

National Aerospace University



ABOUT KHAI

Ukraine is one of few countries of the world where aviation and space engineering are developed and manufactured and where skilled specialists are trained for these areas. The National Aerospace University Kharkiv Aviation Institute is the leading one among the Ukrainian educational institutions which turn out such specialists.

The KHAI was founded in 1930. Its history is closely connected with the development of aircraft engineering and science. The University is famous for its creation of the first in Europe high-speed airplane with a retractable landing gear and the creation of the design of the turbojet engine developed by teacher of the KhAI A. M. Liulka who afterwards became the academician and designer of many structures of aircraft engines including the engine of the aircraft Su-27.

The KhAI is a unique higher educational institution where the airplanes developed by the Institute Design Bureau under the supervision of professor I. G. Neman were produced serially at the aircraft plants and run on passenger airlines.

In 1978 the KhAI was given the name of N. Ye. Zhukovskiy. In 1980 the Institute was awarded with the order of Lenin. In 1998 the N. Ye. Zhukovskiy State Aerospace University "Kharkov Aviation Institute" was founded on the basis of the KhAI and in 2000 the University got a status of the National higher educational institution and got a name of the National Aerospace University Kharkiv Aviation Institute.

During the period of its existence the University has trained about 60 thousands engineers. More than 80% of the specialists with higher education who work in Ukrainian aerospace area are the graduates of the KhAI.

From 1977 to 1984 the Designer General O.K. Antonov run the department of airplane structure at the KhAI.



The distinctive special peculiaring of the KhAI is its close relations with the industry. At present the Designers General and heads of the largest aerospace enterprises: Ya.E. Isenberg, P.V. Balabuyev, V.A. Bogyslayev, I.V. Drenovskiy, S.M. Konyutov, F.M. Muravchenko, A.K. Mialitsa are employed at the University.

At present about 9.5 thousands students and 160 post-graduate students are trained at the University; 650 teachers and 2.5 thousands employers work here. Among them there are 120 Professors and Candidates of Science. Among the teachers of the University there are also: 1 USSR State Lenin Prize winner, 7 USSR State Prize winners, 28 Ukraine State Prize winners, 11 USSR Council of Ministers Prize winners.

The KhAI is a member of International Association of Universities; Global Association, Organization of Industry and Airport Technology; it is also in the International Catalogue and belongs to the Association of higher educational institutions of Kharkiv city INTERVUZ, as well as to the Aerospace Agency of Ukraine.

The KhAI is a co-executor of some programs which are carried out with universities and companies of USA, Japan, Germany, France, Mexico and China. The University takes part in the program of creation of "Alfa" international space station.

In 1992 the KhAI resumed the training of foreign students over 300 foreign citizens from 25 countries of Asia, Africa and America are trained annually at the University.

The KhAI covers a separate territory of the city in the forest-part zone, its area amounts to about 25 hectares. The University has 8 academic buildings, research institute and laboratories, library with 1 ml volume in stock, campus, sporty complex, swimming pool, preventorium clinic of first medical aid, dining halls, bank, children garden, etc.

LIVING EXPENCES:

OUR COUNTRY



Ukraine is a state situated in the center of Europe; it's a member of European Council.

Before 1991 it was in the USSR and in 1991 became dependent sovereign state.

Territory – 600 thousand sq. km.

Population - 50 ml people.

Capital - Kyiv.

Climate - moderate, average temperature in January - -7 C, average temperature in July - +23 C.

Religion - Christianity, Moslemism, Judaism.

Industry - metallurgical industries, mechanical engineering and instrument-making industrial aerospace, chemical and refining industries, Agriculture - production of grain, industrial crops and stark-breeding.



OUR CITY

Kharkiv city is the second city in Ukraine after Kyiv according to its size and population. In 1917 - 34 it was the capital of Ukraine. Kharkiv city is a large industrial, scientific and cultural center of the country. It was founded in 1655.

Area - more than 300 sq. km.

Population - more than 1.5 million people.

Industry – there are 270 industrial enterprises which produce airplanes, tractors, turbines, electric engines, tower cranes, software controlled machine-fools, electronic equipment, medicinal preparations, light and food industrious products.

Transport – there are: international airport, railway stations, bus and coach stations, the Metro and other means of transport.

Education – there are 26 state higher educational institutions here: among them: 11 academies; 14 universities; 1 institute; 150 thousand students including 5 thousand foreign students from 50 countries of the world study here.

LIVING EXPENSES

The cost of market basket with all the required products amounts to 150-200 \$ US.

The prices of some food products are as follows:

1 kg of bread - \$ 0,3-0,4;

1 kg of beef - \$ 2-2,5;

1 kg of potato - \$ 0,4;

1 kg of cheese - \$ 3-4;

1 liter(liter) of milk - \$0,2-0,5;

10 eggs - \$ 0,5;

1 kg of bananas - \$ 1-1,1;

1 kg of coffee - \$5.

1 kg of oranges - \$ 1, 5

All the products may be bought at supermarkets or agricultural markets. There are many products from the countries of Europe and America.

The network of municipal transport is well developed – there buses, trolley-buses, tram and metro (a single fare costs about \$ 0, 1). There are many restaurants, cafes, bars in Kharkov city.

A free time may be spent at museums, theatres, students clubs, and discos.

The cost of one ticket is:
for cinema - \$ 1-2;
for theatre - \$ 2-4;
for disco - \$ 4-5.

Kharkov is a students' center of Ukraine, ecologically pure city with numerous parks and squares. Kharkov City has all the necessary conditions for a comfortable life.

There are many cult edifices in Kharkov. The religious rites one may celebrate in churches, mosques, Roman Catholic churches, and synagogues.

The possibility of the placement-in-the-job for foreign citizens in Ukraine is limited.

INTERNATIONAL RELATIONS DEPARTMENT

The National Aerospace University KhAI is an active follower of the integration of Ukrainian higher education and science with the world educational organizations and funds. With a purpose of consolidating the existing relations between foreign universities and the KhAI as well as establishing new contacts the International Relations Department of the KhAI was created in spring, 2001.



Main lines of the International Relations Department:

1. Co-operation with foreign educational and scientific institutions and organizations under agreements.
2. Organization of services connected with the training of foreign citizens.
3. Definition and realization of international projects with non-budgetary provisions.
4. Participation in international educational and scientific programs and funds.

5. Organization and conduction of scientific and educational conferences, fairs, seminars, and international subjects lectures, etc.

Foreign partners of the National Aerospace University (KhAI)

Institution	Lines of co-operation
Magdeburg Otto-von-Gerike University (Germany)	Co-operation in scientific and educational spheres
Stuttgart University (Germany)	Co-operation in scientific and educational spheres
University of Applied Sciences of Zittau/Gerlitz (Germany)	Co-operation in scientific and educational spheres
National Polytechnic University (Mexico)	Co-operation in scientific and educational spheres
Petroleum Institute (Mexico)	Cooperative scientific work
National Council for Science and Technology CONASYT	Co-operation on formation the researchers and engineers
Peking Aerospace University (China)	Co-operation in scientific and educational spheres
Nanking Aerospace University (China)	Co-operation in scientific and educational spheres
Shaoguan University (China)	Co-operation in educational sphere
Technological University of Tampere (Finland)	Co-operation in scientific and educational spheres
US National Science Foundation	Implementation of new technologies in agriculture
International Association of Universities IAU/UNESCO	Membership in Association

As in any other modern higher educational institution, at the KhAI the international cooperation is a strategic direction to activity, which is aimed at the integration of the university as a whole and its separate subdivisions into world educational space. Such sort of activity promotes the establishment of strategic partner relations with higher educational institutions abroad as well as gives possibilities to get extra-budget financing from international funds, programs acting in the educational sphere.



The KhAI takes part in the following programs:

1. Program of Tempus/Tacis European Community
2. Scholarship programs of the DAAD German Service Academic Exchange
3. Program of International association of students and young specialist, involved in economy, management and AIESEC information technology
4. Edmund Masky Scholarship Program
5. The Full Bright Academic Exchange Program
6. The Program of the Council of IREX International Scientific studies and exchange "Act in support of the liberty"



Some details about these programs:

1. **The Program of Tempus/Tacis European Community** is one of several programs of the European Community, directed on rendering the assistance in the process of social and economic reforms in partner-countries. The



Tempus Program gives the grants for creation of new or the transformation of already existing scholastic courses, restructuring of educational institutions, promotion of joint activity for the organizations (academic and non-academic) on a specific discipline.

2. **The Scholarship Program of DAAD German Service Academic Exchange Service** is a program, aimed at supporting international cooperation in the sphere of higher education and exchange programs (in both directions, i.e. to support German's staying abroad and foreigners' staying in Germany with the purpose of getting education).
3. **The Programs of International Association of students and young specialist involved in economy, management and AIESEC information technology** is a program of the international practical trainings giving practical knowledge in the field of economy, management and AIESEC information technology. It deals with conduction of international conferences, projects, lectures, seminars amongst youth in many cities of Ukraine.
4. **The Edmund Masky Scholarship Program** is intended for a study at magistracies on economic and humanistic major subjects. The purpose of the program is that one which enables graduates to take an active part in the building of democratic society in their own countries and to make a significant contribution into the economic growth of the state, which they represent.
5. **The Full Bright Academic Exchange Program** comprises the program of practical training for young teachers of higher educational institutions, scholarships for carrying out research studies or for delivering lectures at the universities of USA, program of scientists exchange for American researchers and lecturers, scholarships for training at the universities of USA. The purpose of the program is to extend the exchange of scientific information, strengthening of cooperation between scientific communities of Ukraine and USA, granting the possibilities for scientific activity in a broad spectrum of social and humanitarian problems.
6. **The Program of the Council of IREX International Scientific studies and exchange "Act in support of the liberty"** gives a chance to first, second and the third year students (the higher educational institutions with five year system of training) to be trained on length of one year at a university or at 2-4-year college of USA. The scholastic disciplines are: business, economy, journalism, computer discipline, law, international relations, agriculture, sociology, political science.



TERMS OF ENTERING THE FIRST YEAR OF STUDY

When entering the first year of study the foreign citizens have to undergo their entrance interviews. Those entrants who have undergone the interview successfully may conclude contracts for training. The contract should be attached with the following documents:

Certificate of completion of the Preparatory Department course of all-Ukrainian or CIS countries sample;

- questionnaire or application form of established sample;
- documents certifying the unavailability of Aid's infection;
- health certificate;
- health insurance for granting urgent medical aid (except those foreigners who arrived from the countries which have concluded contracts of granting free urgent medical aid);
- birth certificate copy;
- 8 photos 60 x 40 mm sized.

The order of enrollment into the list of first year students shall be signed only on the ground of availability of the above documents.

TRANSFER FROM OTHER HIGHER EDUCATIONAL INSTITUTION

The enrollment into the list of 2-d and the following year students may be realized only on the ground of availability of application form filled in by the student, his/her education certificate and contract. On the ground of these documents the faculty dean determines the academic difference in disciplines and indicates the terms during which this difference is to be eliminated.

KhAI sends an inquiry addressed to the higher educational institution where the foreign student who studied earlier with a request to take the student's name off the register and transfer his/her documents to the KhAI for the training. The contract should be attached with:

- academic certificate with seal affixed and signed by the Rector of the University;
- certificate of completing the Preparatory Department course of all-Ukrainian sample or CIS countries sample; .
- questionnaire or application form of established sample;
- documents certifying the unavailability of Aid's infection;
- medical health certificate;
- health insurance for granting urgent medical aid (except those foreigners who arrived from the countries which have concluded contracts of granting free urgent medical aid); -
- 8 photos 60 x 40 mm sized.



List of major subjects for Bachelor's Degree

- Airplanes and helicopters
- Aircraft engines and power plant
- Control systems of flying machines and their complexes
- Airplane and helicopter manufacturing
- Aircraft engine manufacturing
- Designing and manufacturing articles made in composite
- Rocket and space complexes
- Aerospace heat engineering
- Spacecraft engines and power plant
- Engines of rocket-space craft
- Life safety measures
- Information controlling systems and techniques
- Information design technologies
- Software of automated systems
- Robotic systems and complexes
- Radio electronic devices, systems and complexes
- Manufacture of electronic devices
- Technologies and means of telecommunication
- Specialized computer systems
- Information measuring systems
- Quality, standardization and certification
- Financing Enterprise economics
- Management of organizations
- Gas turbine power plants and compressor stations
- Biotechnical and medical apparatuses and systems
- Metrology and measuring engineering
- Systems of control and automation
- Computer systems and networks
- Non conventional sources of power

- Psychology Applied mathematics
- **List of major subjects for Master's Degree**
- Airplanes and helicopters
- Aircraft engines and power plant
- Control systems of flying machines and their complexes
- Airplane and helicopter manufacturing
- Aircraft engine manufacturing
- Designing and manufacturing articles made in composite
- Rocket and space complexes Aerospace heat engineering
- Spacecraft engines and power plant
- Engines of rocket-space craft
- Life safety measures
- Information controlling systems and techniques
- Information design technologies
- Software of automated systems
- Robotic systems and complexes
- Radio electronic devices, systems and complexes
- Manufacture of electronic devices
- Technologies and means of telecommunication
- Specialized computer systems
- Information measuring systems
- Quality, standardization and certification
- Management of organizations
- Gas turbine power plants and compressor stations
- Biotechnical and medical apparatuses and systems
- Metrology and measuring engineering
- Systems of control and automation
- Computer systems and networks
- Non conventional sources of power

Rules of entering and training at KhAI post-graduate course

The graduates who are going to enter the post-graduate course for a training with a purpose to get a degree of Candidate of Science in engineering should have got a diploma of Master of Science or Specialist, more over the specialty of his/her candidate dissertation shall be related to the main line of the basic education on which the Master's or Specialist's degree awarded.

The KhAI is entitled to conduct the training of PhD students on the large list of major subjects including those related to aerospace area. The indicated list is attached below. Those major subjects on which the defense of dissertation is possible to be realized at the KhAI are marked with a sign * in the list. The KhAI has got a certificate of Higher Certifying Commission on each specialty. The defenses of the dissertations on the major subjects which are not marked with a



sign * in the list shall not be possible; they will be realized in other higher educational institutions of Ukraine.

The training on the full-time post-graduate course lasts 3 years and on the distance instruction post-graduate course - 4 years. The graduates who are going to enter the post-graduate course should pass the entrance examinations on major subject, foreign language (Russian or English) and philosophy.

Within the first year of study the post-graduate students have to pass candidate examinations - candidate minimums which are obligatory under defense of dissertation.

Candidate minimums shall be passed on the following subjects: major subject, foreign subject, philosophy.

Each PhD student shall work individually under the guidance of his/her research supervisor. Within the first year of training an aspirant jointly with his/her research supervisor shall definitely formulate the theme and tasks of investigations. Within the whole period of training a PhD student has to perform reference sources survey on world publications, to carry out theoretical and experimental research work, to make analysis of research results, to prepare and publish at least 2 – 3 research articles.

At the end of training on the post-graduate course an aspirant shall submit dissertation on 120 x 150 A4-size sheets and to defend it in public. The public defense envisages getting positive opinions about research results from a number of scientific schools and enterprises of aerospace industry of Ukraine and other countries.

The defense procedure of already prepared and submitted work usually takes 2 – 4 months in dependence on the level of preparation of the. The presence of the PhD student at his/her defense is obligatory.

According to the results of successful defense the KhAI issues a diploma certifying the awarding of a degree of Candidate of Science of state sample to the aspirant. The KhAI has a great experience of training citizens of Germany, Mexico, Tanzania and other countries on post-graduate course.

During the period of its existence the KhAI has awarded the degree of Candidate of Science to more than 1000 PhD students from Russia, Ukraine and other countries and the degree of Doctor of Science to more than 150 persons.



List of the permanently delivered post-graduate courses at the National Aerospace University «KhAI»

01.02.04.*	Mechanics of a deformed solid.
01.02.05.*	Mechanics of a liquid, gas and plasma.
01.04.22.	Superconductivity.
01.05.02.	Mathematical modeling and computing methods.
01.05.03.	Computers and systems software.
01.05.04.*	Systems analysis and theory of the optimum solutions.
02.00.04.	Physical chemistry.
05.02.02.	Mechanical engineering science.
05.02.08.	Mechanical engineering manufacture.
05.03.05.	Processes and machines for processing by pressure.
05.07.01.	Aircraft dynamics and gas dynamics.
05.07.02.*	Aircraft design.
05.07.03.*	Aircraft strength.
05.07.04.*	Aircraft manufacturing procedure.
05.07.05.*	Engines and power units of aircraft.
05.07.07.	Tests of flight vehicles and their systems.
05.07.12.*	Remote aerospace researches.
05.09.01.	Electrical machines and equipments.
05.11.15.	Metrology and metrology maintenance.
05.12.02.	Telecommunication systems and their control.
05.12.07.	Antenna and microwave devices.
05.12.13.	Radio devices and means of telecommunication.
05.12.31.	Special-purpose radio systems.
05.13.03.*	Systems and control procedures.
05.13.05.	Members both devices of computer facilities and control systems.
05.13.06.*	The automated control systems and advanced information technologies.
05.13.07.	Automation of manufacturing procedures.0.
05.13.12.	CAD systems.
05.13.22.	Projects control and production development.
05.14.06.	Technical thermal physics and industrial power system.
05.14.08.	Transformation of recoverable power.
07.00.01.	History of Ukraine.
08.02.03.	Organization of economics control, planning.
08.06.01.	Enterprise economics and organization of manufacture.

08. 07.01.	Industrial economics.
08. 07.04.	Transport economics and communications.
09. 00.01.	Ontology, epistemology, phenomenology.

TRAINING IN ENGLISH

the Master's Degree is based on a successfully completed Bachelor's Degree

Bachelor's Degree (4 years of training)	Master's Degree (1,5 - 2 years of training)
Aviation and Cosmonautics	<u>Airplanes and helicopters</u>
	<u>Airplane and helicopter manufacturing</u>
	<u>Aircraft engines and power plants</u>
	<u>Designing and manufacturing articles made of composites</u>
	<u>Rocket and space complexes</u>
	<u>Aerospace heat engineering</u>
	<u>Spacecraft engines and power plant</u>
	<u>Aircraft engine manufacturing</u>
Computer engineering	<u>Computer systems and networks</u>
Avionics	<u>Control systems of flying machines and their complexes</u>
	<u>Systems of control and automation</u>

TUITION FEES

National Aerospace University
KhAI
2004-2005 academic years

Course	1 year, US\$	2 year, US\$	3 year, US\$	4 year, US\$
Preparatory department	1000+ application			
Study of Russian and Ukrainian	prosession fee paid	-	-	-
Bachelor				
Training in Russian or Ukrainian *	1500	1500	1500	1500



Bachelor Training in English**	1800+ application proceession fee paid at getting the invitation	1800	1800	1800
Master (1,5 - 2 years of training) Training in Russian or Ukrainian after completing Bachelor's course	1500	750 (1500)	-	-
Master (1,5 - 2 years of training) Training in English**	2000	1000-2000*	-	-
Master Training in English according to curriculum	5000	5000	-	-
PhD Training in Russian or Ukrainian	1500-2000*	1500-2000*	1500- 2000*	-
PhD Training in English	5000	5000	5000	-

PREPARATORY DEPARTMENT

The Preparatory Department for foreign citizens at the National N.Ye.Zhukovsky Aerospace University During the period of existence of the Preparatory Department more than 300 foreign citizens from 25 countries of the world obtained the knowledge necessary for their further study at the KhAI and other higher educational institutions of Ukraine on engineering, economics and natural sciences. The training is conducted on the standard curricula approved by the Ministry of Education and Science of Ukraine. The students of Preparatory Department study the following disciplines: Russian language, mathematics, chemistry, drawing, computer science, computer linguistics, and biology (for those who wish to study in the future on natural sciences).

The cost of training amounts to 1000 \$ US per year.

The academic year at the Preparatory Department lasts from the 1st of September to the 1st of July and it consists of two semesters. **The foreign citizens have to arrive for training within the period from the 1st of September to the 1st of January.** The second semester starts in February. At the end of each semester the students will have to take the examinations followed by holidays. The students of the Preparatory Department may also be exempted from attending classes during their national and religious holidays.



The accommodation conditions for the students of the Preparatory Department are similar to those for foreign students who are trained at other academic faculties.

PROCEDURE OF INVITATION

As a rule citizen get the information about KHAI from their countrymen who study in Ukraine, through the contractors or via the Internet. The citizens who showed their wish to study at the National Aerospace University have to get an invitation for training from the University. The form of this invitation is an official document validated by the Ministry of

Science and Education of Ukraine. Only when having got the original of the invitation and having filled it out properly the foreign citizen is permitted to enter into Ukraine for training.

To get the invitation the citizens who wish to study at the KhAI shall submit to the University the following information about themselves in English:

- name, surname;
- date of birth;
- citizenship;
- N of passport (if available; if the passport is issued during exit from the country, this shall not be submitted);
- address of residence.

This information may be sent in any way: by post, e-mail or by fax. On the ground of this information the University draws up an official invitation for training and sends it to the entrant. The Xerox copy of the invitation shall be kept by the University.

In compliance with the acting Regulations the entrance for a foreign citizen on the ground of this invitation may be realized within the period from 15.08 to 15.11 of current year.

After 15.11 a visa support policy comes into force /confirmation of the information about the arrival for training through the consular departments.

The cost of the invitation for training and the service of granting visa support are not included into the cost of training and shall be extra paid. The amount is 50 \$ US. The invitation is sent in June.

Application Form for Registration of the Invitation for Students from Other Countries: C:\MYDOCUMENTS\APPLICATION FORM

TERMS OF ADMISSION

The foreign citizens who are going to enter Ukraine for a training have to complete the full length one-year course at the Preparatory Department where they study Russian language and major disciplines (mathematics, physics, drawing, computer science and others) in Russian. After completing this preparatory course the foreign



citizens get the official document of all Ukrainian samples - Certificate of completion of the Preparatory Department course.

Foreign citizens, who manage English, can be trained in the direction "Aviation and Cosmonautics".

- To enter the Preparatory Department the foreign citizens shall have to submit the following documents:
- original or copy of the document of education with an attachment of the list of disciplines and grades certified by a Notary.;
- applicant's health certificate;
- document certifying the unavailability of Aid's infection;
- health insurance of granting urgent medical aid (except those foreigners who arrived from the countries with which have concluded contracts of granting free urgent medical aid);
- copy of birth certificate;
- 8 photos 60 x 40 mm sized.

The preferable term for entrance into Ukraine is from 15.08 to 15.11 annually.

PROCEDURE OF ENTRANCE INTO UKRAINE

To draw up the Ukraine entry visa the foreign citizen who has an official invitation has to apply to the nearest Embassy or Consulate of Ukraine. He must have the following documents:

- original of official invitation for a training;
- original or copy of the document of education with the attachment of the list of disciplines and grades certified by a Notary;
- document certifying the unavailability of Aid's infection;
- health reference certified by official health care bodies of the country from which the citizen has arrived and issued not later than two months before entrance into Ukraine for a training;
- birth certificate copy;
- 8 photos 60 x 40 mm sized.
- After having got the visa and tickets a student sends the following information to the University: when he/she is due to arrive, which transport he/she is going to take and what city he/she is bound for. The employees of the University send this information to the appropriate departments and arrange the meetings in airports, railway stations and coach stations.

GETTING TO THE UNIVERSITY

Kharkiv city is a large transport junction in Ukraine. It is connected with all cities of Ukraine by coach and rail communication and with many cities – by air communication. Foreign citizens may arrive in Ukraine to one of the international



airports in: Kyiv (Borispol airport), Kharkiv, Odessa, Donetsk, Dniepropetrovsk. They may also arrive in our country by rail, bus, coach or by sea. A foreign citizen should inform the University about the day and time of arrival, kind of transport, number of flight, and number of carriage and return ticket with an open date of return to home land with a period of validity up to one year. The University's representatives meet the arriving foreign citizens and afterwards accompany them to the place of destination. The travel expenses to and from Kharkiv city must be met by a foreign citizen.

-: For More Details Contact At :-



**26, Vadhani Industrial Estate,
Near Shreyas Cinema,
Sanghani Estate, L. B. S. Marg,
Ghatkopar (w) Mumbai – 400 086.
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