




(Ф21.01-03)

**SYLLABUS**  
**academic discipline**  
**"Modern management theory"**

**Specialty: 151 Automation and computer-integrated technologies**



<b>Level of higher education</b>	Second (master's)
<b>Discipline Status*</b>	Educational discipline of the selective component of the professional list
<b>Semester (fall/spring)</b>	Autumn semester
<b>Scope of the discipline, ECTS credits/total number of hours</b>	3 credits/90 hours
<b>Language of teaching</b>	Ukrainian, English
<b>(Ukrainian, English)</b>	Object: technical, software, mathematical, information and organizational support of automation systems of objects and processes in various fields of activity using modern computer equipment, specialized application software and information technologies. Theoretical content: Concepts and principles of the theory of automatic control, automation and computer-integrated systems
<b>What will be studied (subject of study)</b>	The course is aimed at developing students' analytical mathematical thinking skills, the ability to navigate freely in a large array of modern information and computer information
<b>Why you can learn (learning outcomes)</b>	Formation of stable knowledge on methods of processing and mathematical description of random processes, methods of analysis of automatic control systems that are under the influence of random disturbances.
<b>How to use acquired knowledge and skills (competencies)</b>	Knowledge of the principles and laws of the applied theory of probability in management tasks allows competently carrying out theoretical and practical processing of experimental material in any field of knowledge, building dynamic models of systems and processes, building management strategies for computer-integrated technological processes and productions
<b>Educational logistics</b>	<b>Content of the discipline:</b> Classification and principles of construction of modern digital control systems. Mathematical description of digital control systems. Analysis of dynamic properties of digital control systems. Mathematical models of digital control systems in the space of states. Deterministic control systems. Stochastic control systems.

	Control systems with state regulators. Fuzzy and neuro-fuzzy control systems. Adaptive control systems. <b>Teaching methods:</b> introductory conversation, scientific story, explanation, introductory and ongoing instruction <b>Forms of education:</b> full-time
<b>Prerequisites</b>	General and professional knowledge obtained at the second (bachelor) level of higher education
<b>Props</b>	Knowledge can be used when writing a qualifying master's thesis
<b>Information support from the fund and repository of the NTB of the NAU</b>	<b>Educational and scientific literature:</b> 1. Тютюнник А. Г. Оптимальні і адаптивні системи автоматичного керування: навчальний посібник для студ. вузів. - ЖІТІ. – Житомир, 2002. 2. Аблесімов О.К. Теорія автоматичного керування. К.: Освіта України, 2019. – 271 с. 3. Тунік А.А., Абрамович О.О. Основи сучасної теорії управління. - К: НАУ, 2010. – 269с. 4. Аблесімов О.К. Сучасна теорія керування. Методичні вказівки до лабораторних робіт. - К.: “Принт-центр”, 2019. Ч.1 -36с. 5. Аблесімов О.К. Сучасна теорія керування. Методичні вказівки до лабораторних робіт. - К.: “Принт-центр”, 2019. Ч.2 -26с. 6. Зайцев Г.Ф., Стеклов В.К., Брицький О.І. Теорія автоматичного управління. - К: Техніка, 2002. - 688с.
<b>Location and material and technical support</b>	lecture hall, projector, computer class
<b>Semester control, examination method</b>	exam, testing
<b>Chair</b>	department of aviation computer-integrated complexes
<b>Faculty</b>	Faculty of Aeronautics, Electronics and Telecommunications
<b>Teacher ()</b> 	<b>ABLESIMOV OLEKSANDR KOSTIANTYNOVYCH</b> <b>Position: professor</b> <b>Academic title: professor</b> <b>Scientific degree: candidate of technical sciences</b> <b>Teacher profile: Phone: 044 408-85-55</b> <b>E-mail: aakbrzn4115@ukr.net</b>  <b>Workplace: 5,417</b>