

**PJSC 'Higher Educational Institution
'Interregional Academy of Personnel Management''**



**SYLLABUS OF THE ACADEMIC DISCIPLINE
'*DIGITAL ECONOMY AND MANAGEMENT*'**

Speciality: D3 Management
Educational level: first (bachelor's) level
Study programme: Management

General information about the academic discipline

Name of the academic course	Digital Economy and Management
Code and name of the speciality	D3 'Management'
Level of higher education	first (bachelor's) level of Higher Education
Status of the discipline	Optional
Number of credits and hours	3 credits / 90 hours Lectures: 20 Seminar classes: 14 Independent work of students: 56
Terms of study of the discipline	semester
Language of instruction	Ukrainian
Type of final assessment	Credit
Page of the discipline on the website	https://ks.maup.com.ua/en/pro-nas/akredytacija/akredytacija-menedzhment-2026

General information about the lecturer. Contact information

Course annotation .
The course «Digital economy and management» is devoted to the study of the regularities of the functioning of the digital economy and the peculiarities of the management of

Name, surname	
Scientific degree	
Academic title	
Position	
Disciplines taught by NPP	
Areas of scientific research	
Links to identifier registers for scientists	https://scholar.google.com/citations?user=Vdvg5GgAA&hl=ru https://orcid.org/0000-0002-1651-9750
Contact information of the lecturer :	
E-mail:	
Contact phone number	
The teacher's portfolio on the website of the department /Institute /Academy	

organizations in the conditions of digital transformation. The discipline examines key digital technologies and platforms, their impact on business models, markets, public administration and society, as well as modern approaches to data-driven management decision-making.

The purpose of the course is to form students' systematic understanding of the processes of digitalization of the economy, development of digital ecosystems, use of information and communication technologies, big data, artificial intelligence and electronic governance. As a result of the training, students will acquire practical skills in analyzing digital business processes,

managing digital projects and developing effective management solutions to increase the competitiveness of organizations in the digital environment.

The subject of the academic discipline is the theoretical foundations, methods and practical tools of the formation and development of the digital economy, as well as the processes and mechanisms of managing organizations, business processes and resources in the conditions of digital transformation using modern information, communication and digital technologies.

The purpose of the educational discipline. The purpose of the discipline is to acquire theoretical knowledge, applied skills and abilities to solve professional tasks arising in various spheres of the digital economy and management processes, which will make it possible to train highly qualified and competitive specialists who possess modern economic thinking, theoretical knowledge and practical skills necessary for solving complex specialized tasks to deepen the digitalization of the economy and management using elements of artificial intelligence. The academic discipline «Digital Economics and Management» studies the content and construction of digital economic relations based on digital products/services such as: BioTech, WealthTech, RetailTech, FinTech, LegalTech, GovTech, FinTech, RegTech, AgriTech, Edtech. Advantages of studying the discipline in the purposeful formation of future specialists' knowledge and professional competences necessary for the management of economic objects in the process of their digitalization, and the introduction of digital technologies in the sectors of industry, business and public administration to increase their efficiency, competitiveness, ensure sustainable national development, increase in the volume of production of high-tech products and well-being of the population of Ukraine.

The task of the educational discipline: - to form a holistic view of the essence, structure and trends of the development of the digital economy among education seekers;

- introduce key digital technologies, platforms and management tools in the digital environment;

- teach to analyze the impact of digitalization on business models, markets, organizations and public administration;

- build management decision-making skills based on data, digital analytics and information systems;

- develop the ability to plan and implement the digital transformation of organizations and digital project management;

- promote the formation of digital competencies necessary for effective professional activity in the conditions of the digital economy.

Prerequisites: «Management», «Economic theory», «Development and management decision-making».

Post-requisites of the academic discipline. Educational disciplines and types of professional activity, for which the knowledge and skills acquired during the course are basic, in particular: digital and strategic management, innovative management, project management, business analytics, e-governance, management of information systems, as well as coursework and qualification work, internship and professional activity in the field of digital transformation of the economy and management.

The educational discipline ensures the formation of general and special competencies by students and the acquisition of learning results determined by the educational and professional program «Management», namely:

IC. 3 The ability to solve complex specialized problems and practical problems, which are characterized by complexity and uncertainty of conditions, in the field of management or in the process of learning, which involves the application of theories and methods of social and behavioral sciences.

General competences	GC 4. Ability to apply knowledge in practical situations. GC 9. 3 Ability to learn and master modern knowledge
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Special competences	SC 7. Ability to choose and use modern management tools. SC* 16. Ability to innovate in conditions of uncertainty and riskiness of the external environment..
Learning outcomes	LO 6. Identify the skills of searching, collecting and analyzing information, calculating indicators to justify management decisions. LO 16. Demonstrate the skills of independent work, flexible thinking, openness to new knowledge, be critical and self-critical.

Content of the academic discipline (full-time education)

№	Topic name	Number of hours, of which:			
		Lectures	Seminar/Practical classes	Lectures	Teaching methods/assessment methods
CONTENT MODULE 1. Basic principles of the digital econom					Teaching methods: To achieve the educational goal and predicted program results, the main traditional and interactive teaching methods, the latest technologies are used. Teaching methods: – verbal methods (lecture, discussion, conversation, consultation, etc.); – practical methods (practical works); – visual methods (presentations of the results of completed tasks, illustrations, video materials, etc.); – work with information resources: with educational and methodological, scientific, normative literature and Internet resources; – computer teaching aids (online courses – resources, web conferences, webinars, etc.); – independent work on an individual task or according to the program of the academic discipline.
Topic 1.	Digital economy: content, definition and characteristic features.	2	2	5	
Topic 2.	The fourth industrial revolution as a catalyst for digital transformations	2	2	5	
Topic 3.	Risks and opportunities of the digital economy	2	2	6	
Topic 4.	Digital Products Market	2		6	
Topic 5.	Digital risk and digital security	2	2	6	
Topic 6.	Characteristics of specialized digital products/services such as: BioTech, WealthTech, RetailTech, FinTech, LegalTech, GovTech, RegTech, AgriTech, EdTech, CivicTech, Insurtech, etc.	2		6	
CONTENT MODULE 2. Practical aspects of digital technologies in economics and management					Assessment methods: oral control (oral survey, evaluation of participation in discussions, other interactive learning methods); written control (control, independent
Topic 7.	Digital transformation of business	2	2	6	
Topic 8.	Artificial intelligence and big data in the management of organizations	2	2	5	
Topic 9.	Digital ecosystems and complex information systems (platforms).	2		6	

Topic 10.	E-business and e-commerce.	2	2	5	works, analytical tasks, essays);
					test control (closed form tests: test alternative, test compliance, data and model analysis tasks); self-control and self-assessment method; assessment of case tasks; assessment of project and laboratory works (simulation of economic processes, forecasting), presentation of the results of tasks.
Modular test					
Total :		20	14	56	
Form of assessment: credit					

Technical facilities and/or software. In the educational process, classrooms, a library, a multimedia projector and a computer are used to conduct lecture and seminar classes with elements of the presentation. Studying certain topics and performing practical tasks requires access to information from the worldwide Internet, which is provided by a free Wi-Fi network.

Forms of control methods.

Control of the success of education seekers is divided into current and final (semester).

Current control is carried out during practical and seminar classes. Its purpose is systematic verification:

- understanding and assimilation of the theoretical foundations of economic processes;
- ability to apply knowledge to build models and analyze economic data;
- skills in diagnosis and forecasting of economic processes;
- use of specialized software for modeling and processing statistical data.

Forms of student participation in the educational process, which are subject to current control:

- speeches and presentations on the analysis of economic processes;
- oral reports on the analysis of economic cases;
- addendum, questions to who answers;
- systematic work in seminar classes and activity during discussions;
- participation in discussions, brainstorming, interactive forms of classes;
- analysis of economic data, statistical indicators, economic and mathematical models;
- written assignments (control papers, test papers, analytical and abstract papers);
- preparation of notes, theses, analytical notes;
- independent study of discipline topics and lecture materials.

Current control methods:

- oral control (survey, conversation, report, message);
- written control (control work, analytical report, abstract, performance of tasks for building models or processing statistics);
- combined control (oral and written combination to assess understanding and practical skills);
- presentation of independent work or case analysis;
- observation of activity and participation in practical classes;
- test control (closed and open tasks, analysis of graphs and models);

- work with problem situations (analytical cases, scenario modeling of economic processes).

Assessment system and requirements.

Table of distribution of points received by students of higher education*

1st semester

Topics	Ongoing knowledge assessment										Final control		Total number of points
											Modular control work	Credit **	
	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7	Topic 8	Topic 9	Topic 10	20	20*	100
Work in a seminar class	3	3	3	3	3	3	3	3	3	3			
Independent work	3	3	3	3	3	3	3	3	3	3			

*The table contains information about the maximum points for each type of academic work of a higher education applicant.

When assessing the mastery of each topic for the current academic activity, applicants are given grades based on the approved assessment criteria for the relevant discipline.

The criteria for assessing the learning outcomes of students and the distribution of points they receive are regulated by the Regulations on the Assessment of Academic Achievement of Higher Education Students at PJSC 'Higher Educational Institution' MAUP".

Modular control is carried out in the last class of the module in written form, in the form of a test.

Criteria for assessing the modular test in the academic discipline 'Digital Economy and Management':

When assessing the modular test, the volume and correctness of the tasks are taken into account:

- a grade of 'excellent' (A) is given for the correct completion of all tasks (or more than 90% of all tasks);
- a 'good' (B) grade is given for completing 80% of all tasks;
- a 'good' (C) grade is given for completing 70% of all tasks;
- a 'satisfactory' (D) grade is given for correctly completing 60% of the proposed tasks;
- A grade of 'satisfactory' (E) is given for the correct completion of more than 50% of the proposed tasks.

- A grade of 'unsatisfactory' (FX) is given for the completion of less than 50% of the tasks. Failure to attend the module test results in 0 points.

The above grades are converted into rating points as follows:

- «A» - 18-20 points;
- «B» - 16-17 points;
- «C» - 14-15 points;
- «D» - 12-13 points.
- «E» - 10-11 points;
- «FX» - less than 10 points.

Final Semester Assessment

The final semester assessment in the course “Digital Economy and Management” is a mandatory component of evaluating students’ learning outcomes. It is conducted within the timeframe established by the academic calendar and covers the full scope of material defined by the course syllabus.

The final assessment is conducted in the form of a test. Only students who have completed all required coursework and assessment tasks are admitted to the final semester assessment.

The final grade is determined based on the student’s academic performance throughout the semester. It consists of:

- points accumulated through continuous assessment;
- incentive (bonus) points awarded in accordance with institutional regulations.

Students who have completed all required tasks and obtained 60 points or higher receive the corresponding final grade without additional testing.

Students who have completed all required tasks but obtained fewer than 60 points, as well as those wishing to improve their grade, are required to complete a final test administered during the last scheduled class of the semester.

Assessment of Additional (Individual) Learning Activities

Additional (individual) learning activities include participation in: scientific conferences; student research groups and academic clubs; problem-focused research groups; preparation of academic publications; national academic Olympiads and competitions; international competitions and other scholarly activities exceeding the requirements of the course syllabus.

By decision of the department, students who actively participate in research activities or complete additional individual academic tasks may be awarded incentive (bonus) points for the respective educational component.

Assessment of Independent Study

The total number of points obtained for independent study constitutes an integral component of the overall academic performance in the course.

Independent work for each topic, in accordance with the course syllabus, is assessed within a range of 0 to 3 points, based on standardized and generalised assessment criteria evaluating the level of knowledge acquisition and analytical competence.

Assessment scale for independent work (individual assignments) assessment criteria.

Maximum possible grade for independent work (individual assignments)	Level of implementation			
	Excellent	Good	Satisfactory	Unsatisfactory
3	3	2	1	0

Assessment forms include: ongoing assessment of practical work; ongoing assessment of knowledge acquisition based on oral answers, reports, presentations and other forms of participation during practical (seminar) classes; individual or group projects requiring the development of practical skills and competences (optional format); solving situational tasks; preparing summaries of independently studied topics; testing or written exams; preparing draft articles, conference abstracts and other publications; other forms that ensure comprehensive mastery of the curriculum and contribute to the gradual development of skills for effective independent professional (practical, scientific and theoretical) activity at a high level.

To assess the learning outcomes of higher education students during the semester, a 100-point, national and ECTS assessment scale is used

Final assessment scale: national and ECTS

Total points for all types of educational activities	ECTS rating	Assessment on a national scale	
		for exams, course projects (assignments), practical training	for credit
90 – 100	A	excellent	passed
82 – 89	B	good	
75 – 81	C		
68 – 74	D	satisfactory	
60 – 67	E		
35 – 59	FX	unsatisfactory with the possibility of retaking the exam	Failed with the possibility of retaking the exam
0 – 34	F	unsatisfactory with mandatory retaking of the course	Failed with mandatory retaking of the course

Course policy.

To successfully master the course «Digital economy and management», the student of education has to:

- regularly attend lectures and practical classes;
- systematically, systematically and actively work in lectures and practical classes;
- practice missed classes or unsatisfactory grades obtained in classes;
- to perform in full the tasks required to be prepared by the teacher, their proper quality;
- perform control and other independent work;
- adhere to the norms of academic behavior and ethics.

The course «Digital economy and management» involves the assimilation and observance of the principles of ethics and academic integrity, in particular the focus on preventing plagiarism in any of its manifestations: all works, reports, essays, essays and presentations must be original and author's, not overburdened with quotes, which must be accompanied by references to primary sources. Violations of academic integrity are considered: academic plagiarism, self-plagiarism, fabrication, falsification, write-off, deception, bribery, biased assessment.

List of issues for self-control and final control of educational student achievements

- 1. Digital transformation of the economy of Ukraine in the conditions of war.**
- 2. Problems of Ukrainian business regarding competitiveness in Industry 4.0**
- 3. Describe Ukraine's prospects in Industry 4.0.**
- 4. To reveal the theoretical aspects of digital business transformation**
- 5. To characterize the differences in the understanding of the concepts: digitalization, digitalization, digitization, transformation, automation.**
- 6. Identify the benefits and limitations of digital transformation**
- 7. What are the differences in the approach to transformation at different levels of business**
- 8. Describe the types of business models and the possibilities of their digitalization**
- 9. Give examples of successful cases of digital business transformation**
- 10. Gartner digitization and cycles**
- 11. The role of a digital leader**
- 12. Content and structure of the digital ecosystem**
- 13. State policy of development of the digital ecosystem of Ukraine**
- 14. Digital platform concept, types of platforms**

15. Digital platforms as the core of the digital economy**16. Features of «Blue Ocean»****17. Domestic technological platforms****18. Advantages and problems of digital platforms****19. Examples of implementation of the Smart city concept****20. DREAM Digital Ecosystem**

21. The essence and basic principles of the Internet of Things

22. Internet of Things Standards and Architecture

23. World e-business

24. The main trends in the development of the e-commerce market in Ukraine

25. Electronic systems of public procurement in Ukraine

26. Concepts and components of electronic business.

27. Development of electronic business in Ukraine

28. Electronic commerce in the context of digitalization of the economy

29. Content and features of e-commerce

30. Business models of e-commerce

31. Collaborative development of digital products

32. Digitalization of the supply chain management process

Recommended sources of information.**Basic literature:**

1. Dmytrenko V. AND. Regulatory and legal regulation of the implementation of electronic governance at the local level in Ukraine. Law and public administration. № 4 (29). Volume 2. 2023. S. 55-61.

2. Dobrynin A. P. Digital economy – different ways to effective use technologist (BIM, PLM, CAD, IOT, Smart City, BIG DATA). International Journal of Open Information Technologies. 2022. № 67. S. 4–7.

3. Kraus N. M., Klaus K. M. Innovative scoreboard of Ukraine. Eastern Europe: economy, business and management. 2021. № 6. URL: <http://www.easterneuropeebm.in.ua/6-2017-ukr>.

4. Kryvoruchko O. S., Kraus N. M. Imperatives of formation and dominants of digital development economics in the modern paradigmatic context. Paradigmatic shifts in economic theory of the 19th century: III International Scientific and Practical Conference, November 2–3. 2017: abstracts of reports. Kyiv: KNU named after. T. Shevchenko, 2023. S. 681–685.

5. Kupriyanovsky V. P. Distributive trades in the digital economy. International Journal Of Open Information Technologies. URL: <https://istina.msu.ru/publications/article/22278615/> Kupriyanovskiy, V. [“Roznichnaya trgovlya v

6. Oleksyuk L. IN. Legislative regulation of identification of individuals and legal entities in e-government, democracy and commerce. Public administration: improvement and development. 2022. № 4. URL: <http://www.dy.nayka.com.ua>.

7. Paramonov V. Internet of things. «Smart» electronics. URL: <https://www.turkaramamotoru.com/uk/Интернетречей-20010.html>

8. Digital Agenda of Ukraine – 2020 (Digital Agenda – 2020). Conceptual principles (version 1.0). Priority areas, initiatives, projects of —digitalization of Ukraine to 2020. HITECH office Dec 2019 90 pp. URL: <https://ucci.org.ua/uploads/files/58e78ee3c3922.pdf>

9. Artificial intelligence. Internet of things. Help or threat?! Materials of the second scientific and practical conference «Internet of Things: problems of legal regulation and implementation». Kyiv, 2024. P.60-61 25.

10. Artificial intelligence. Problems and prospects of implementing e-government in Ukraine. Materials of the International Scientific and Practical Conference «Economics, Finance, accounting, management and law in Ukraine and the world». Poltava, 2022. S. 53-54 27

11. Industrie 4.0 in a Global Context Strategies for Cooperating with International Partners / H. Kagermann, R. Anderl, J. Gausemeier, G. Schuh, W. Wahlster (Eds.); acatech STUDY. Herbert Utz Verlag GmbH, 2022. 74 p.

12. Ralf C. Schlaepfer, Markus Koch, Philioo Merkofer. Industry 4.0. Challenges and solutions for the digital transformation and use of exponential technologies. Deloitte. URL: <http://www2.deloitte.com/content/dam/Deloitte/ch/>

13. Lorenz M. Man and Machine in Industry 4.0. How Will Technology Transform the Industrial Workforce Through 2025? URL: <https://www.bcgperspectives.com/content/articles/technology/business/transformation/engineered/products/infrastructure/man/machine/industry/4/#chapter1>

Information resources

1. Department of Industry, Innovation and Science. URL: <https://industry.gov.au>

2. Organisation for Economic Cooperation and Development URL: <http://www.oecd.org/sti/ieconomy>

3. The official site of the platform «Industry 4.0». Federal Ministry of Economic Affairs issues and energy. Federal Ministry of Education and Scientific Research, Germany. URL: <http://www.plattform/i40.de/>

4. Portal of the European Commission. Internet of Things laws. URL: <https://ec.europa.eu/digitalsinglemarket/en/policies/internet-things>