innovation Center is to promote the development of innovative activities in TCTI, create conditions for effective interaction of the institute with industry, ensure the transfer of the results of research activities of TCTI employees through technology licensing, the creation of technological small innovative enterprises or companies based

Institute research projects



on institute technologies, as well as attracting research contracts and grants to TCTI.

The development and prospects of research work carried out at TCTI depend on close cooperation with large manufacturing enterprises and related institutions of the Republic.

To achieve this goal, agreements on scientific cooperation have been signed with prestigious institutes, HEIs, institutes of the Academy of Sciences of the Republic of Uzbekistan and industry institutes in the CIS countries. On the basis of these agreements, talented students and researchers of the institute were sent to educational institutions to study, to continue research work, to improve their skills.

363 professors and teachers took part in research work not funded by the state.

Several projects of TCTI researchers aimed at solving environmental problems in the territory of Uzbekistan are listed above:

- ❖ Study of the composition of dusty wastes from the copper smelter and conduct various experiments on the extraction of rare and non-ferrous metals from the waste.
- ❖ Composite sorbents of photocatalysts for water purification on the basis of activated coal matrices (Scientific supervisor: Ph.D., Prof. Kadirova ZH).
- ❖ One of the most pressing issues in Portland cement production is the reduction of resource and energy efficiency, clinker and fuel consumption, and the improvement of cement quality. (Scientific supervisor: Ph.D., Mukhamedbaeva Z.A.)
- ❖ Disposal of industrial waste and production of ceramic materials based on them (Scientific supervisor: PhD, Ph.D., Matkarimov ZT).
- ❖ Extraction of scandium element from man-made wastes in Uzbekistan (Supervisor: Ass. Yahyaev UA).
- ❖ Obtaining cotton pulp from low-grade lint by creating technologies that ensure efficient use of water resources (Supervisor: Prof. Saifutdinov RS).
- ❖ Extraction of raw materials for the chemical and metallurgical industries from hydrogen sulfide gas of the Mubarak gas processing plant (Supervisor: Assoc. Prof. Turaev T.B.).

On the basis of economic contracts, 12 contracts have been concluded with various enterprises to carry out research work, and they are conducting research with various enterprises. The total financial volume of economic contracts is 709.0 mln. soums.

Contracts with enterprises and research institutes at the Tashkent Institute of Chemical Technology - more than 120, among them contracts with Institute of General and Inorganic Chemistry of the Academy of Sciences of the Republic of Uzbekistan, Dehkanabad Potash Plant JSC, Kungrad Soda Plant LLC, Ferganaazot JSC, Keramika Obsalyut JSC, Asl Oyna JSC, BEKOBODCEMENT JSC, "UZMETKOMBINAT", JSC "FOTON", JSC "Almalik mining komplex", JSC "Jizzakh battery plant", State Committee of the Republic of Uzbekistan for Environmental Protection, Fergana Chemical Plant, North Sokh gas field, North Sokh gas field Bozsuv aeration station, Ustyurt gas-chemical complex, JSC "Jizzakh Plastmassa", Bukhara Oil Refinery LLC, Fergana Oil Refinery LLC, Petromar Uzbekistan LLC, Chinoz Oil Refinery "LLC, Shurtan Oil and Gas Production Department, "Shurtan Gas Chemical Complex "LLC, "UZLITINEFTGAZ" JSC, "Uzbekistan GTL" plant, "Oil and food industry Association", "Tashkent Oil and Gas Plant" LLC, "Pharmacy-Innovation Center "LLC, "AGRO-KIMYO STAND ART" LLC and others.

Cooperation and partnership with «Artel» company



Artel is a leader company in the production of household appliances and electronics in Central Asia.

The company started its operation in 2011 with the production of gas stoves. Nowadays, the Artel product range has everything you need for home. Artel produces more than twenty categories of household appliances, including air conditioners, microwave ovens, mini-ovens, gas and electric cookers, televisions, refrigerators, mobile phones, built-in appliances, vacuum cleaners, hoods, small household appliances, etc.

Artel is a dynamically and steadily growing company, creating innovations in the field of high technologies, and actively introducing them into the production of electrical engineering.

Artel Company has a special experimental research and development center, R & D. Research and Development center is actively engaged in the development and creation of new technologies, new construction solutions and design, research and practical tests of products under development.

Artel believes that the most valuable contribution to the future is the harmonious development of the younger generation and cooperates with TCTI in education and research. For this reason

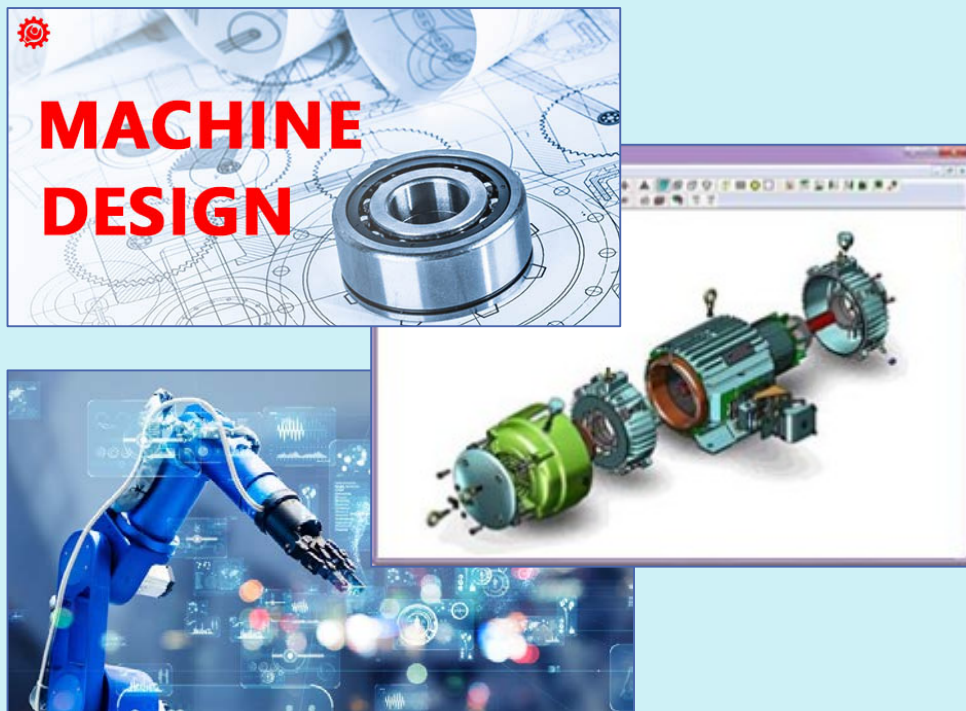


Artel Technical School was founded. Artel Technical School is a school with a specially developed program of in-depth study of technical and natural subjects.

Meetings were held on 23.07.2021 y. between the Rector of Institute B.Usmanov, the head of the department of training on the basis of international joint educational programs A.N.Shernaev and the director of the Innovation Training Center of Artel group B.G.Ganiyev, the deputy director H.M.Mamarahimov, the general adviser of the training center A.V.Ivanov.



An agreement of cooperation between the TCTI and the company's innovative training center was signed to ensure the integration of production, science and education and training qualified and knowledgeable personnel for the industry.



During the meeting, ARTEL have selected the talented students of TCTI from the 2nd year undergraduate students in the field of 5320300-Technological machines and equipment (by industry) with the participation of qualified staff of the innovative training center in the field of 5320300-Technological machines and equipment (home appliances). It was agreed to start innovative training to develop practical skills of students.

The departments of this direction have agreed to develop joint curricula with the participation of qualified staff of the Department of "Fundamentals of Mechanics of Machinery and Equipment of the Food Industry", the Department of "Technological Processes and Devices", the Department of "Cellulose and Woodworking Technology" from 2021-2022 academic year.

Cooperation with Artel company is continuing in 2022 to train engineers, including training with our institute, improving students' knowledge of computer 3D design in the innovative center and attracting experienced production professionals.



Principle 6 | Dialogue



We will facilitate and support dialog among educators, students, business, government, consumers, media, civil society organizations and other interested groups on issues related to global sustainability.



- ✓ The Institute organizes a constant dialogue and discussions between teachers, students, the management of the Institute, business representatives, organizations, mahallas, consumers of personnel - industry enterprises, mass media, civil society organizations, schools and secondary education organizations and other stakeholders on important issues related to global social responsibility and sustainability.

In 2021-2022 academic year to provide close dialogue with society, media, stakeholders and civil society organizations activities were carried out in several ways:

- ❖ Collaboration and dialogue with neighborhoods (meetings, compains with over than 3400 people participation)

- ❖ meetings and activities in 5 important initiatives (10450 participants)
- ❖ collaboration and dialogue with schools (930 persons)
- ❖ over 2900 partipants in meetings with religious and educational organizations (look at infografic).



About the activities carried out by the Tashkent Institute of Chemical Technology during the 2021-2022 academic year in cooperation with various organizations and agencies and in the framework of five important initiatives

INFORMATION

General indicators of spiritual and educational activities

collaboration with neighborhoods	In the framework of 5 important initiatives	In collaboration with schools	In collaboration with the Center for Spirituality and Enlightenment	In cooperation with religious and educational organizations	In collaboration with the prosecutor's office	In cooperation with law enforcement agencies	In cooperation with the State Security Service
60 Participants 3400 people	35 Participants 10450 people	20 Participants 930 people	4 Participant 570 people	8 Participants 880 people	3 Participants 540 people	6 Participants 700 people	3 Participants 490 people

Opportunities created in the student dormitory:

electric stove- 16, refrigerator- 11, Washing machine (automatic) – 5,
Washing machine(semi-avtomatic) – 10 , iron – 9

Lack of information and library centers

Suggestions and solutions:

Establishment of information and library centers based on the existing base of the institute.

During the 2021-2022 academic year, financial incentives and financial assistance were provided to students in need of social protection, active in public affairs of the institute, gifted students, as well as students on lease.

The contract amount was paid to the first-year students included in the "Iron Book"
Number of students: 5 people

Active and talented students are encouraged in the public affairs of the institute.
Number of students: 101 people

Students in need of social protection are encouraged
Number of students: 41 people

Rent is paid to students who are not covered by the institute's dormitory, live on a lease basis and have a lease agreement..
number of students: 56 people

Winners of various national and interregional competitions and Olympiads are encouraged
Number of students: 14 people

Weak quality of education
Suggestions and solutions :

Assist in overcoming the main problems related to improving the quality of education in secondary schools.

Problems related to the organization of joint and other spiritual and educational activities with partner organizations at the Institute and suggestions for their solution

Unemployed youth in the neighborhood
Suggestions and solutions :
Organize entrepreneurship training courses for unemployed youth in the neighborhood.

Protecting young people from information attacks
Suggestions and solutions :
Organize meetings to protect young people from the effects of various destructive ideas and information attacks.

SUMMARY

The SIP Report reflects major achievements and activities of Tashkent Chemical-Technological Institute (TCTI) reported period (2020-2021 y.y.).

TCTI committed to further following the UN PRME principles and implementing UN SDG throw activity. Its strategy and operations are based on the UNSDGs, so that every activity aimed at nurturing social responsibility, sustainability and responsible management.

An institute aims to strengthen its positions being the impact university among the Eurasian Economic Union countries and actively participate in recently established (in 2021) Eurasian PRME Charter work.

TCTI increase social activity and sustainable development by establishing and launching social and research projects via students, academic and research initiatives with civil society, media, governmental bodies and international organizations.

TCTI's UN initiatives and Sustainability Task Force continues implement and promote UNPRME and Academic Impact principles, UNSDGs, and other key priorities of partner organizations.

The Report is designed by:

Dr.Z.Babakhanova, Head of International cooperation department

Mr. S.Saidakhmadov, Manager staff of International cooperation department

TCTI contact information

Tashkent Chemical-Technological Institute

Navoi 32, Tashkent, 100011, UZBEKISTAN

Tel.:(+998-71) 244-79-20, Fax.:(+998-71) 244-79-17

E-mail: info@tcti.uz, www.tkti.uz

International Cooperation Office:

Dr. Zebo babakhanova - Director,

e-mail: zebo.babakhanova@gmail.com, tel. + 998-935279500

Mr. Saidumarhon Saidakhmadov - Manager

e-mail: saidumarhon1998@gmail.com, tel. + 998-97-0124455