




Discipline

Avionics Information and Measuring Devices (Part 1)

Specialities: 134 «Aviation and rocket and space technics»,
272 «Aviation transport», specialities of the field
17 «Electronics and telecommunications»

Рівень вищої освіти	<i>first (bachelor)</i>
Статус дисципліни	<i>selective</i>
Обсяг дисципліни	150 hours / 5 credits ECTS
Мова викладання	<i>English</i>
Що буде вивчатися (предмет вивчення)	Formation of acquirers of professional knowledge and practical skills from the theoretical foundations of measuring devices of aircraft motion parameters, built on various physical principles, methods of mathematical description of statics and dynamics of aircraft motion parameters meters; selection and justification of aircraft motion parameters meters; methods of extracting useful information, integrating and increasing the accuracy of measurement of various parameters of aircraft movement, principles of construction and operation of aircraft control devices; methods of experimental research and testing, navigation complexes, flight control systems, their arrangement, characteristics, principle of construction, interaction according to ICAO requirements.
Чому це цікаво/треба вивчати (мета)	The purpose of the educational discipline is to master the basic concepts and methods of calculating measuring devices of aircraft control systems (avionics systems)
Як можна користуватися набутими знаннями і уміннями (компетентності)	<ol style="list-style-type: none">1. The ability to use basic knowledge of the main national, European and international regulatory acts in the field of automation in order to constantly improve one's professional activity.2. The ability to develop technical tasks for the design and manufacture of control systems, to choose equipment and technological equipment.3. The ability to analyze automation systems, form the architecture of automatic control systems, identify subsystems that are components of the overall system and the relationships between them.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 implement the achievements of domestic and foreign science and technology, to use innovative experience in the field of automation.6. The ability to evaluate the technical and economic efficiency of designing control systems.

Пререквізити	<p>Prerequisites for studying this discipline:</p> <p>Higher mathematics: differential and integral calculus; study of functions and construction of their graphs. Electrical engineering: Ohm's and Kirchhoff's laws. Physics: electric current, optics. Informatics: the basics of working on a personal computer. Theory of automatic control: static and dynamic characteristics of dynamic links, transfer functions. Metrology: measurement errors, calibration of measuring transducers. Electronics and fundamentals of circuit engineering: operational amplifiers, circuits for performing mathematical operations on an operational amplifier, analog comparators, signal generators and active filters</p>		
Кореквізити	<p>The discipline supports the following courses:</p> <p>Microcontrollers. Automatic Control Theory. Aircraft control systems. Theory of digital control systems</p>		
Організація навчання	<p>Types of classes: lectures, laboratory classes</p> <p>Forms of obtaining education: full-time, part-time</p> <p>Forms of testing: exam</p>		
Кафедра	301 – Aircraft Control Systems		
Факультет	№ 3 – Aircraft Control Systems		
Викладач		ПІБ	Anatolii Zymovin
		Посада	Professor of dept. 301
		Вчене звання	Docent
		Науковий ступінь	Candidate of technical sciences
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Посилання на електронні матеріали курсу	https://drive.google.com/drive/folders/18poJfeP1ebCU1pZp1A9Sav58bIka0nwn		
Посилання на робочу програму (силабус)			