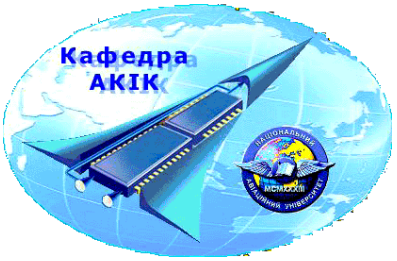
(Ф21.01-03)

**SYLLABUS**
**academic discipline**
**""Technical and economic support of integrated transport systems""**

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

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| **Level of higher education** | Second (master's) |
| **Discipline Status*** | Educational discipline of the selective component of the professional list |
| **Semester (fall/spring)** | Spring semester |
| **Scope of the discipline, ECTS credits/total number of hours** | 3 credits / 90 hours |
| **Language of teaching** | Ukrainian, English |
| **What will be studied (subject of study)** | theoretical and applied tasks of building computer-integrated transport systems using modern technical means and, above all, industrial and office computers and microprocessor controllers |
| **Why you can learn (learning outcomes)** | Management processes of technical objects in the modern world are carried out with the help of computer-integrated systems. Therefore, studying the principles of construction, elements and systems of computer-integrated control is extremely important for a modern specialist in this specialty. |
| **How to use acquired knowledge and skills (competencies)** | - mastering the principles of building computer-integrated control systems; algorithms of primary information processing and algorithmic self-diagnosis;<br>- mastering the principles of optimal management of technological complexes that function continuously or periodically;<br>- knowledge of the structure of automation systems of production flows in air transport;<br>- mastering the principles of automated management of technological processes and types of provision of the corresponding systems;<br>- mastering the principles of integration of management systems for technological and organizational and economic processes; |
| **Educational logistics** | **Content of the discipline:**<br>The main stages of ACS development. Computer-integrated control systems (CISU). Technical structure of KISU: workstations and local computing networks. Functional structure of KISU. Collection and primary processing of information in KISU. Optimal management of technological complexes. General characteristics of a computer-integrated control system. Corporate business process management system. General characteristics of the system. Use of Web technologies. The structure and functions of the business process management system, its subsystems and components. Corporate computer network. Upper level protocols. Formation of the backbone of the corporate network: use of FDDI technology, ATM technology, IR technology and Gigabit Ethernet technology. Databases in KISU.<br>**Types of classes**: lectures, laboratory<br>**Teaching methods**: classroom classes<br>**Forms of education**: full-time |

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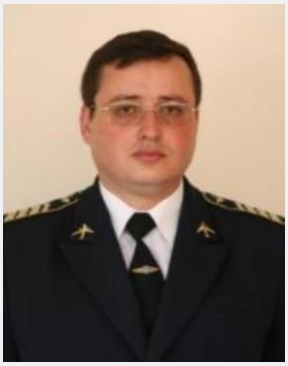
| **Prerequisites** | General and professional knowledge obtained at the second (bachelor) level of higher education |
| **Props** | Knowledge can be used when writing a qualifying master's thesis |
| **Information support from the fund and repository of the NTB of the NAU** | **Educational and scientific literature:**<br><br>1. Інформаційні системи і технології : навч. посіб. / [П. М. з фонду та репозитарію Павленко, С. Ф. Філоненко, К. С. Бабіч та ін.]. - К. : НАУ, 2013. - НТБ НАУ 324 с.<br>2. Гужва В.М. Інформаційні системи і технології на підприємствах: навчальний посібник/ КНЕУ. - Київ, 2001. - 400 с.<br>3. Трегуб В.Г. Основи комп'ютерно-інтегрованого керування [Текст]: Навчальний посібник / В.Г. Трегуб. - К. : НУХТ, 2005. - 191 с.<br>Пупена О.М. Промислові мережі та інтеграційні технології в автоматизованих системах [Текст]: Навчальний посібник / О.М. Пупена, І.В. Ельперін, Н.М. Луцька, А.П. Ладанюк. - К. : «Ліра- К», 2011. - 552 с. |
| **Location and material and technical support** | lecture hall, projector, computer class |
| **Semester control, examination method** | exam, testing |
| **Chair** | department of aviation computer-integrated complexes |
| **Faculty** | Faculty of Aeronautics, Electronics and Telecommunications |
| **Teacher ()**<br>  | **Yenchev Serhii Vasilovich**<br>**Position: associate professor**<br>**Academic degree: candidate of technical sciences Teacher profile: https://scholar.google.com.ua Tel.: 406-70-96**<br>**E-mail: yenchev@nau.edu.ua Workplace: 10.110** |