Protection of Information in Aviation Systems

Minor *«Information support of aviation systems»*

Specialities: *all specialities*

Higher Education Level	*first (bachelor)*
Status of Discipline	*selective*
Volume	150 hours / 5 credits ECTS
Language	*English*
Subject of studying	The subject of study is software objects that can be attacked by computer hackers and methods of unauthorized access to information; principles of operation of built-in means of protection of computer systems (BIOS) and ways of countering attempts to hack them; principles of functioning of protection systems, assignment of privileges, storage of passwords in computer systems that ensure the functioning of aviation equipment
Why it is interesting/should be studied (purpose)	The purpose of the educational discipline is to familiarize with the principles of construction and use of algorithmic and software-hardware tools for the protection of software and other information in computer systems for aviation purposes. As a result of the study, the acquirer will be able to perform a security analysis of the computer system and eliminate possible ways of unauthorized access; implement organizational and program measures to increase the level of security of information storage; will have an idea of the main directions and prospects for the development of methods and means of information protection and management of the rights to use information resources when transmitting confidential information through communication channels, establishing the authenticity of transmitted messages, storing information (documents, databases), establishing hidden official information.

How to use acquired knowledge and skills (competencies)	1. The ability to use basic knowledge of the main national, European and international regulatory acts in the field of avionics and air transport in order to constantly improve one's professional activity. 2. The ability to use the achievements of science and technology in professional activities, to argue the choice of methods for solving specialized problems in the analysis and synthesis of aviation computer systems. 3. The ability to implement and use hardware and software-algorithmic means to increase the accuracy and reliability of avionics systems. 4. The ability to determine the composition of test equipment necessary for conducting experiments to determine the characteristics and parameters of aircraft control systems. 5. The ability to analyze avionics systems, form the architecture of automatic aircraft control systems, identify subsystems that are components of the overall system and the relationships between them. 6. The ability to evaluate the technical and economic efficiency of designing aircraft control systems.
Prerequisites	Prerequisites for studying this discipline: Higher mathematics. Fundamentals of Modelling. Mathematical Basis of Digital Systems. Calculation Methods and Computer Modelling
Co-Requisites	The discipline supports the following courses: Microcontrollers. Aircraft Control Systems. Digital Control Systems Aerodromes. Fundamentals of Air Traffic Control
Type of classes, Testing	Types of classes: lectures, laboratory classes Forms of obtaining education: full-time, part-time Forms of testing: exam
Department	301 – Aircraft Control Systems
Faculty	№ 3 – Aircraft Control Systems

Teacher		Name	**Anatolii Zymovin**
		Position	Professor of dept. 301
		Academic status	Docent
		Degree	Candidate of technical sciences
		e-mail	a.zymovin@khai.edu

Links to electronic course materials	https://drive.google.com/drive/folders/10sAYmKlmXxTPoVx8znUdkIa9LMj5JYRt
Link to the work program (syllabus)	