



SYLLABUS OF THE SUBJECT

«GEOINFORMATIONAL SYSTEMS ON TRANSPORT»

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 professionally-oriented subjects cycle
Course of study	3
Semester	6
Subject volume, ECTS credits / total amount of hours	3,5/105
Language	Ukrainian, English
To be studied (study subject)	Basic concepts, classification and structure of geographic information systems, basic provisions on the concept of geographic information systems, types of modern geographic information systems, modern software. Principles of operation and application of geographic information systems, the main directions of use of geographic information systems in the field of transport.
Why is it interesting and must be learned? (purpose)	Providing future specialists with specific knowledge on the application of geographic information systems in the process of planning, forecasting and supporting management decisions in the activities of transport enterprises.
What is studied? (learning results)	<ul style="list-style-type: none"> - Formulate, modify, develop new ideas for improving transport technologies; - Develop, plan, implement methods of organizing safe activities in the field of transport systems and technologies; - Apply, use modern information and communication technologies to solve practical problems in the organization of transportation and design of transport technologies; - Develop and use transport technologies taking into account the requirements for environmental protection.
How is it possible to use the gained knowledge and skills? (competencies)	<ul style="list-style-type: none"> - Ability to analyze and predict the parameters and performance indicators of transport systems and technologies, taking into account the impact of the external environment; - 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.
Academic logistics	<p>Subject program: Module № 1 «Geoinformational Systems on Transport»</p> <p>Topic 1. Integration of Ukraine into the world geoinformation space.</p> <p>Topic 2. General concepts of information and geoinformation systems.</p> <p>Topic 3. Structure, functions and technologies of geographic information systems.</p> <p>Topic 4. Information support of geoinformation systems.</p> <p>Topic 5. Spatial data models.</p> <p>Topic 6. Geographic information systems software.</p> <p>Topic 7. Application of geographic information systems.</p> <p>Topic 8. Vehicles and traffic management.</p> <p>Kinds of sessions: lectures, laboratory classes</p>

	<p><u>Teaching methods</u>: explanatory-illustrative method; problem statement method; reproductive method; research method</p> <p><u>Modes of study</u>: full-time</p>	
Prerequisites	This subject is the basis for studying such subjects, as «Air Passenger Transportation», «Information Systems and Technologies on Transport».	
Post-requisites	This subject is the is base for studying following subjects, as: «Microcontrollers and Programming of Automation Means of Transport Processes and Systems», «Aircraft Handling at Airports».	
Information support from the fund and repository of NAU library	<p>Basic concept of guidance:</p> <ol style="list-style-type: none"> 1. Доля К.В., Доля О.Є. Геоінформаційні системи на транспорті. – Харків: ХНУМГ ім. О.М. Бекетова, 2018. 2. В.І. Зацерковний. Геоінформаційні системи в науках про Землю / В.І. Зацерковний, І.В. Тішаєв, І.В. Віршило, В.К. Демидов – Ніжин: НДУ ім. М. Гоголя, 2016. – 510 с. 3. Геоінформаційні системи і бази даних: монографія. – Кн. 2 / В. І. Зацерковний, В. Г. Бурачек, О. О. Железняк, А. О. Терещенко. – Ніжин: НДУ ім. М. Гоголя, 2017. – 237 с. 4. Творошенко І. С. Конспект лекцій з дисципліни «Інтелектуальні геоінформаційні системи» / І. С. Творошенко; Харків. нац. ун-т міськ. госп-ва ім. О. М. Бекетова. - Харків: ХНУМГ ім. О. М. Бекетова, 2016. - 95 с. 5. http://er.nau.edu.ua/handle/NAU/28038 6. http://er.nau.edu.ua/handle/NAU/28040 	
Location and logistics	(Classroom of theoretical training, laptop, mobile device (phone, tablet) with Internet connection for: communication and surveys; homework; performing tasks of independent work; testing (current, boundary, final control)	
Semester control, examination techniques	Graded Test, Calculation and Graphic Paper, Testing.	
Department	Air Transportation Management Department	
Faculty	Faculty of Transport, Management and Logistics	
Lecturer(s)		<p>AKMALDINOVA VICTORIA YEVHENIVNA Position: Senior Lecturer Scientific Degree: - Academic Status: - Teacher profile: https://scholar.google.com/citations?user=3zAFsjwAAAAJ&hl=uk Тел.: 044 406-70-94 E-mail: viktoriaa.akmaldinova@npp.nau.edu.ua Location: 2.102</p>
Originality of the subject	Author's course, teaching in English	
Link to the subject	https://er.nau.edu.ua/handle/NAU/34200	