



The syllabus of the discipline
"Methodology of Applied Research in the Field of Transport Technologies
(by modes)"
Educational and Professional Program: «Air Transportation Management»

Field of study: 27 «Transport»
Specialty: 275 «Air Transport Technologies»
Specialization: 275.04 «Air Transport Technologies»

Level of higher education	Second (master's)
Discipline status	Educational subject of program mandatory component
Course	1
1	1
The scope of discipline, ECTS credits / hours	3,5/105
Language of teaching	Ukrainian, English
What will be studied (subject of study)	The subject is a component of the theoretical basis of knowledge and skills for the study of technological disciplines for the training of specialists in the field of management transportation and transport technologies.
Why it is interesting / necessary to study (goal)	The purpose of teaching is to develop skills of scientific research and their further application in the preparation of master's thesis, in writing scientific articles.
Why you can learn (learning outcomes)	<ul style="list-style-type: none"> - Make effective decisions in the field of transport systems and technologies, taking into account technical, social, economic and legal aspects, generate and compare alternatives, assess the necessary resources and constraints, analyze risks; - develop new and improve existing transport systems and technologies, define development goals, existing constraints, efficiency criteria and scope; - develop and analyze graphical, mathematical and computer models of transport systems and technologies; - analyze and evaluate the effectiveness of supply chains and logistics centers, to calculate the relevant indicators; - manage complex technological and production processes of transport systems and technologies, including unpredictable and those that require new strategic approaches; - present the results of research activities, prepare scientific publications, participate in scientific discussions at scientific conferences, symposia and carry out pedagogical activities in educational institutions.
How to use the acquired knowledge and skills (competencies)	<ul style="list-style-type: none"> - Skills in the use of information and communication technologies; - Ability to evaluate and ensure ergonomic efficiency of transport technologies; - Ability to evaluate plans and proposals for the organization and technology of transportation, performed by other developers and make the necessary changes based on the technical and operational parameters and principles of operation of facilities and devices of transport infrastructure, vehicles.

Educational logistics	<p>Thematic Plan:</p> <p>Module №1 «Basic principles of scientific research and formatting of their results»</p> <p>Topic 1. Science as a sphere of human activity. Research methodology.</p> <p>Topic 2. Theoretical methods of scientific research. Basic principles of review and analysis of scientific information.</p> <p>Topic 3. Main sources of scientific information. Requirements for registration of research results.</p> <p>Topic 4. Fundamentals of academic integrity.</p> <p>Topic 5. Modeling of transport processes. Fundamentals of mathematical processing of results.</p> <p>Topic 6. Application of analysis of variance (ANOVA). Application of linear regression models. Application of multiple regression models.</p> <p>Topic 7. Components of the classical model of time series. Trend calculation using autoregression and forecasting.</p> <p>Topic 8. Forecasting time series based on seasonal data.</p> <p>Types of classes: lectures, laboratory classes.</p> <p>Teaching methods: explanatory-illustrative method; method of problem statement; reproductive method; research method.</p> <p>Forms of study: full-time, part-time.</p>
Prerequisites	The discipline is based on knowledge of discipline "Business Foreign Language ".
Details	The discipline is the basis for the study of discipline " Project Management in the Field of Transport ".
Information support from the repository and fund of NTB NAU	<p>1. Палеха Ю., Леміш Н. Основи науково-дослідної роботи: навчальний посібник/ МОН МС України. – Київ: Ліра-К, 2015. – 336 с.</p> <p>2. Юринець В. Є. Методологія наукових досліджень : навч. посібник / МОН. – Львів : ЛНУ імені Івана Франка, 2014. – 178 с.</p> <p>3. Berenson, Mark L.; Levine, David M.; Krehbiel, Timothy C. Basic Business Statistics: Concepts and Applications, 12th Edition, Published by Prentice Hall. 2011.. – 859p.</p> <p>4. Чумак В. Л., Іванов С. В., Максимюк М. Р. Основи наукових досліджень: підручник/ МОН. – Київ: НАУ-друк, 2019.– 304с.– (Сучасний університетський підручник).</p> <p>5. Марінцева К. В. Наукові основи та методи забезпечення ефективного функціонування авіатранспортних систем [Текст] : монографія / Марінцева К. В. ; Нац. авіац. ун-т. - Київ : НАУ, 2014. - 503 с.: рис., табл. - Бібліогр.: с. 379-409.</p> <p>Internet information resources</p> <p>1. https://nuczu.edu.ua/sciencearchive/Articles/gornostal/vajinskii%20posibnyk.pdf</p> <p>2. http://biology.univ.kiev.ua/images/stories/Upload/Kafedry/Biofizyky/2014/konversky_osn_metod_ta_org_nayk_dosl.pdf</p> <p>3. https://studme.org/35357/filosofiya/metodologiya_nauchnyh_issledovaniy</p>
Location and logistics	Classroom for 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 methods	Credit, testing
Department	Air Transportation Management
Faculty	Transport, management and logistics

Teacher	<div data-bbox="432 190 778 645" data-label="Image"> </div> <p> ANTONOVA ANNA OLEGIVNA Position: Professor Scientific degree: Ph.D. Academic title: Associate Professor Teacher profiles: https://scholar.google.com.ua/citations?user=14QRvJQAAAAJ&hl=uk https://www.scopus.com/authid/detail.uri?authorId=35222885500 https://publons.com/researcher/2952197/anna-antonova/ Tel: 044 406-70-94 E-mail: anna.antonova@npp.nau.edu.ua Location: 2.113a </p>
Originality of academic discipline	Author's course, teaching in Ukrainian and English
Link to the discipline	https://er.nau.edu.ua/handle/NAU/34200