NATIONAL TECHNICAL UNIVERSITY OF UKRAINE
«IGOR SIKORSKY KYIV POLYTECHNIC INSTITUTE»
FACULTY OF MANAGEMENT AND MARKETING

DEPARTMENT OF ECONOMIC CYBERNETICS

DEPARTMENT OF ECONOMIC CYBERNETICS was created on July 1, 2021 by merging the departments of mathematical modeling of economic systems and theoretical and applied economics.

Head of Department:

BOIARYNOVA KATERYNA OLEKSANDRIVNA

Doctor economic sciences, professor

TRAINING OF ACQUISITIONERS:

❏ The first (bachelor) level of higher education under the educational and professional program "ECONOMIC ANALYTICS", SPECIALTY 051 ECONOMICS of the field of knowledge 05 «Social and behavioral sciences»

❏ The second (master's) level of higher education under the educational and professional program "ECONOMIC ANALYTICS", SPECIALTY 051 ECONOMICS of the field of knowledge 05 «Social and behavioral sciences"

❏ The third (educational and scientific) level of higher education under the educational and scientific program "ECONOMICS" SPECIALTY 051 ECONOMICS

Highly professional training of specialists is carried out by <u>25 scientific and pedagogical workers, including 9 doctors of science</u>, who systematically develop hard skills and soft skills, as well as undergo domestic and foreign internships.

The department provides teaching of the disciplines of economic and economic-analytical profile to students of institutes and faculties of National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute».

The scientific and pedagogical staff of the department are scientists, teachers and practitioners.

EDUCATIONAL AND PROFESSIONAL PROGRAM "ECONOMIC ANALYTICS", 051 ECONOMICS

BACHELOR. The program is aimed at training specialists who have the skills of economic analytics, mathematical economics, macro-, micro-, financial and economic analysis, econometric, system and intellectual analysis of large arrays of economic data (Data Mining, Big Data), methods of economic and mathematical modeling, forecasting, behavioral and experimental economics, information-analytical and computer technologies.

MASTER. The program is aimed at training highly qualified professionals with exceptional skills in economic diagnostics, economic, scenario, strategic and project analysis, economic analytics of big data (Big Data Analytics), information systems and business analytics (Business Intelligence), tools of Data Science, predictive, prospective and digital analytics, mathematical and computer modeling.

GRADUATES are highly competitive specialists on the labor market, able to conduct descriptive, predictive and prospective analytics, Digital and business analytics, possess the technologies of Data Mining, Data Stream, Big Data Analytics, strategizing, modeling and forecasting of economic trends, financial, economic analysis, economic diagnostics, system, situational project analyses, languages programming, software and computer systems.
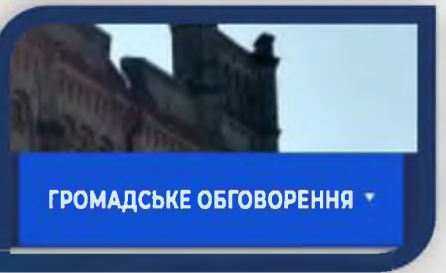
EDUCATIONAL AND METHODOLOGICAL SUPPORT

The department fully provides educational and methodological support for the training of applicants:

- ❑ **Educational and teaching-methodical manuals with open access**
- ❑ **Educational and professional programs**
- ❑ **Distance courses on the Distance Learning Platform "Sikorsky"**
- ❑ **Trainings and practice-oriented seminars for applicants with employers and professional practitioners**

COOPERATION WITH STAKEHOLDERS

To improve the educational process and prepare higher education applicants, the department cooperates with applicants, graduates, employers, representatives of the academic community, and stakeholders by:

- ❑ **Survey and discussion of educational and professional programs**
- ❑ **Cooperation with enterprises, organizations, institutions**
- ❑ **Cooperation with foreign universities**

RESEARCH ACTIVITIES

The department specializes in research related to economic analytics, modeling and forecasting of socio-economic trends, namely:

- ❏ Analysis, forecasting and justification of economic decisions at different levels of the social hierarchy.
- ❏ Economic and analytical diagnostics in the management system of enterprises.
- ❏ Economic and mathematical modeling of logistic, financial and production subsystems.
- ❏ Modeling and optimization of socio-economic systems and processes.
- ❏ Economic and prognostic analysis of financial, economic and operational risks.
- ❏ Analysis and modeling of the behavior of economic agents.
- ❏ Prognostic analytics and modeling of the development of sectors and subjects of the economy.
- ❏ Systemic economic analysis and making optimal economic decisions.
- ❏ Data mining, business analytics, Data Science at the micro, meso and macro levels.
- ❏ Economic planning and algorithms for the implementation of effective strategies, programs and projects for the development of socio-economic systems.

The **SCIENTIFIC GROUP**: **"ANALYTICS, PROGNOSTICS AND MODELING OF SOCIO-ECONOMIC SYSTEMS and PROCESSES"** works at the department, which performs scientific research works, provides scientific services within the framework of economic contracts with enterprises, organizations and institutions regarding economic analytics, business analytics, prognostics, strategizing.

DEPARTMENT OF ECONOMIC CYBERNETICS

RESEARCH ACTIVITIES

The scientific and analytical competence of the members of the department is realized in actual economic and analytical studies. The department carries out SCIENTIFIC RESEARCH WORK within the working hours of teachers (initiative) and provides scientific services within the framework of business contracts with enterprises, organizations and institutions.

Active SCIENTIFIC GROUPS: ESTIEM Local Group Kyiv, Formation and development of human capital and social challenges in the conditions of Industry 4.0., Economics: theory and practice, Theoretical principles of decision-making in Economics and Management, Mathematical methods in Economics

SCIENTIFIC SUPERVISION OF ACQUIRERS OF THE DOCTOR OF PHILOSOPHY degree is carried out.

SCIENTIFIC EVENTS

The department organizes and conducts on a systematic basis a number of scientific activities of a scientific and scientific-practical direction:

❑ All-Ukrainian scientific and practical conference with international participation "MODELING AND FORECASTING OF ECONOMIC PROCESSES»

❑ Educational and scientific event with international participation: "FALL SCHOOL: MODELING, DATA ANALYSIS AND DIGITAL TECHNOLOGIES IN ECONOMIC RESEARCH" series of interactive lectures

❑ Olympiad in Economic Cybernetics

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INTERNATIONAL ACTIVITY

The department carries out international activities within the framework of cooperation between universities in accordance with CONTRACTS, as well as regarding:

- ❏ Conducting OPEN LECTURES for universities - members of the Academy of Digital Technologies and Entrepreneurship of the Alliance of Twin Cities Universities of Guangzhou (People's Republic of China)
- ❏ International internships for teachers
- ❏ Academic mobility of applicants

MATERIAL AND TECHNICAL SUPPLY

The needs and interests of the applicants are fully satisfied by the educational and material and technical environment. The auditor fund for classes is located in buildings 17, 7 and 1 of Igor Sikorsky Kyiv Polytechnic Institute. The department has an educational multimedia laboratory, computer classes, licensed software, WiFi. Access to information and analytical systems for searching and processing information, as well as to the electronic archive of ELAKPI, scientific databases with free access. Distance learning is provided by the prepaid ZOOM platform. The following are used: Distance courses on the "Sikorsky" distance learning platform (Moodle, G Suite for Education); IS Electronic campus. Applicants and teachers of the department have the opportunity to use medical care institutions and improve their health at recreation centers.