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2019

Greetings on World Aviation and Cosmonautics Day and Ukrainian Rocket and Space Industry Workers' Day

April 12, dreams and fantasies of human flight into space became a reality. The first space flight paved the way for cosmic mystery researchers. Highly acclaimed Ukraine natives were also involved in the further steps of mankind toward the stars. Ancestors of Kostiantyn Tsiolkovsky come from Volyn region. They were relatives of Hetman Severyn Nalyvaiko. Mykola Kibalchych comes from Chernihiv region, Yuriy Kondratyuk was born in Poltava, while Serhiy Korolev was from Zhytomyr ... Their names have been woven with the brightest string into the fabric of world cosmonautics.

In 1929, Yuriy Kondratiuk in his book "The Conquest of Interplanetary Spaces" described the optimal flight trajectory to get from Earth to the Moon. A monument was installed to the Ukrainian at a Cape Canaveral space center in Florida.

The first cosmonaut of an independent Ukraine, Leonid Kadenyuk, conquered space as part of an American team on Columbia Shuttle.

At the same time, Ukraine has been systemically involved in manufacturing means of space transport. So, on March 22, 2019, a European lightweight carrier Vega with a Ukrainian engine successfully launched from the Kourou Space Center in French Guiana.

I'd like to greet everyone involved in the space industry on this World Aviation and Cosmonautics Day and Ukrainian Rocket and Space Industry Workers' Day. Let your dreams fly into space, let your ambitious plans outrun hopes of the most daring science fiction authors. Please, keep creating, building airplanes and spaceships, laying new space tracks, boosting Ukraine's fame, and consolidating its image as a global space power.

Sincerely,
Volodymyr ISAIENKO

OFFICIALLY



Problems and prospects of NAU's international affairs



Vice-Rector for International Cooperation and Education Oleksandr Zaporozhets, speaking at the NAU Academic Council, reported on the University's international affairs.

We consider the development of NAU's international cooperation and education as an important means to boost Ukraine's credibility in the international arena as a global aviation challenge.

The main competitive advantage of our university in the world educational market is the aviation component. History shows that most foreign students primarily opt for aviation-related classes. The recurrent training of civil aviation leaders is also a key to ensuring that the university is globally perceived as a world-renowned aviation education center.

This year, we're celebrating the 70th anniversary of the training of foreign aviation professionals, launched by Kyiv Institute of Civil Aviation back in 1949 when a group of seven students from China and Mongolia came to study at Mechanics Faculty. In the 1970s and 1980s, at Kyiv Civil Aviation Engineers Institute, every fifth or every sixth student was from another country. By that time, perhaps, only a Moscow-based Patrice Lumumba Peoples' Friendship University could boast a higher number of foreign students.

Over half a century, the university has trained tens of thousands of professionals from over 140 countries. **NAU alumni are now CEOs of air carriers, airports, production and repair enterprises, and design bureaus.**

At the same time, the analysis of NAU management in the field of international cooperation and education over the past 20 years

has revealed a number of systemic deficiencies that led to a negative trend for a significant reduction of the number of foreign students being attracted. The aviation image, created by decades of NAU staff's hard work could be lost due to the lower quality of the educational process, brushing aviation-related classes off the curriculum, outdated teaching material and technical base, and weak English language skills of some of our teachers.

By realizing that these issues exist, we can outline a number of priority moves to be taken in the following areas:

- Harmonization of NAU curricula with those of the world's leading aviation universities and bringing them in line with the modern requirements of the aviation industry;

- Introduction of aviation disciplines into the curricula of "non-aviation" fields of study as aviation needs managers, economists, psychologists, lawyers, and experts in international relations;

- Principal improvement of the level of teaching applying professional English;

- Wide involvement of leading NAU staff in the system of training and recurrent training of aviation personnel.

Developing bilateral relations with the world's leading higher educational facilities and organizations, we improve the university's international credibility. In particular, an agreement was signed on the establishment of the International Association of Aviation and Aerospace Education (ALICANTO). Training centers

OFFICIALLY

of NAU-based ICAO Institute have hosted 1,017 aviation experts from Ukraine and 295 – from thirteen other countries – as they underwent training and retraining. For the first time, the university represents Ukraine in ICAO's governing and expert bodies: Professor Galyna Suslova has been elected for two years Chair of the Board of Directors of the European/North Atlantic Aviation Safety Training Centers; Professor Oleksandr Zaporozhets, on the nomination of the State Aviation Service of Ukraine, became a member of the ICAO Committee on Environmental Protection.

A comprehensive program has been developed on expanding the exports of educational services and increasing the number of foreign students at NAU in 2019-2029. The set of measures involves the development of cooperation with leading international organizations, primarily working in the aviation field; development of multilateral relations within the framework of international educational associations and bilateral agreements signed with world's leading universities; increasing participation in the implementation of international projects and programs launched by the EU, Canada, and the U.S.; development

of the system of recurrent training and advanced training of aviation professionals from across the world; improvement of cooperation with leading developers and manufacturers of aerospace equipment (SE ANTONOV, MOTOR SICH JSC, SE "Plant 410 CA", DB "LUCH") in the field of student training, retraining, and internships. Also, it is worth noting the need to set up on foreign soil NAU's advisory-information centers and educational-research centers with the involvement of our foreign alumni.

The demand of the aviation industry goes beyond aviation personnel. Cyber security, eco-security, biotechnology (for example, biofuels production), economics and management, and international aviation law also require highly-qualified professionals in corresponding areas. All of them are connected with aviation sector in a member of ways.

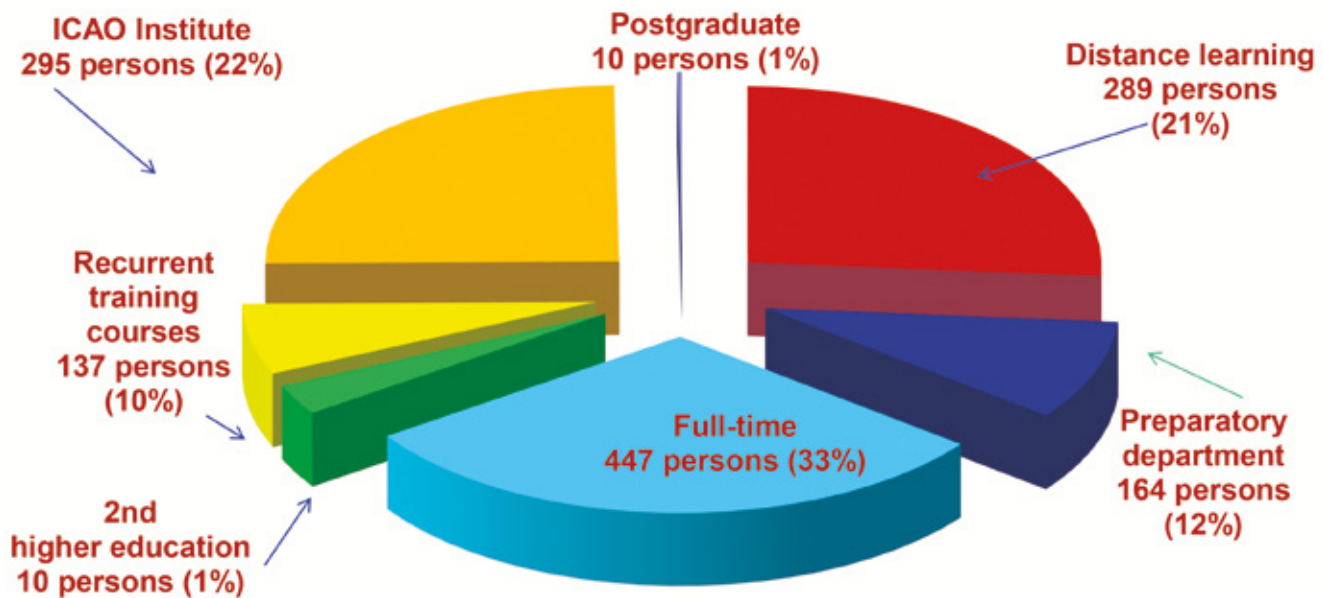
Implementation of the program to expand the exports of educational services and increase the number of foreign students at NAU will strengthen the international image of Ukraine as an aviation power and increase the University's competitiveness as one of the leading higher educational center in the aviation field.

In the next 20 years, global civil aviation will require around half a million pilots, 100,000 air traffic controllers, one million cabin crew, and more than half a million technical personnel for aircraft maintenance.

At the same time, the existing capacity of aviation training centers is far from meeting the demand for training of said aviation professionals.

According to the ICAO Global Safety Plan 2017-2019, the 4th critical element of aviation safety oversight regarding the availability of qualified aviation technicians is only covered by 47.7%, which is the lowest share among all eight critical elements and one of the main gaps of global aviation nowadays.

NUMBER OF FOREIGNERS WHO UNDERWENT TRAINING AND RETRAINING IN DIFFERENT STUDY FORMS IN 2018



OFFICIALLY

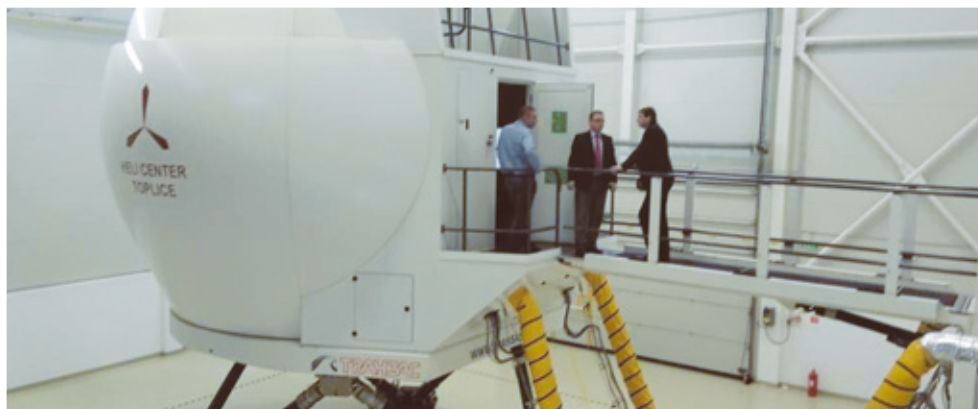
In the capital of Slovenia, Ljubljana, within the framework of the Ukrainian-Slovenian Air Transport Conference, which took place March 11-12, 2019, National Aviation University signed a contract for a two-level training program for cadet pilots.

From now on, NAU students have the opportunity to obtain a CPL certificate of commercial license in accordance with European standards EASA (European Union Aviation Safety Agency). This is extremely important for the university, which is one of the leading higher educational facilities in Ukraine, which comprehensively provides for the needs of the aviation industry of Ukraine and many other countries.

On the one hand, such cooperation increases the university's capacity to train highly skilled personnel, on the other - it attracts them already at the training stage to the international aviation sector, creating for them a prerequisite for a broad selection of opportunities for building up their professional careers.

The NAU delegation, EASA representatives dealing with the training of aviation personnel, and the leadership of "Aeros d.o.o. 2019", specialists of the HeliCenter Toplice Aeronautical Training Center, and Kocevar Ferdo Technical Center participated in the conference.

At the same time, the interim results of the ANIMA project, which is being carried out within the framework of the European Horizon 2020 Program, were discussed. The aim of the project is to develop new approaches to regulating the impact of aviation noise on the population. The project coordinator is ONERA, a France-based leading aviation research institute.



VISIT OF WORLD UAV FEDERATION LEADERS

Top representatives of the World UAV Federation have paid a working visit to National Aviation University. The delegation included Federation Chairman Yang Jintai, Secretary General Norman Ng, and assistant to chairman Euan Yao.

NAU vice-rectors Artur Hudmalyan and Volodymyr Kharchenko have told the delegation about the university and main directions of its activity, as well as achievements and cooperation with various international organizations in the aviation industry and higher education facilities across the world.

World UAV Federation Chairman Yang Jintai said that the organization,

established in June 2017, has offices in Thailand, Malaysia, Singapore, the United States, Australia, Bangladesh, the Philippines, South Korea, Egypt, and Japan. Also, he stressed that NAU Rector Volodymyr Isaienko was an honorary member of the Federation and a member of the organizing committee of the Third World UAV Congress, which is set to be held in Shenzhen in June this year.

The parties discussed participation of NAU delegation at the World Congress and "The SZUAVIA, WUAVF, Drone World Congress and Expo" event, as well as the possibility of concluding with NAU an agreement on international cooperation.

MEETING WITH PRESIDENT OF ITALY'S ERNEST AIRLINES

President of the Italy-based Ernest Airlines, Chady El Tannir, and Deputy Director of the Kyiv International Airport named after I. Sikorsky, Valeriy Polishchuk, have paid a working visit to NAU.



Mr Polishchuk told about the airport's partnership with Ernest Airlines. He noted that Chady El Tannir had expressed his willingness to learn more about the university where future aviation professionals study.

The foreign guest got familiarized with the university's educational and research base. He visited the Aviation Training Hangar, the NAU Museum, and the specialized laboratories of Aerospace Institute.

Following the meeting, the parties agreed to draft and conclude a Memorandum of Understanding envisaging advanced training courses for Ernest staff at NAU-based ICAO Institute and Institute of Continuing Education.



COOPERATION GAINING MOMENTUM

At the invitation of Polish partners, the delegation of National Aviation University, headed by Rector Volodymyr Isaienko, attended the Higher State Professional School (PWSZ) in Chelm and Rzeszow Polytechnic (Republic of Poland).

Vice-rector for international cooperation and education Oleksandr Zaporozhets, Dean of Ecological Security,

Engineering and Technology Institute Serhiy Boychenko, Head of Aerodynamics and Flight Safety Department Serhiy Ishchenko, and Assistant Professor Hanna Yakovleva were also part of the delegation.

During a meeting with PWSZ Rector Arkadiusz Tofil and Senator Josef Zajac, the parties discussed progress in cooperation that had been launched in October 2006. University leaders agreed in the next two years to implement joint scientific and educational projects, organize joint conferences, seminars, scientific symposia, and also to set up student exchange. The agreement was reached on the joint training of technical and flight personnel

for the needs of the training centers of both universities.

An important part of the trip was the visit to the laboratories of the Center for Engineering Studies and the Aircraft Training Center for Aviation and Technical Faculty students. Director of the Center, Lukasz Puzio, spoke about pilots training plans (for obtaining PPL, CPL, and ATPL licenses) and technical staff training to obtain licenses of aviation mechanics.

Also, the NAU delegation visited Rzeszow Polytechnic where they met with Rector Tadeusz Markowski, Vice-rector for international relations Grzegorz Ostasz, Head of the Engine Department Kazimierz Lejda, and Director of the Aviation Training Center Mieczyslaw Gorak.

The parties agreed on further cooperation, in particular regarding dual diplomas for students and the signing of a new agreement on cooperation in the scientific area. In particular, it is about the development of educational programs for pilot training, ecology, chemical technology, and internal combustion engines.

The Ukrainian delegation visited the Aviation Center, located at the Rzeszow-Jasionka Airport, which has for over 40 years been training pilots for Polish air carriers.



Cooperation in the scientific, research and educational spheres is the main points of the signed Memorandums of Cooperation between the National Aviation University and international partners.

In particular, with the Ukrainian-Arab Business Council NAU will cooperate on the exchange of students, scientists (professors, lecturers, and researchers); joint scientific research and implementation of its results; scientific research and implementation of research results; organization, holding of, and participation in symposiums, conferences, seminars; exchange of experience, teaching materials, documentation, and information in various areas.

A key position of the agreement with the Turkish Civil Aviation University is cooperation in the aerospace sector, in particular, toward joint training of professionals in the field. The agreement also involves joint research and establishment of R&D centers. The parties expressed their will to develop and approve the program of dual diplomas.



NEW FOREIGN PARTNERS

During the visit, Dean of NAU Institute of International Relations, Yuriy Voloshyn signed a Memorandum of Understanding on cooperation with University of Georgia and Caucasus University. The memorandums are aimed at developing and deepening cooperation in the field of scientific and technological progress and increasing the efficiency of academic and research work.



The delegation of scientists from the Faculty of Law participated in the III International Scientific and Practical Forum "Association Agreement: Driving Integration Changes". The Forum, co-organized by NAU's Law Institute, was held in Bratislava (Slovakia). Within the framework of the visit, the delegation of National Aviation University signed a cooperation agreement with Dubnica Technology Institute. The parties agreed on setting up training and recurrent training of professionals of all levels, as well as conducting joint research, holding symposia, conferences, and seminars.



Also, a Memorandum of Understanding was signed between National Aviation University and the Fujian Provincial Education Association for International Exchange (PRC). Cooperation will be based on mutually beneficial partnerships in the scientific area, R&D, and education. In particular, it is about student exchange, joint research, and cooperation with Chinese schools, institutes and universities.



BOARD OF DIRECTORS OF ICAO

AVIATION SECURITY TRAINING CENTERS

It took place in the ICAO Regional office in Paris on the 12-15, March, 2019. The chairlady of the meeting prof. Galyna Suslova, Ukraine greeted the directors of the AVSEC/EURO Net ICAO Training Centers and opened the discussion on practical issues.

The Directors of the AVSEC/EURO Net ICAO Training Centers discussed the status process of the 4th meeting decisions implementation and draw the ways, methods and operational procedures of new standards and recommended practices realization in the field of Aviation security. The chairlady prof. Galyna Suslova proposed the development of training courses in full compliance with AVSEC requirements for training specialists ready to face new challenges. One of the courses devoted to cybersecurity



and safe information space operations has been developed by prof. Valery Kozlovsky, vice-rector of the NAU (Kyiv, Ukraine).

As the ASTC directors who took part in the discussions expressed the support to ICAO.

They would help and provide any assistance to the countries which do not have ICAO centers

for the realization of ERO/NET road map in the field of aviation specialists training. The ICAO Headquarters (Montreal, Canada) was represented by Katie Schmidt, the member of the ICAO AVSEC working group, who confirmed the highly estimated results obtained in EURO/NET region AVSEC training centers activities.

Top managers of SKYUP, Ukraine Aero Alliance, Columbus, and aviation repair firm Aviaremrervis and Aerohandling ground service company have attended the training course on the Aviation Safety Management System organized by ICAO Institute.

The session was led by Director of ICAO Institute Galina Suslova and instructor Dmytro Bugaiko.

The attendees stated that the training course was important and relevant in view of ICAO's current requirements, and in general, for the development of civil aviation.

Top managers are convinced of the need for representatives of all of Ukraine's aviation enterprises to undergo such training and make the course mandatory for students in all aviation-related areas of study.

COURSE "AVIATION SAFETY MANAGEMENT SYSTEM"





Ticket to



National Aviation University hosted a ceremony to issue Masters' diplomas from all educational-scientific institutes and faculties. The most successful Master graduates were awarded with special NAU Certificates for their success in studying, active participation in research, and victory in the diploma project competition.

Opening the ceremony, Rector Volodymyr Isaienko noted that "getting a diploma is just the beginning of your professional path

because you never stop learning. So our university doors are always open if you want to further improve your skills and train."

Symbolically, the first ones to receive the diplomas were 138 Masters of Aerospace Institute, of whom 37 received Honors Diplomas. Officials of Ukraine's aviation enterprises – HR chief at SE Antonov Vadym Hordienko and Deputy Director General of Odesa Aircraft Repair Plant Yuriy Moskalenko – came to greet the Masters, noting the high

level NAU Masters and inviting them to join their friendly teams.

As the group of Master of Faculty of Linguistics and Social Communications were receiving their diplomas, General Director of Empire English School LLC Rostyslav Romaniuk and head of Univer Management Asset Management Company, Mykhailo Hrytsko, expressed their interest in hiring University graduates. Master graduates of Institute of Transport, Management and Logistics were greeted by representative of





Professional Future



Metinvest-Shipping Ltd. Vagil Askerov, Antonov's IT chief Hennadiy Kopa and Deputy Chief Controller Oleh Yaroshchuk, in turn, invited Master graduates of Computer IT Institute to become part of their company.

The ceremony for Masters of International Relations Institute was attended by a number of government officials: State Secretary of the Ministry of Culture of Ukraine, Rostyslav Karandeev, head of the patronage service at the Ministry of Culture of Ukraine, Viktoriya Mulyavka, advisor to

the Minister of Justice of Ukraine, Roman Usenko, and advisor to the Director of the Department of International Cooperation at the Ministry of Defense of Ukraine, Oleh Barabash.

A sudden marriage proposal during the ceremony for Master of Institute of Economics and Business Administration added some touching notes to the event.

The graduation at Institute of Aeronavigation, Electronics and Telecommunications, Institute of Information and Diagnostics Systems,

Faculty of Architecture, Construction and Design, Faculty of Environmental Security, Engineering and Technology, and Law Faculty were just as triumphant and festive.

In general, 1,309 graduates of National Aviation University (of whom 318 were honored) received diplomas confirming their Master's Degree. The Masters expressed their sincere appreciation to the university staff for their professional training skills, knowledge, and care for their professional future.



Institute for International Cooperation and Education hosted a traditional Kobzar International Event marking the birthday of Taras Shevchenko.

The works of Taras Shevchenko were read out at the festival in the languages of representatives of 11 countries. Foreign students are just beginning to master the Ukrainian language, but it is worth noting how emotional and moving the poems were read by them in Ukrainian. Meski El Mehdi (Morocco) read "Spring Has Come", while Nkova Thie Jochabelle (Congo) read "Village..."

Shevchenko's lyrics got deep in the students' hearts. So sincere was the song by Stepan Rudansky "Wind, Blow over Ukraine" performed by a Taiwan-China quartet: Kong Weiliang, Tsai Zong-Yan, Weng Jingkai, and Wang Zongxiang. And so charming was a song on Shevchenko's poem "On a High Poplar High" performed by a duet from Morocco (Rachdi Hajar and Ben El Mouaq Issam) who sparked a big round of applause.

On a separate note, it is worth highlighting translation skills of our foreign students. Roshan Sepideh from Iran translated the poem "Oh, I am alone," Amrani Ayoob from Morocco translated into English an excerpt from "Haidamaks": "There is No Wind in the Grove," Ghaniyah Mohammed Bader Bader from Iraq did "The Sun Goes Down, the Mountains are Black ..." in Arabic, and Chang Shih-Kuan from Taiwan did "Water Flows from under a Sycamore" in ancient Chinese. These translations were included in the annual collection of scholarly works devoted to Shevchenko. The works of our students are now part of the 19th volume and will be kept at the National Academy of Pedagogical Sciences of Ukraine, the



KOBZAR INTERNATIONAL EVENT

Shevchenko National Museum in Kyiv, and in separate libraries of Ukrainian universities.

In conclusion, the participants in the event read Taras Shevchenko's "Testament" in many languages (Ukrainian, French, Arabic, Spanish, Azerbaijani, Farsi, English, Chinese, Korean, Turkish, and Russian). The poem was read

by Ansumana Robert S (Liberia), Manal Bouhtitch (Morocco), Motaraf Moumen (Morocco), Rosero Hurtado Alexis Patricio (Ecuador), Samadov Hakim Badir Oglu (Azerbaijan), Fallah Zadeh Shiva (Iran), Anih Benedict Ositadinma (Nigeria), Wang Zongxiang (China), Choi Gyu-Ran (South Korea), Olmesek Baris (Turkey), and Batur Berk (Turkey).

Department of Civil and Industrial Safety of the Faculty of Ecological Safety, Engineering and Technology has for the first time hosted the final stage of the All-Ukrainian Student Olympiad in "Civil Defense".

ALL-UKRAINIAN STUDENT OLYMPIAD ON EDUCATIONAL DISCIPLINE



"CIVIL DEFENSE"

Ninety-three students from thirty four higher educational facilities of Kyiv, Dnipropetrovsk, Donetsk, Zaporizhia, Volyn, Lviv, Mykolayiv, Odesa, Poltava, Sumy, Cherkasy, Rivne, and Kharkiv regions participated in the competition.

The Olympiad was held in two rounds: the first one was on civil defense theory, while round two assessed practical skills and creativity.

The participants were divided into five groups according to the areas of study and specialization: Facilities specializing in civil defense; humanitarian facilities; those specializing in occupational safety; technical universities and institutes; and transport and agrarian facilities.

The jury defined the TOP 3 in each group.

UNIVERSITY TEAM IN TOP-5 IN "WHAT? WHERE? HOW MUCH?" GAMES

The Aviator Team of Institute of Economics and Business Administration has earned a spot in the TOP 5 of participants in the "What? Where? How much?" Game organized by the National Bank of Ukraine within the framework of the Global Money Week project. A total of sixty students of economic areas of study from nine Kyiv-based higher educational facilities competed to prove their knowledge of the financial sector.



Our female team won silver at the Ukrainian Sport Aerobics Youth Cup held in Kharkiv. The competition involved teams from Zaporizhia, Donetsk, Ternopil, Zhytomyr, Sumy, and Kyiv regions, as well as the City of Kyiv. NAU was duly represented by Yelizaveta Fedchenko (Institute of Information and Diagnostic Systems), Albina Posenko (Institute of Computer IT), Valeria Paliy (Faculty of Linguistics and Social Communications), Antonina Tomchuk (Institute of Aeronavigation), Oksana Kapshuchenko (Institute of Information and Diagnostic Systems), Diana Bahinska (Faculty of Linguistics and Social Communications), Natalia Palamarchuk (Faculty of Economics and Business Administration), and Anastasia Tovstollis (Faculty of Transport and Techno-logy) led by senior staffer Svitlana Orheeva.



In an individual score, we won 2 golds, 3 silvers and 5 bronzes. Our new Kyiv champions among students in various weight categories were: Daria Voloshchuk (FEBA) and Kateryna Krasnova (Institute of International Relations). Prize-winners were Volodymyr Sherengovy (Faculty of Architecture, Construction and Design), Vugar Gasimov (ICIT), Vladyslav Kucherenko (Ecology Safety Faculty), Andriy Harbulinsky (Institute of Aeronavigation), Oleksandr Nemesh (Aerospace Institute), Oleh Pylypenko (Law Faculty), Hanna Kravchuk (ICIT), and Maksym Danik (IIR).

Our girls won bronze at the Ukrainian Students' Rope-Pull Cup. The competition was attended by seven women's and 14 men's teams, with a total of 189 athletes



Team NAU in sport aerobics were also runners-up at the Kyiv Open Cup – Fourth University Games. NAU girls judo team fought without any compromise to secure a general score win the XIV Summer Judo Universiade. In total, 12 teams from Kyiv-based educational facilities took part in the competition. Our team was represented by 25 athletes in 14 weight categories, led by senior staffer Vasyl Pakhomov.

MORE WINS IN SPORTS

Congratulations to our athletes! We wish you further victories!

The student team of our university also took the third place in table tennis competitions within the framework of the XIV Summer Universiade in Kyiv. The team members are: Bohdan Zaika, Oleksiy Holomoz, Hanna Lukashova, and Natalia Koshel. The coach is a senior teacher at FLSC, Volodymyr Korotia.



from all over Ukraine. The team consists of: Veronika Sibirova (FEBA), Yulia Popovych (IIR), Vladyslava Luhovskaya (FEBA), Kseniya Kovalchuk (ICIT), Alina Kravchenko (FLSC), Olha Avramenko (ESF), Kateryna Nesterenko (FTT), Valeria Medvid (FTT), and Khrystyna Demchenko (ICIT). Coaches are senior instructors at FLSC Inna Skidan and Svitlana Heychenko.



The last few years have become a turning point for space exploration. For the first time ever, private space companies claim leadership in space. Last month, SpaceX's first private carrier made its successful maiden flight. It is set to deliver crew to the International Space Station. Not surprisingly, another stage of technical and economic revolution in the space sector is causing a public stir. Online streams of space launches are becoming more and more popular, along with profile media outlets, and meetings with astronauts and engineers. Finally, young boys and girls have returned to dreaming of once become astronauts. In Ukraine, experimental rocket building began to emerge.

Experimental rocketry arose as a massive amateur movement during the space race between the Soviet Union and the United States back in 1950-1960. It all started from garage-level development of rockets and engines but later went on a national scale. In 1957, the NATIONAL ASSOCIATION OF ROCKETRY (NAR) was founded. Now it boasts 6,000 members and 145 clubs and design bureaus. Today, the Association approves safety rules for rocket builders and certifies designers who intend to work on rocket engines. At the same time, rocket modeling clubs for children started emerging in the Soviet Union.

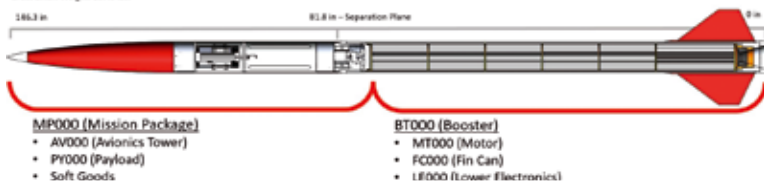
According to NAR classification, in rocket modeling, G class engines are used, with a total impulse of 160 N*s. Such rockets are made of paper, cardboard, light plastic, while having no metal parts. These are small rockets that may even fit into the palm of your hand. Their mass cannot exceed 1.5 kg, while the total mass of fuel used should be below 125 g. Everything that is heavier and larger is considered to be rockets of the class within High Power Rocketry, which, incidentally, is also divided into different classes – from H to S, depending on the engine.

Although experimental rocketry is considered an amateur thing, that is, it's not used for commercial orders, student design bureaus operate at universities worldwide. In the U.S., apparently, there is no respectable technical university without its own rocket design bureau. One of the best ones is **Rocket Team** at [Massachusetts University of Technology \(MTU\)](http://Massachusetts University of Technology (MTU)).

PROSPECTS FOR EXPERIMENTAL ROCKETRY

Hermes 2

December 1, 2018 - F4 Check
Gross Lift-off Weight: 147.6 lb.



Their latest project is called Hermes-2. The rocket body is made of composite materials; it has modern electronics and an advanced engine, as well as fuel of own design. Some may say the rocket is just a toy but in the process of its construction, the team applied developments of various institutes that are part of MTU. The rocket carries on board two CanSats – pseudo satellites in cans, which in fact will never get to the orbit – they are filled with electronics to measure atmospheric performance.

The most ambitious European team - **DARE (Delft Aerospace Rocket Engineering)** – is a student association from Delft University of Technology in the Netherlands. The team hosts about 100 students. They manufacture rockets with solid, liquid, and combined fuel engines. Last year, the team began working on the creation of a rocket set to beat the 100 km altitude – the officially recognized space boundary.





The most prestigious rocketry contest is **Spaceport America Cup**, held annually by Experimental Sounding Rocket Association (ESRA) for various types of rockets. The contest takes place in the U.S. desert, at the world's first commercial Spaceport America. Of our closest neighbors, it's the Poles who regularly take part in the event.



The team of a Krakow-based Mining and Metallurgy Academy were runners-up in 2018 with their Turbulencija rocket. The team competed in the liquid fuel engines category and reached an altitude of 9 km. In 2019, a total of 122 teams registered to participate, 40 of them – from outside the U.S.

National Aviation University was the first university in Ukraine whose students built and launched an experimental class rocket.

In April 2018, the NAURocket Student Design Bureau for Experimental Rocket Development was founded by the NAU scientific society of students, postgraduates, doctoral students, and young scientists. Students of NAU, KPI, Shevchenko National University, and even National Medical University are part of this team, led by Candidate of Chemical Sciences, Serhiy Pipka. They launched their first rocket in April 2018, and in June two more rockets were launched. The first launches reached an altitude of 300 meters. Although potentially such rockets could reach altitudes up to 5 km, a larger launch field should be found for this. Throughout the winter, students worked on Mars-1 rocket, twice as large as its predecessors, which would carry on board two CanSats.

Having secured funding from the municipal public budget, NAURocket is organizing the Kyiv Experimental Rocketry Cup where 15 student teams, including from high schools, will launch their rockets this June.

Team NAURocket is also planning to compete in the U.S. More work is yet to be done to this end. Firstly, the body of the rocket will have to be made of composite materials, not plastic. Fortunately, NAU has its own Mechanics Department with a modern lab for composite materials. Secondly, to build a more serious rocket, the team will need more people. Therefore, NAURocket invites everyone wishing to build rockets to join them on Facebook and Telegram:

<https://www.facebook.com/NAURocket>
<https://t.me/naurocket>

Ksenia Semenova-Shelevytska



JURISPRUDENCE IN MODERN INFORMATION SPACE

Scholars, diplomatic corps, and law practitioners from twenty five countries and nineteen regions of Ukraine took part in the ninth international scientific-practical conference "Jurisprudence in Modern Information Apace" hosted by NAU.

Among the honored guests of the Conference were Ambassador Extraordinary and Plenipotentiary of the Republic of Lithuania, Marius Janukonis, and Military Attache of the Embassy of the Azerbaijani Republic, Ilgar Ageev.

Participants discussed and defined the main directions of and prospects for the development of legal science and practice in the modern information space.



NAU AMONG LEADERS OF EDUCATION IN UKRAINE

Following the tenth international exhibit "Modern Educational Facilities", the University was recognized the winner of the ranking competition and awarded the Grand Prix "Leader of Scientific and Technical Efforts". Also, NAU was declared the winner of the competition on "creation and implementation of a system for monitoring the quality of education and educational activities in higher educational facilities", having been awarded a Diploma and a

gold medal. Rector Volodymyr Isaienko was granted an honorary diploma for significant achievements in reforming the national education system.

According to the SciVerse Scopus international science and technology database, the University received a Certificate of Quality of Scientific Publications (based on the Hirsch Index (h-index)) and a Diploma for active participation in reforming the national education system.



HUMANITARIAN DISCOURSE IN MULTICULTURAL WORLD: SCIENCE, EDUCATION, COMMUNICATION

Institute of Linguistics and Social Communications set up the Second International Symposium "Humanitarian Discourse in Multicultural World: Science, Education, Communication".

The symposium will be held throughout March and April. Within its framework, an international conference "Pressing Issues of Higher Professional Education" has already been held.

Speeches were delivered by: Dean of the Holy Cross College, David Lutz (USA); Head of the Care Pedagogy Department at Rzeszow University

Grzegorz Grzybek (Poland); Head of NAU's Department for Monitoring the Quality of Higher Education Oksana Bilous; Professor with the department of foreign languages for the natural faculties at Ivan Franko National University of Lviv Lilia Morska; Professor with the Department of Pedagogy and Psychology of Professional Education at NAU Olha Drobot; Vasyl Kovalchuk, Doctor of Pedagogical Sciences; Head of the Distance Learning Center of Institute of Innovation Education at Kyiv National University of Architecture and Construction, Svitlana Tsyhaniy.

IT, SYSTEM ANALYSIS, AND MODELING OF SOCIOECOLOGICAL AND ECONOMIC SYSTEMS

Institute of Economics and Business Administration held the tenth international scientific and practical conference "IT, System Analysis, and Simulation of Socioecological and economic Systems".

At the plenary meeting, First Vice Prime Minister - Minister of Economic Development and Trade of Ukraine Stepan Kubiv delivered a welcoming address and then a scientific report.

Specialists from the theoretical and practical spheres of various-level system management presented their research results: head of the NAU R&D Department Petro Pavlenko, head of information systems department at National University of Food Technologies Serhiy Chumachenko, Professor Andriy Aparov of Sumy-based Makarenko State Pedagogical University, Assistant Professor with the Department of Economic Cybernetics at NAU Oleh Leshchynsky, and branch manager of AccordBank Oleksiy Petrovsky.

CHOOSE

Dear applicants, we are waiting for you
at National Aviation University!

The final conditions for admission to higher education facilities for 2019 have been approved - the relevant order of the Ministry of Education and science was registered with the Ministry of Justice and posted on the Ministry's website. A minimum of 150 and 130 score points for certain areas of study, creative contests ahead of application submissions, and shorter terms for an admission campaign - these and other innovations are awaiting applicants this year.

One of the innovations of 2019 is the extension of privileges for combatants. Now the privileges apply to all those who have been granted status of combatants, not only those who participated in the Anti-Terrorist Operation/Joint Forces Operation. Additionally, correction coefficients have been introduced - priority, rural, and sectoral - the ones that were practiced during the previous admissions campaigns. The competition score will be multiplied by this coefficient.

The registration of applicants' e-offices begins July 1, 2019, while the reception of applications and documents starts July 10. Application deadline: July 16 - for those who enter based on an interview, exams, or creative competitions; July 22 - for those who apply exclusively based on general school exam (ZNO) certificates. Applicants for correspondence study will be able to register their e-offices until the end of summer.

This year, the deadlines for conducting creative competitions have been changed: they will be held until the beginning of the application period - from July 1 to July 10. For graduates who wish to sign contracts, a second session of creative competitions is scheduled from July 11 to July 22. Entrance exams will be held from July 17 to July 22 (inclusive), interviews - from July 17 to July 19 (inclusive).

In 2019, certificates received in 2017, 2018, and 2019 will also be valid for entry. At the same time, certificates for English, French, German, and Spanish will only be valid if received in 2018 and 2019. The minimum threshold of 130 score points in the second and third competition subjects remains relevant for entrants to Law, Public Management and Administration, International Relations, International Economic Relations, and International Law.

As in the past year, applicants will have the opportunity to submit seven applications for no more than four areas of study, while the number of applications for contracted students is unlimited. To apply for a Bachelor-level course, applicants must submit ZNO certificates in three disciplines, included in the competition.

*Kyrylo Nikolayev,
Angelica Kokarjeva*

Applicant Calendar

Registration of e-offices starting **July 1**.

Creative competitions, 1st stage (according to schedule), from **July 1** to July 10.

Creative competitions, 2nd stage (for applicants willing to sign contracts), from **July 11 to July 22**.

Start of accepting applications and paperwork, from **July 10**.

Applications and paperwork from those entering based on an interview, exams, or creative competitions, and those applying to join the military training department, cease to be accepted at **18:00 on July 16**.

Applications and paperwork from those applying exclusively based on final school exam (ZNO) certificates cease to be accepted at **18:00 on July 22**.

Rating lists of those applying based on ZNO certificates, creative competitions, and entrance exams are published no later than **18:00 on July 26**.

Selection of place of study by those entering on state or regional order - no later than **18:00 on July 31**.

Admittance of those entering on state or regional order - no later than **12:00 on August 01**.

Memo

The NAU Consultation Center is located at the premises of the Admission Board

Kosmonavta Komarova Avenue 1, building 8

08:00-17:00
(lunch break from 12:00 to 13:00)

E-mail: pk@nau.edu.ua

tel.: **(044) 497-41-05**
(044) 406-70-38

[facebook.com/nauentrant](https://www.facebook.com/nauentrant)
nau.edu.ua



ALL-UKRAINIAN CONTEST "WORD ABOUT UKRAINE"

Groups of children from Donetsk, Zaporizhia, Ivano-Frankivsk, Kyiv, Luhansk, Sumy, Ternopil, Kherson, and Cherkasy regions, as well as the City of Kyiv, took part in the annual All-Ukrainian creative contest "Word about Ukraine" organized by NAU Law Faculty.

NAU Rector Volodymyr Isaienko, State Secretary of the Ministry of Culture of Ukraine Rostyslav Karandeev, and Dean of the Faculty of Law Iryna Sopilko greeted the participants.

The jury and the audience were impressed with the performance by an "Edelweiss" Folk Acrobatic Studio from Sumy region's Children's Palace (1st prize); Yelizaveta Huzovets, a student of Vadym School in Kherson region (1st prize); Kateryna Kisiv, student of School 317 in Kyiv (1st prize); Dmytro Siruk and Kateryna Panasyuk, students of the Shumy Lyceum in Ternopil region (2nd place); vocal band "Lastivka" from Nadvirna High School 1 in Ivano-Frankivsk region (2nd place); students of School 304 in Kyiv (2nd place); Oleksiy Nikitenko, a student of Kyiv Gymnasium 154 (3rd place); Dance Group "Oberih" of Popasna School 21 in Luhansk region (3rd place); Hanna Voylenko, student of School 223 in Kyiv (nomination "Eloquence"); Diana Diominova, student of Popasna secondary school №21 in Luhansk region (nomination "Unique Speech"); "Mriya" Theater of Chasovoyarsk Secondary School 17 in Bakhmut district, Donetsk region (nomination "Best Presentation"); and the folk art group of the "Sonechko" choreographic group of the Center for Out-of-School Work in Kyiv's Svyatoshinsky District ("Best Dance" nomination).

The participants in the event were touched by a creative performance and presentation of children with special needs of the "Prolisok" choreographic team from Zaporizhia-based specialized boarding school "Dzherelo" who took the third place, and Rosemary Chepurnenko who won the audience honor award.

