



SYLLABUS OF THE SUBJECT

«Automated Systems in Designing Elements of Transport Systems»

Educational Professional Program: «Air Transportation Management»

Field of study: 27 «Transport»

Speciality: 275 «Air Transport Technologies»

Specialization: 275.04 «Air Transport Technologies»

Higher Education Degree	First (Bachelor)
Subject status	Academic subject of selective component subjects
Course of study	2
Semester	4
Subject volume, ECTS credits / total amount of hours	4.0 / 120
Language	Ukrainian, English
To be studied (study subject)	Students master the basics of engineering design; gaining skills of graphical display and visualization of information using AutoCAD CAD; clarification of the principles and acquisition of basic skills of working with specialized software in the field of CAD; understanding the principles of construction and architecture of CAD, drawing elements, basic requirements for creating and editing two-dimensional drawings; acquaintance with methods of calculation of technical and economic efficiency of technical decisions accepted in the course of designing of components of transport systems; application in practice of the obtained theoretical knowledge and skills in the field of CAD.
Why is it interesting and must be learned? (purpose)	The purpose of teaching the discipline is to study the theoretical and practical foundations of work in software environments of automatic design systems (CAD) on the example of AutoCAD.
What is studied? (learning results)	<ul style="list-style-type: none"> - Take responsibility, show public consciousness, social activity and participation in the life of civil society, think analytically, critically understand the world; - Critically evaluate the scientific values and achievements of society in the development of transport technologies; - Apply, use modern information and communication technologies to solve practical problems in the organization of transportation and design of transport technologies; - Choose information systems for transportation. Operate automated control systems and navigation systems in the transportation process. Use electronic cards.
How is it possible to use the gained knowledge and skills? (competencies)	<ul style="list-style-type: none"> - Ability to use modern information technologies, automated control systems and geographic information systems in the organization of the transportation process; - Ability to organize international transportation; - Ability to design transport (transport-production, transport-warehousing) systems and their individual elements. Ability to develop and use appropriate software to automate transport systems and processes.
Academic logistics	<p>Subject program: Module №1 «Automated Systems in Designing Elements of Transport Systems»</p> <p>Topic 1. General information about computer-aided design.</p> <p>Topic 2. Typical design procedures.</p>

	<p>Topic 3. Typical automated design system. Topic 4. Information and CAD software. Topic 5. Technical support of CAD. Topic 6. General information about AutoCAD. Topic 7. Teams for drawing, drawings. Editing drawings. Topic 8. Graphic primitives and AutoCAD commands. Types of classes: lectures, laboratory classes Teaching methods: explanatory-illustrative method; problem statement method; reproductive method; research method Forms of education: full-time, part-time</p>	
Prerequisites	<p>The subject is based on following subjects: «Computer Engineering», «Higher Mathematics», «Informational Systems and Technologies on Transport», «Fundamentals of Transport Processes and Systems Theory», «Stochastic Processes in Transport Systems»</p>	
Post-requisites	<p>The subject is base for studying the following subjects: «Mathematical Modeling of Air Transportation», «Transport Vehicles Operation», «Transportation of Special Goods by Air Transport», «Microcontrollers and Programming of Automation Means of Transport Processes and Systems», «Transport Infrastructure», «Fundamentals of Transport Process Designing».</p>	
Information support from the fund and repository of NAU library	<p>Basic concept of guidance :</p> <ol style="list-style-type: none"> 1. Mastering AutoCAD 2020 and AutoCAD LT 2020. By authors: George Omura Brian C. Benton, New York, United States. - 1045P. 2. AutoCAD 2018 For Beginners. Cadfolks R., Createspace Independent Publishing Platform - 450 P. 3. AutoCAD For Dummies. By author: Goodread T., John Wiley & Sons Inc. – 546 P. 4. Проектування систем автоматизації. Навчальний посібник / М.С. Пушкар, С.М. Проценко // – Д.: Національний гірничий університет, 2018. – 268 с. 5. AutoCad. Basic Tutorial. By author: Dootred T., John Wiley & Sons Inc. – 456 P. 6. ДСТУ 2226-93 Автоматизовані системи проектування. Терміни і визначення. 	
Location and logistics	<p>Computer class for labs, laptop, mobile device (phone, tablet) with Internet connection for: communication and surveys; homework; laboratory work; performing tasks of independent work; testing (current, boundary, final control)</p>	
Semester control, examination techniques	<p>Graded Test, Term Paper, Testing</p>	
Department	<p>Air Transportation Management Department</p>	
Faculty	<p>Faculty of Transport, Management and Logistics</p>	
Lecturer(s)		<p>SHEVCHUK DMYTRO OLEGOVICH Position: Head of Department Degree: Doctor of Engineering Academic Status: Senior Researcher Teacher profile: http://www.lib.nau.edu.ua/naukpraci/teacher.php?id=10130 Tel .: 044 406 -72-85</p>

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Originality of the subject	Author's course, teaching in English	
Link to the subject	https://er.nau.edu.ua/handle/NAU/34200	