



University  
of Urgench State



# Current state and prospects of development of training for computer science teachers in Uzbekistan

Post doctoral Ashirova Anorgul  
Urgench state University, Uzbekistan

# Contents



- About Uzbekistan
- Education system of Uzbekistan
- Current state and prospects of development of training for computer science teachers in Uzbekistan



**The Republic of Uzbekistan declared Independence at September 1, 1991 .  
Uzbekistan is divided into twelve provinces, one autonomous republic  
Karakalpakistan .  
Uzbekistan has an area of 447,400 square kilometers  
Capital: Tashkent.      Population: 29 million people (after Russian, Ukraine)**

# UZBEKISTAN



**Islam Karimov**  
**President of Uzbekistan.**



Emblem of Uzbekistan



Flag



## UZBEKISTAN AND GREAT SILK ROAD



# FAMOUS PEOPLE UZBEKISTÁN

## Amir Temur (Tamerlane)



Tamerlane was a conqueror, military and political leader Turkish-Mongol, the last great nomadic conquerors of Central Asia. He was born in Kesh, Central Asia, in 1336, possibly in Samarkand. He died on the way to conquer China, the sunset in 1405.

This noble Muslim Turkish and Mongol conquered vast tracts of Eurasia in little more than two decades. Between 1382 and 1405 their big armies crossed from Delhi to Moscow, from the Tian Shan Mountains of Central Asia to the Taurus Mountains of Anatolia, conquered and reconquered, destroying cities and forgiving others. His fame spread throughout Europe, where for centuries it was a romantic figure and terror, while for those involved more directly in its path memory, seven centuries later, is still fresh, either as a destroyer of cities in the Middle East or the last great representative of nomadic power.

# FAMOUS PEOPLE UZBEKISTAN

## Ulugbeg



Ulugbeg (1393/1394 - October 27, 1449) was, during the rule of Tamerlane, ruler (1447-1449) and Sultan. Also stressed as an astronomer and mathematician.

During his life took a great interest in astronomy and in 1428 built a large observatory called Zij Gurjani very similar to the operation of Tycho Brahe he called Uraniborg. Instruments installed in the observatory large to make it possible to make precision measurements in this way had Fakhri sextant with a radius of about 36 meters and a visual separation of 180 " (arc seconds). sundials built immense.



# FAMOUS PEOPLE UZBEKISTAN



## Avicenna

Avicenna was a physician, Persian philosopher and scientist. He wrote nearly four hundred and fifty books on various subjects, mainly in philosophy and medicine.

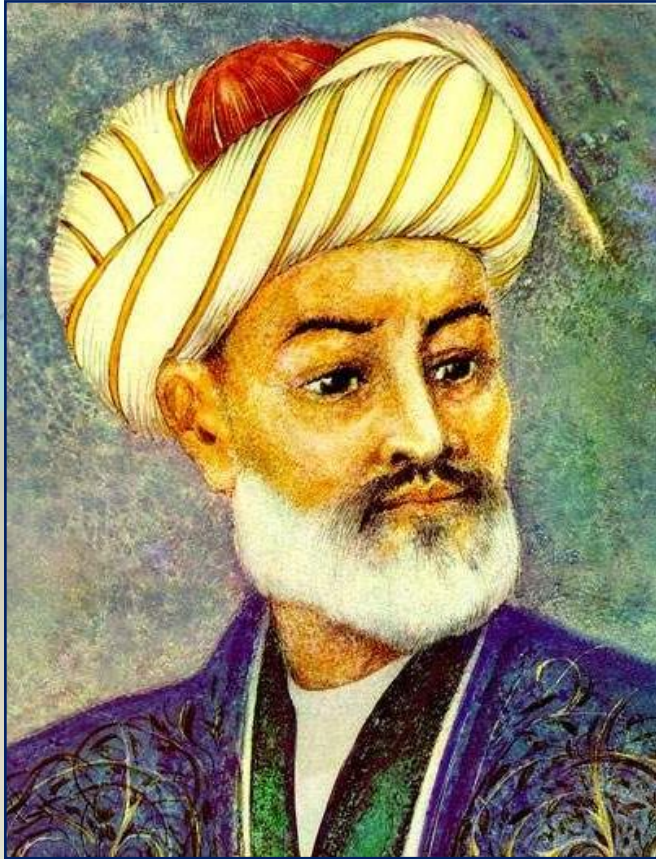
His most famous being The Book of Healing and The Canon of Medicine also known as Avicenna's Canon. His disciples called him Ra'is el-Cheikh, ie "prince of the wise", or the greatest doctors, the Teacher, or end the third Master (after Aristotle and Al-Farabi).

He was born on 7 August 980 Afshan (Khorasan province, now in Uzbekistan), near Bukhara. His parents were Muslims.

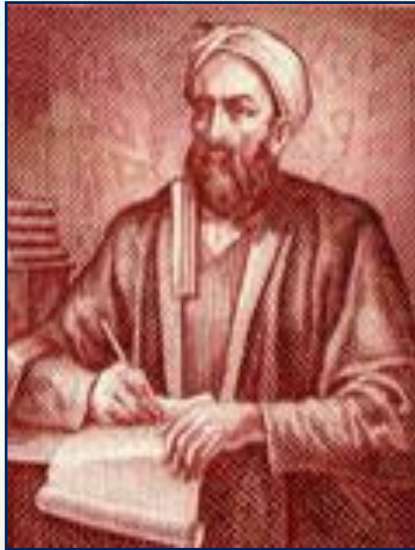




# FAMOUS PEOPLE UZBEKISTAN



**Alisher Navoi**

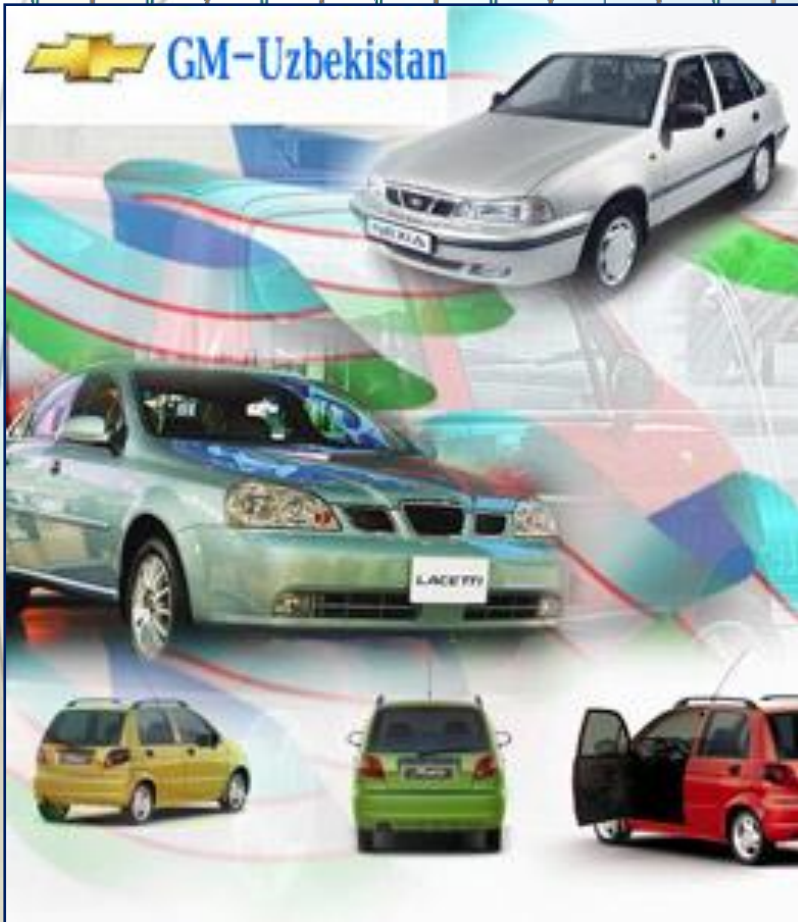


**Al-Beruni**



**Al-Khorezmi**

# Economy



GM-Uzbekistan a company producing vehicles with a capacity of 280 thousand in the year.

# Economy

SAMKOCHAUTO is another company that makes buses marked "ISUZU" and trucks marked "MAN"



# Economy



A company "TAPOICH" which produce branded aircraft IL-110, are produced every year and arrange other 5 planes

## Interesting information about Uzbekistan

Reserves of gold Uzbekistan ranks fourth in the world after South Africa, USA and Russia. And in terms of gold - the second place among CIS countries after Russia.

Uranium reserves of Uzbekistan is ranked seventh in the world after Australia, Kazakhstan, Russia, Canada, South Africa and Ukraine, and third place in the world on its exports after Kazakhstan and Australia.

Reserves and production of copper and tungsten, Uzbekistan is among the top ten countries in the world.

Natural gas production of Uzbekistan is among the top ten gas-producing countries in the world and ranks third among the CIS, after Russia and Turkmenistan.

Uzbekistan's natural gas industry is concentrated mainly in the areas Gazley and Karshi. In 2010 in Uzbekistan, the discovery of new natural gas field near Kosbulakskogo Trough and the North Ustyurt region (western Aral Sea), as well as prospective area Ernaza in Bukhara-Khiva oil and gas region.

# Economy



Uzbekistan has some deposits  
Gas from 66.2 trillion cubic feet

Gas-oil 600 million tons



# Economy



Produced 3.4 million tons each year. Uzbekistan is among the five leading producers of cotton. Five countries: China, USA, India, Pakistan and Uzbekistan - together produce 65% of its total amount. Export of cotton fiber Uzbekistan ranks third after the U.S. and India. Over 75% of produced cotton is shipped for export.

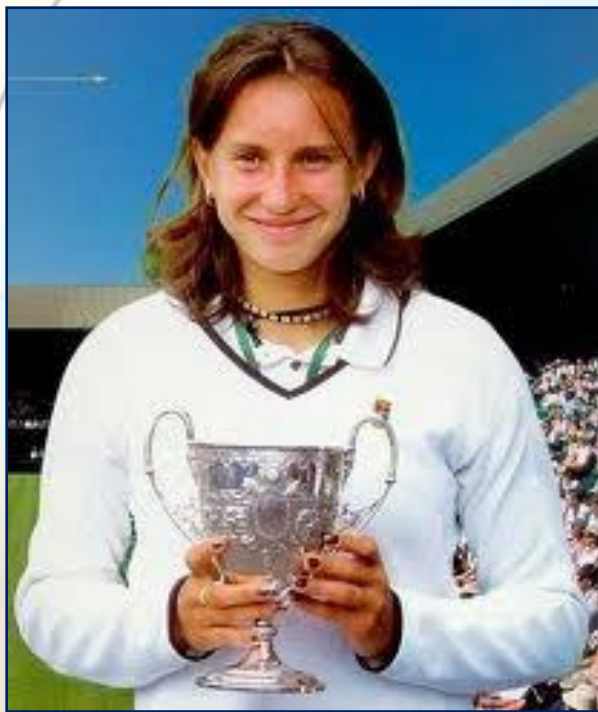
# Sports in Uzbekistan



**Ruslan Chagaev - has been boxing World Champion,  
by the World Association.**



# Sports in Uzbekistan



**Iroda TULAGANOVA - tennis champion at 18 years of the tournament UMLDON**

**Rustam Qosimjonov - 2004 World Champion Chess.**



# Tourism in Uzbekistan



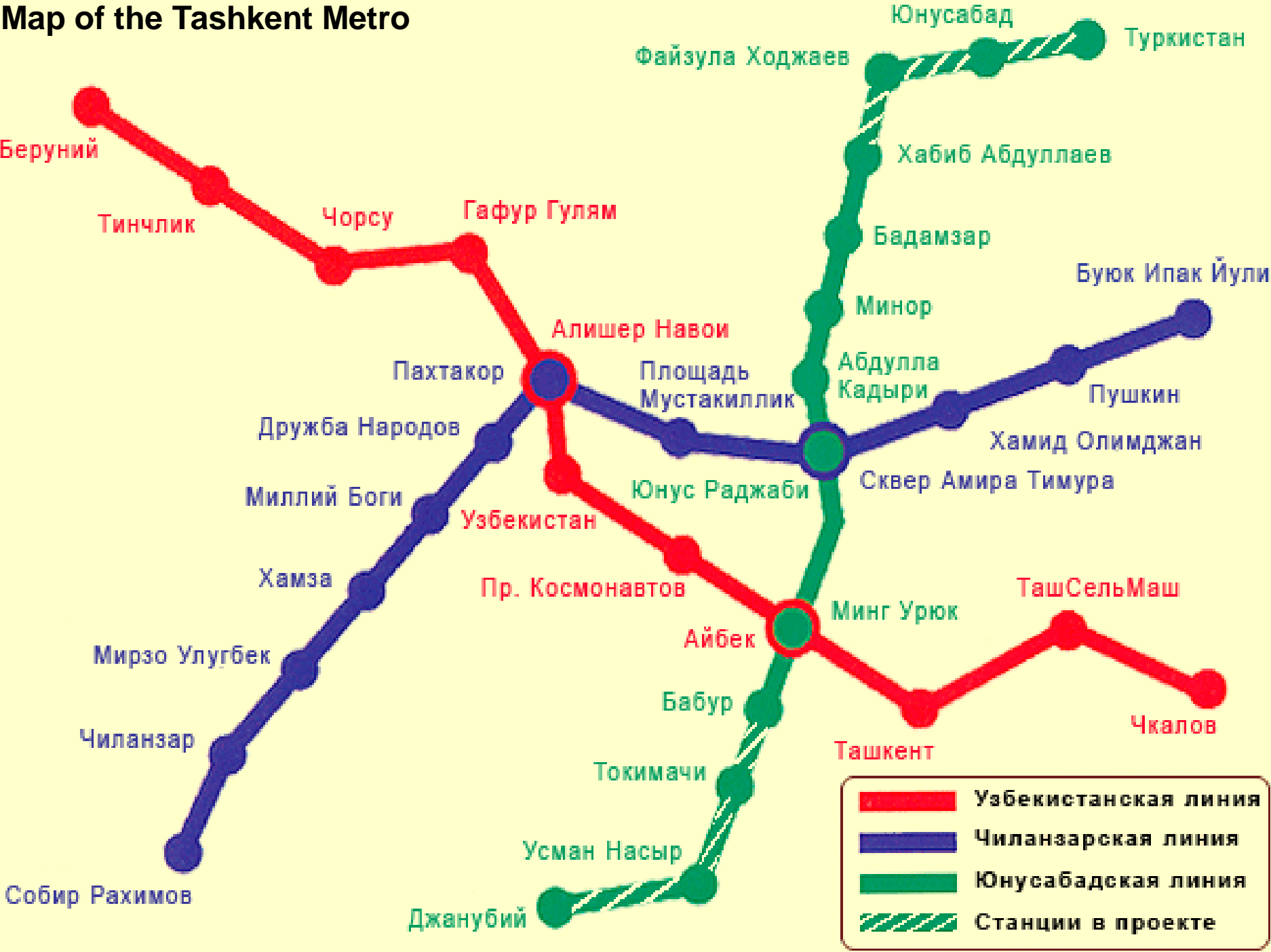
Tourism is developing rapidly in Uzbekistan for its culture and become a new destination. Tashkent - capital is a business center.

# Tashkent – capital of Uzbekistan

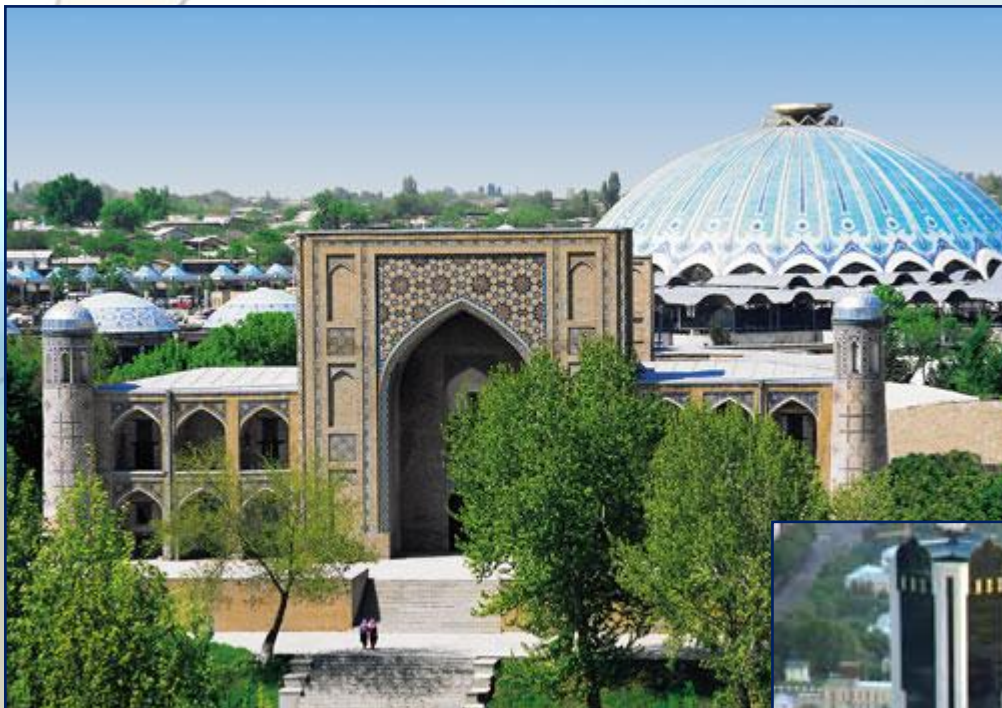


**Tashkent Metro is a marvel.**

# Map of the Tashkent Metro



# Tashkent – capital of Uzbekistán



№11.375 metr

Tashkent - a modern and cultural city.



# Tourism in Uzbekistan

**Cities accepted as a World Heritage Site by UNESCO.**

**Ichan Kala (Khiva)**

**Historic Centre of Bukhara**

**Samarkand - Crossroads of Cultures**

# Tourism in Uzbekistan

Ichan Kala is the inner city to the city of Khiva, Uzbekistan, protected by high brick walls, a dozen meters, the ancient oasis that was the last stage of caravans before crossing the desert to Iran.

Ichan Kala (Khiva)



# Tourism in Uzbekistan

## Historic Centre of Bukhara

Bukhara is the fifth largest city in Uzbekistan. Bukhara is the capital of the province of Bukhara. Historically, it was also coming to know Buhe / Puhe in China during the Tang dynasty.

Bukhara has been one of the main centers of Iranian civilization throughout history. Its architecture and archaeological sites are part of the pillars of history and Persian art. The region of Bukhara was for a long period of the Persian Empire. The origin of its inhabitants from the period of Aryan immigration into the region.





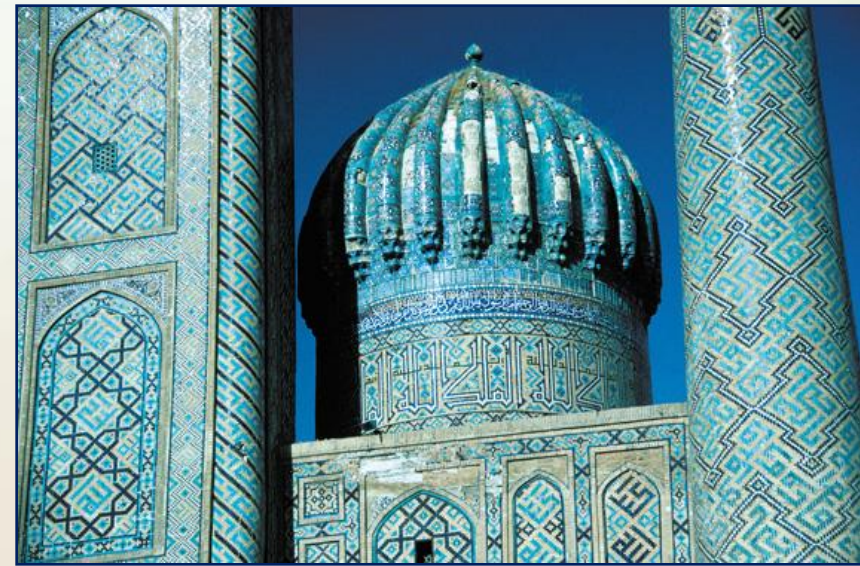


# Tourism in Uzbekistan

## Samarkand - Crossroads of Cultures

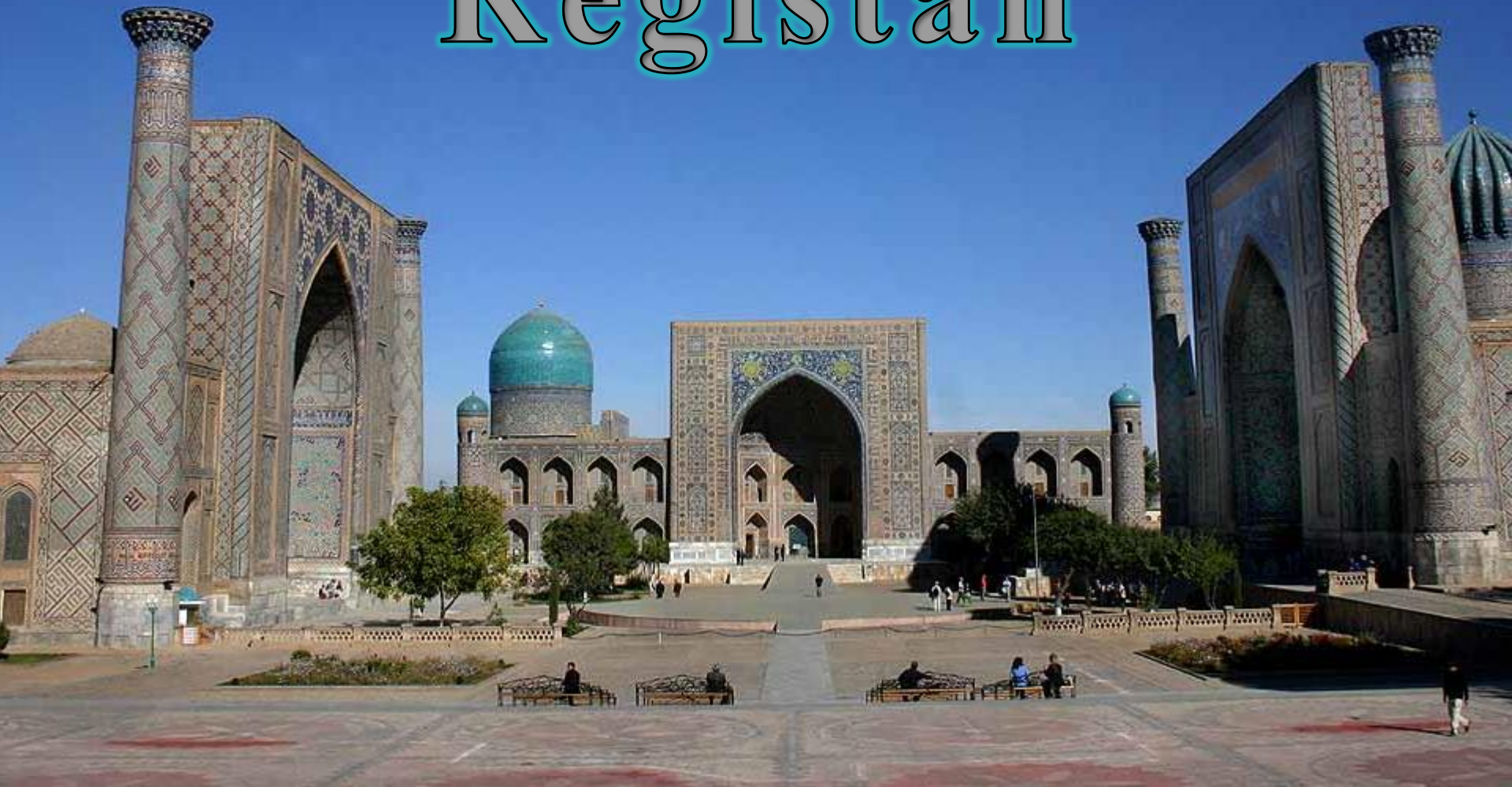
Samarkand is the second largest city in Uzbekistan. UNESCO declared this city of 2,700 years ago as a World Heritage

Humanity in 2001 and was registered as Samarkand - Crossroads of Cultures. Samarkand is one of the oldest cities in the world still inhabited. Given its location, Samarkand flourished due to being located on the Silk Road between China and Europe. He became one of the largest cities in Central Asia.



# SAMARQAND

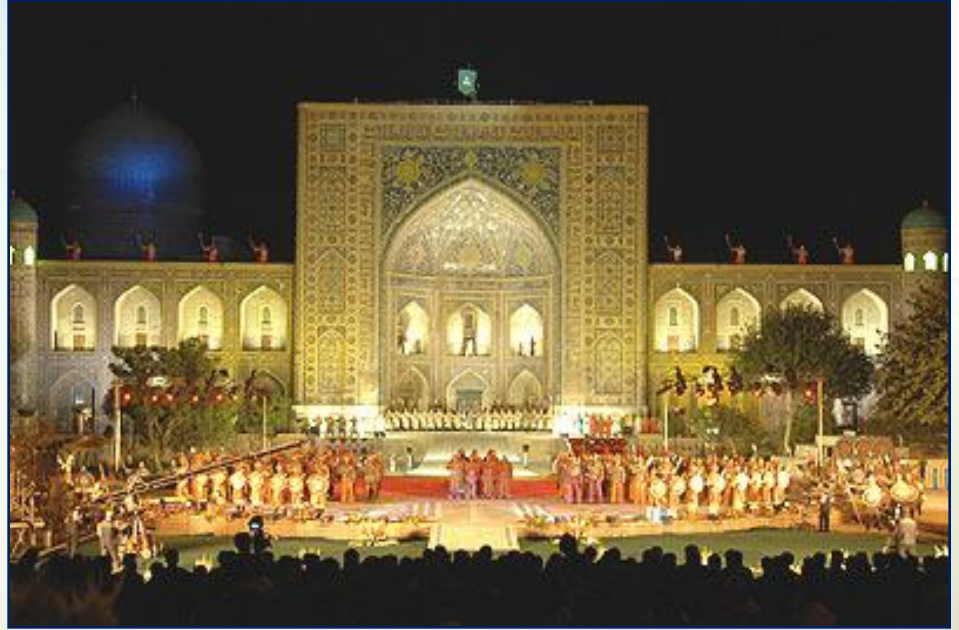
## Registan



# Tourism in Uzbekistan



# Art and music in Uzbekistan



Uzbekistan hosts many music festivals as "Sharq taronalari", "Asrlar sadosi. "

# Art and music in Uzbekistan



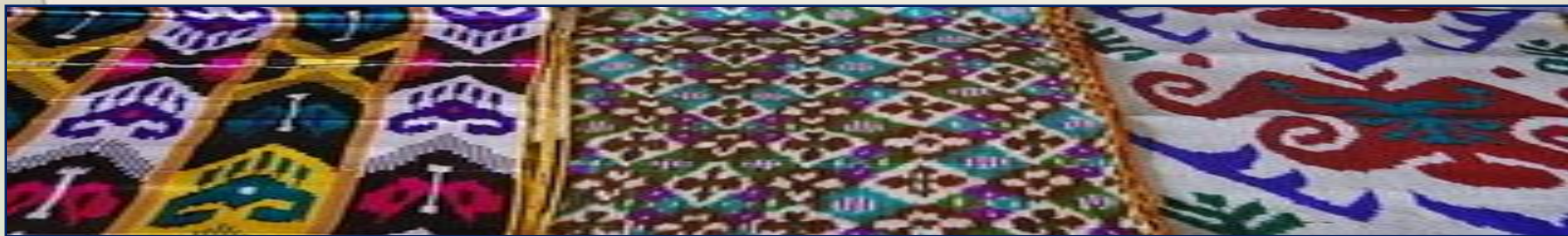
# Art and music in Uzbekistan



Traditional Uzbek knives



Uzbekistan traditional ceramics



# Art and music in Uzbekistan



Working on a pottery wheel and metal (brass, copper ...)....







**DOMESTIC ROUTES**

# Ecologic problem Uzbekistan



# *Education system of Uzbekistan*





**preschool education;  
secondary education**



**specialized secondary and  
vocational education;  
higher education;  
postgraduate education;**



**skills upgrading and retraining;  
school education.**



Kindergarden 6135

Schools 9727

colleges and lyceums 1507  
(1372 colleges and 135 lyceums )

University and institutes 59

Scientific institutes 53

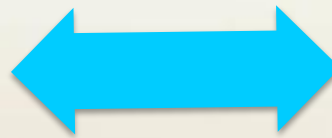
**school education - 214**

system of general  
secondary  
education

Primary (1-4  
school classes)



secondary (5-9  
school classes)



# ***System of secondary specialized vocational education***

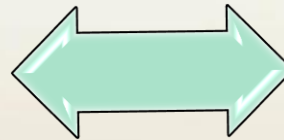
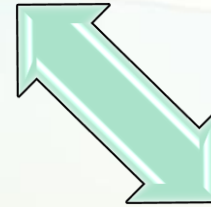
Compulsory secondary specialized vocational education (AFS) with a three-year course is an independent kind of continuing education. It is carried out in accordance with the laws of the Republic of Uzbekistan "On Education" and "On the National Program for training."



System of secondary specialized vocational education

secondary vocational education (academic high schools)

Vocational education (professional colleges)



# *Academic Lyceum*

**Academic Lyceum** - specialized secondary and vocational educational institution for a period of training for three years, ensuring, in accordance with state educational standards of intensive intellectual development, depth, profile, differentiated, professionally oriented education with the capacities and interests of students. In the academic high schools students to voluntarily choose a field of study: humanities, natural sciences, agricultural and other





## ***Higher education has two stages: bachelors and masters degrees.***

- Undergraduate - a basic higher education that includes basic and applied knowledge in the direction of training courses with a duration of at least four years. Upon completion of bachelor's program graduates on the basis of state certification is awarded the degree "Bachelor" in the direction of training and be issued a state diploma.
- Graduate - Higher education in basic and applied knowledge on a particular specialty (training direction) with the duration of study for at least two years, which can be accessed on a competitive basis only on the basis of an undergraduate degree.

# *Institutions of higher education*

Higher education institutions are legal entities. In the Republic, the following types of higher educational institutions:

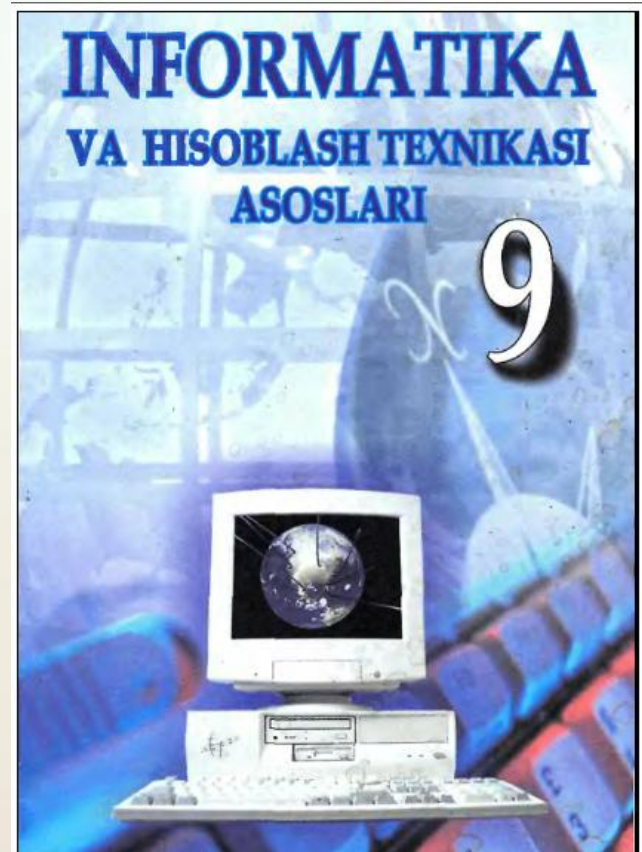
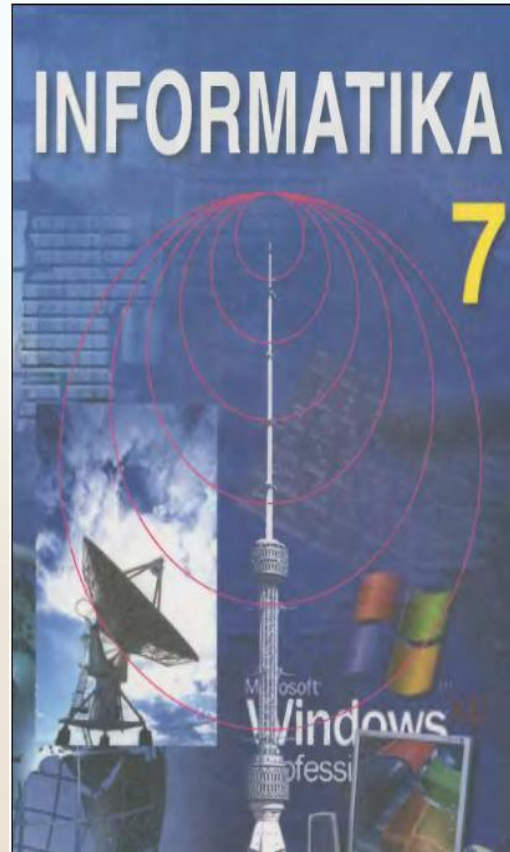
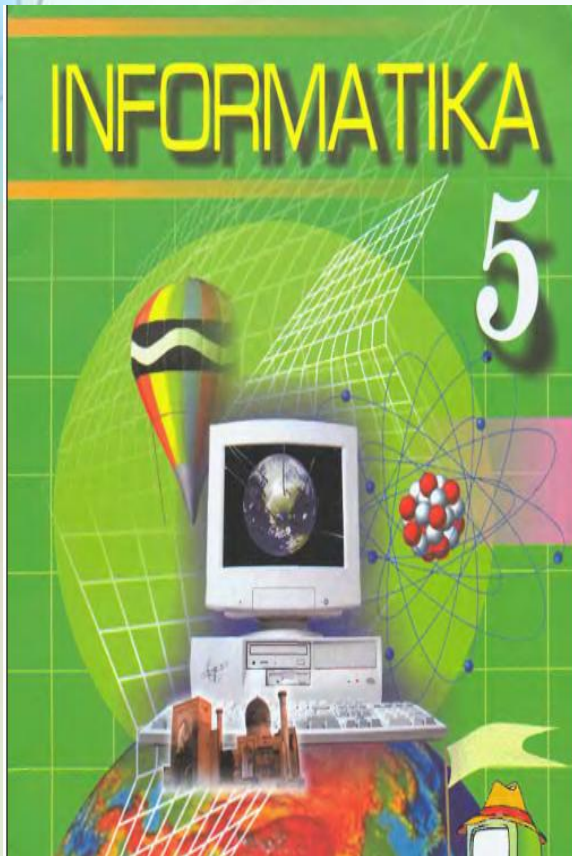
- University - provides educational programs of higher and postgraduate education on a wide range of areas of knowledge and training areas;
- Academy - provides educational programs of higher and postgraduate education on a specific area of expertise and areas of training;
- Institute - provides higher education programs and, as a rule, post-graduate education in specific areas of training within a single area of expertise.

# *Graduate education*

Postgraduate studies can be obtained at universities and research institutions (aspirantura, adyunktura, , doctorantura, researcher). Stage (aspirant, doctoral) graduate education completed thesis. According to the results of the final state certification, awarded degrees, respectively, the Ph.D. and Doctor of Science, with the issuance of state diplomas.

***Current state and prospects of  
development of training for  
computer science teachers in  
Uzbekistan***

# *Textbooks for school*





# Problems and Solutions

## Teacher Training

- **Technological knowledge "age" every 2-3 years, with a steady positive dynamics of this process.**

Problems

- One of the solutions to the current problem is to use mixed (combined) training



Solutions

- The concept of blended learning suggests that in contemporary conditions the student must optimally and in various combinations to use all the opportunities provided by both classical training, and application of remote technology.

Teacher training

# Standards for bachelor's and comparison of curricula developed countries

- Discrete Structures (дискретная математика),
- Probability and Statistics (теория вероятности и статистика),
- Electronics (электроника),
- Circuits and Signals (схемотехника),
- Computer Engineering (вычислительная техника),
- Digital Signal Processing (сигнальные процессоры),
- Algorithms (алгоритмы),
- Software Engineering (технологии программирования),
- Operating Systems (операционные системы),

- **Computer Achitecture and Organization (организация ЭВМ и вычислительных систем),**
- **Computer Systems Engineering (проектирование ЭВМ и вычислительных систем),**
- **Database Systems (базы данных),**
- **Digital Logic (логическое проектирование и моделирование),**
- **Embedded Systems (встроенные системы),**
- **Computer Networks (компьютерные сети),**
- **VLSI Design and Fabrication (проектирование и производство СБИС),**
- **Human - Computer Interaction (человеко-машинное взаимодействие),**
- **Social and Professional questions (социальные и профессиональные вопросы).**

# Standards for bachelor's in Uzbekistan

- **1 block.** Humanitarian and socially economic subjects: history, law, philosophy, Russian, a foreign language, ... 14 subjects

# Standards for bachelor's in Uzbekistan

**2 block.** Mathematical and naturally  
scientific subjects.

Higher mathematics, computer science,  
information technology, discrete  
mathematics, physics, ecology - 6  
subjects

### **3 block. General professional subjects - 21 subjects**

- 1) Computer graphics and design**
- 2) Technology of programming**
- 3) Structure of the data and algorithms**
- 4) Circuitry**   **5) Information bases of computing systems**
- 6) System software**   **7) Banks a database**
- 8) Mathematical modeling**
- 9) Operating systems and office programs**
- 10) Bases the management theory**
- 11) Information safety**
- 12) intellectual systems**
- 13) Bases of the system analysis**
- 14) General psychology**
- 15) Pedagogica**
- 16) Technique professional educations**
- 17) Bases pedagogical skill**

## **4 block. Subjects on a speciality - 5 subjects**

- 1) objective focused programming languages**
- 2) Computer systems and networks**
- 3) Information systems and technologies**
- 4) Multimedia systems and technologies**
- 5) technology Internet**

**5 block. Military preparation**

**6 block. Selective subjects 8 subjects**

**1) Electronic pedagogics**

**2) Bases of distance learning**

**3) Technique of teaching of special subjects**

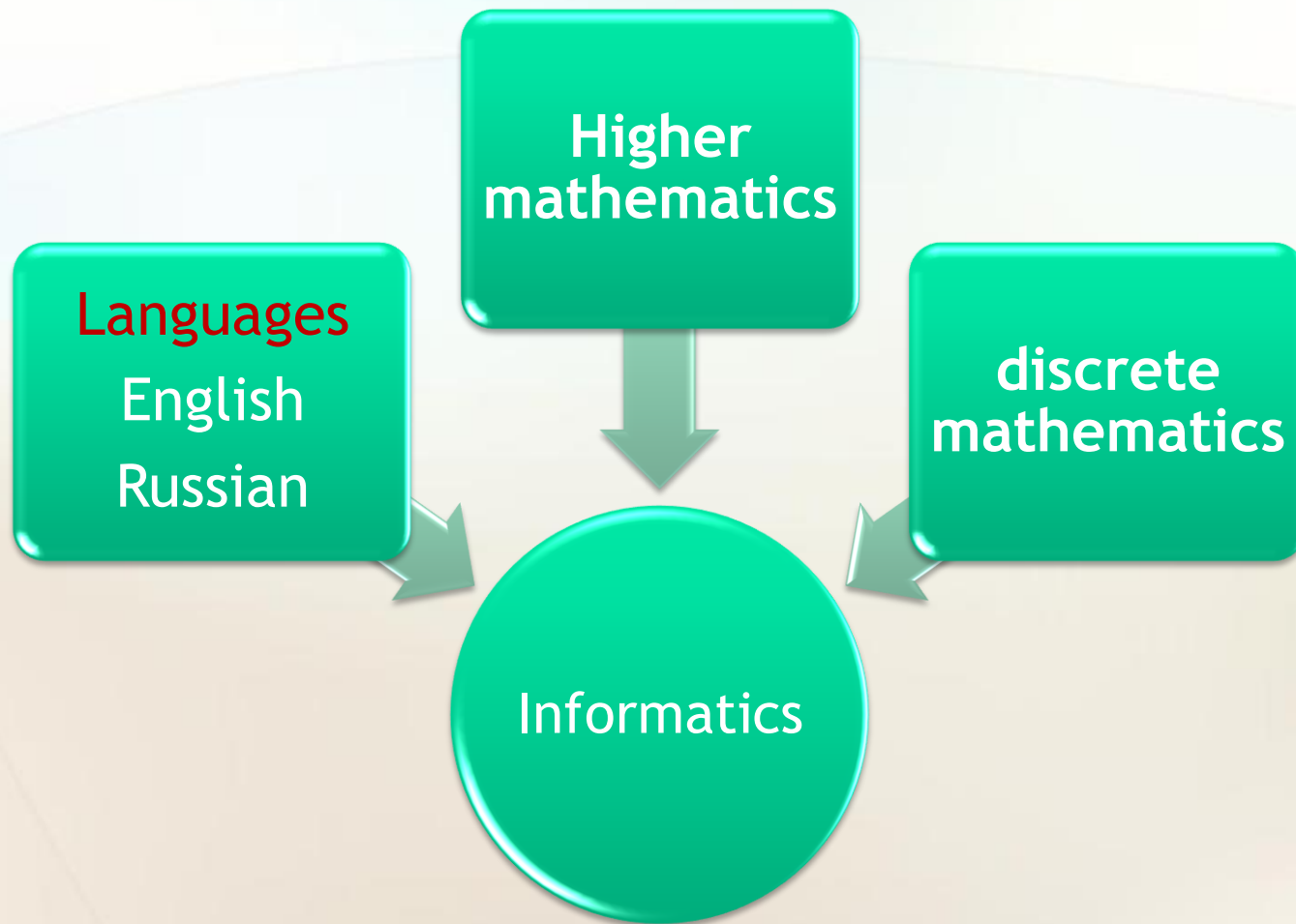
**4) Pedagogical technologies**



# Methodological framework to improve training of future teachers of informatics

- **Integrated education** - a modern principle of learning that affects the selection and structure of educational material of a number of items increases the systematic knowledge of students, stimulates learning methods, focuses on the use of complex forms of training, ensuring the unity of the educational process.

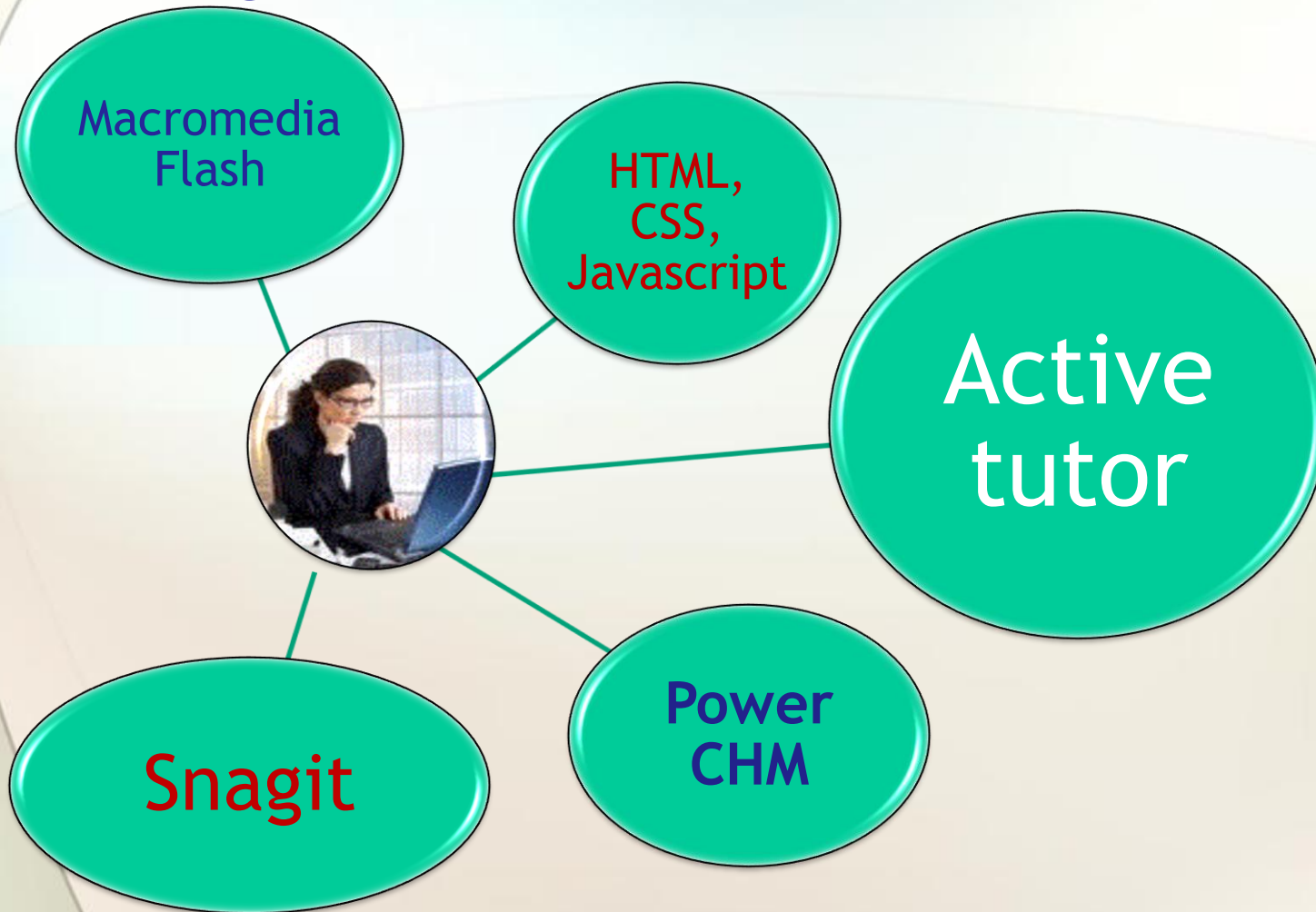
# Methodological framework to improve training of future teachers of informatics



# Methodological framework to improve training of future teachers of informatics

**Blended learning model** - a model of distributed information and educational resources in a full-time training with elements of asynchronous and synchronous distance learning.

# Methodological framework to improve training of future teachers of informatics





**Thanks for  
attention**