

KNUTD

Kyiv National University of Technologies and Design



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CYBERSECURITY. Cybersecurity engineering

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Faculty of Mechatronics and Computer Technologies

Specialty 125 «Cybersecurity»

Educational program «Cybersecurity engineering»

Educational degree «**bachelor**»

DEPARTMENT OF COMPUTER SCIENCE

Address:

2, Nemyrovych-Danchenko St, Kyiv, 01011 , Educational building 4, Room 4-1108

For more information: +38044-256-84-14

e-mail: kitp@knutd.edu.ua

Level of education:

The first (bachelor's) level of higher education.

Training is conducted by state order and at the expense of individuals or legal entities.

To become a 1st year full-time or part-time student for obtaining a bachelor's degree, entrants perform an external independent testing (EIT)- in competitive subjects.

Admission for a bachelor's degree program is conducted in accordance with [«Rules of Admission to Kyiv National University of Technologies and Design»](#).

Phones and contacts of the Admissions Committee:

Address: 01011 Kyiv, 2, Nemyrovych-Danchenko St, Kyiv, 01011, educational building 4, 2nd floor.

Phone for inquiries: +38044-256-29-75

e-mail: pk@knutd.edu.ua

Students majoring in Cybersecurity, receive a bachelor's degree in Cybersecurity and can work as specialists in information protection and cyber security in the relevant departments of organizations, enterprises and banks, as developers and testers of applications that require the fulfillment of special requirements for information and cybernetic security; employees of information protection services; administrators of information and cybernetic security, designers of protection systems in cyberspace; developers of software and software hardware means of information protection in cyberspace, consultants-instructors in cyber security, specialists in the field of cyber security as part of law enforcement agencies, specialists in ensuring cyber security in cyber space (in particular, objects of critical infrastructure).

The educational and professional program Cybersecurity Engineering of the specialty 125 Cybersecurity develops competencies in basic knowledge in the field of cybersecurity, including the use and implementation of information and / or cybersecurity technologies, as well as the latest technologies and mathematical methods.

The main objectives of the program are to train specialists capable of working with informatization objects, including computer, automated, telecommunication, information, information-analytical, information-telecommunication systems, information resources and technologies.

The Cybersecurity Engineering program is focused on developing competencies for applicants to acquire in-depth knowledge, skills and abilities in cybersecurity.

The educational and professional program Cybersecurity Engineering takes into account the main trends and directions in the field of cybersecurity, built on the close interaction of theory and practice.

Competitive Advantages:

- staffing — highly qualified teaching staff in accordance with the requirements of the profile and direction of the specialty;
- partnership with domestic and foreign educational and research institutions; the department promotes professional orientation and employment of graduates;
- the University has sports sections and creative clubs.

Studying at the University

The educational process is accompanied by modern communication learning tools through the "KNUTD Modular Educational Environment", "Electronic Journal", "Zoom", "Google Meet" and others, which provide students with convenient access to electronic educational resources, including educational and methodological materials for the courses (lecture notes, guidelines, textbooks, teaching aids, presentation materials, etc.), the ability to submit reports, perform control tests, consult with teachers on forums, find out the schedule of classes, consultations, exams, learning outcomes, and much more, which also makes it possible to implement the continuity of distance learning. In order to deepen the knowledge of students in fundamental and general professional courses, annual internships are provided at basic enterprises and scientific institutions

According to the results of studies, students acquire the following skills:

- apply knowledge of the basic forms and laws of abstract and logical thinking, the basics of logic, the norms of a critical approach, the basics of the methodology of scientific knowledge, methods of analysis and synthesis of information;
- understand the principles of modeling organizational and technical systems and operations;
- understand the concept of information security, the principles of secure software design, and ensure the security of computer networks in conditions of incompleteness and uncertainty of source data;
- use the results of independent search, analysis and synthesis of information from various sources for the effective solution of specialized tasks of professional activity;
- to adapt to the conditions of frequent changes in the technologies of professional activity, to predict the final result; act on the basis of the legislative and regulatory framework of Ukraine and the requirements of relevant standards, including international ones in the field of information and/or cyber security;
- implement processes based on national and international standards for detection, identification, analysis and response to information and/or cyber security incidents;
- perform analysis and decomposition of information and telecommunication systems;
- develop threat and offender models;
- analyze projects of information and telecommunication systems, based on standardized technologies and data transfer protocols;
- solve the task of protecting programs and information processed in information and telecommunication systems by means of software and hardware and give an assessment of the effectiveness of the quality of the decisions made;
- to ensure the processes of protection and functioning of information and telecommunication (automated) systems based on practices, skills and knowledge, regarding structural (structural-logical) schemes, network topology, modern architectures and models of protection of electronic information resources with a reflection of relationships and information flows, processes for internal and remote components;
- apply protection theories and methods to ensure information security in information and telecommunication systems;

- to solve the tasks of managing procedures for identification, authentication, authorization of processes and users in information and telecommunication systems in accordance with the established policy of information and/or cyber security; to solve the problems of managing access to information resources and processes in information and information and telecommunication (automated) systems based on access management models (mandatory, discretionary, role-based);
- solve problems of data flow protection in information, information and telecommunication (automated) systems;
- analyze and evaluate the effectiveness and level of security of resources of various classes in information and information and telecommunication (automated) systems during tests in accordance with the established policy of information and/or cyber security;
- carry out an assessment of the possibility of realizing potential threats of information processed in information and telecommunication systems and the effectiveness of the use of complexes of protection means in the conditions of the realization of threats of various classes;
- detect dangerous signals of technical means; apply national and international regulatory acts in the field of information security and/or cyber security to investigate incidents;
- ensure the functioning of software and software-hardware complexes for detecting intrusions of various levels and classes (statistical, signature, statistical-signature);
- use tools for monitoring processes in information and telecommunication systems; solve the problems of software code analysis for the presence of possible threats.

Students are provided with modern educational and methodological literature and information about the latest technologies in the field of computer science.

After graduation, graduates receive a diploma of basic higher education of the established state standard in the specialty 125 Cybersecurity: Bachelor of Cybersecurity - the course length is - 3 years and 10 months (full-time education based on full general education).

Military Training

Simultaneously with the basic higher education, the 3rd and 4th years students are given the opportunity to acquire the military accounting specialty "Organization of food, material, skipper and commercial and household supplies" obtaining an officer's rank upon completion. The time of military training is coordinated with the schedule of students at the University.

All students of the Faculty of Mechatronics and Computer Technologies who live in cities and towns outside Kyiv and the Kyiv region are provided with accommodation in the hostel located near the educational buildings of the University.

Teachers of the Department and students during the educational process and defense of diplomas







