

Syllabus
elective educational component

Digital economy

Name of discipline:	Digital economy
Level of higher education:	second (master's) degree
Course page in Moodle:	https://dl2022.khadi-kh.com/course/view.php?id=4813
Volume of the educational component	4 credits (120 hours)
Form of final control	Credit
Consultations:	on schedule
Name of the department:	Economics and entrepreneurship
Language of instruction:	English
Course leader:	Oleksander Mordovtsev, PhD in Economics, Associate Professor
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Summary of the educational component:

The aim is to acquire theoretical knowledge, applied skills and abilities to solve professional problems arising in various areas of the digital economy.

Subject: theoretical foundations of the digital economy, the essence of key concepts of the digital economy - digital transformation, computerisation, digitalisation, informatisation, automation, digitalisation, data mining, digital well-being, digital market, digital trends.

The main objectives of the discipline are:

- identification of key features and goals of the digital economy, analysis of the development of digital technologies, products, services in various areas of the digital economy;
- formation of skills of e-commerce organisation;
- determine the properties and determinants of the quality of electronic services; advantages and disadvantages of various methods of assessing and measuring the quality of e-commerce and other types of electronic services;
- identify trends and features of the formation of intellectual capital of enterprises in the context of the development of the digital economy;
- substantiate the existing composition of the elements of intellectual capital of a real enterprise;
- identify ways to strengthen and grow the intellectual capital of enterprises.

Prerequisites for studying the educational component: none

Competences acquired by the student:

- ability to generate new ideas (creativity)
- the ability to collect, analyse and process statistical data, scientific and analytical materials necessary for solving complex economic problems, and to draw reasonable conclusions based on them;
- the ability to use modern information technologies, methods and techniques of research of economic and social processes, adequate to the established research needs;
- ability to develop scenarios and strategies for the development of socio-economic systems.

Learning outcomes in accordance with the study programme:

- collect, process and analyse statistical data, scientific and analytical materials necessary for solving complex economic problems
- apply modern information technologies and specialised software in socio-economic research and in the management of social and economic systems.

Thematic plan

№ themes	Name of the topic (Lecture (LC), Practical training (PT) , Independent work (IW))	Number of hours	
		full- time	part- time
1	2	3	4
1	LC. Modern information economy and its features	2	2
	PT. Information business as a direction of entrepreneurial activity	2	
	IW. Building an information business at the enterprise	11	13
2	LC. Information as the main resource	2	2
	PT. Types of information products and services	2	
	IW. Methods of obtaining and processing marketing information	11	13
3	LC. The impact of the digital economy on the labour market	2	2
	PT. Research of the competitive environment in the labour market	2	
	IW. Structural adjustment of the Ukrainian economy	11	13
4	LC. Information modernisation through digitalisation of Ukraine	2	2
	PT. The state of investment in the digital economy in Ukraine	2	
	IW. Information economy in the context of strategic priorities of Ukraine's development	11	13
5	LC. E-business - the environment of entrepreneurial activity in the information economy	2	
	PT. Fundamentals of e-commerce	2	2
	IW. Types of electronic commerce	11	13
6	LC. Marketing in the information economy	2	
	PO. Building a marketing information system	2	2
	IW. Principles of development and implementation of information systems	11	15
7	LC. Development of e-commerce as a component of digital business	2	
	PT. Internet marketing as the basis for the success of e-commerce	2	
	IW. Features of e-commerce development in Ukraine	11	15
8	LC. Opportunities and main threats of digitalisation	2	
	PT. Positive impact of digitalisation	2	
	IW. Main threats and risks of digitalisation	11	13
Total for the semester LC		16	8
Total for the semester PT		16	4
Total for the semester IW		88	108
TOTAL by discipline		120	120

Methods of teaching:

- 1) verbal: traditional: lectures, explanations, narration; interactive: discussions, debates, polemics, analysis of stories and situations, answers to questions and surveys of students' opinions, work in small groups
- 2) visual: method of illustrations, method of demonstrations; interactive: diagrams, tables, graphs, charts; images, videos
- 3) practical: traditional: practical classes, seminars; interactive: creative works, joint work of students and teacher with applications, computer programmes

Assessment system and requirements:

Current performance

1. The current academic performance of students for the performance of academic types of work in classrooms and for the performance of independent work is assessed using a four-point grading scale with the subsequent conversion to a 100-point scale. When assessing current performance, all types of work provided by the curriculum are taken into

account.

1.1 Lecture classes are assessed by determining the quality of specific tasks.

1.2 Seminar classes are assessed by the quality of the individual assignment/essay.

2. Assessment of the current performance of higher education students is carried out at each practical lesson (laboratory or seminar) on a four-point scale ("5", "4", "C", "2") and is recorded in the academic performance record.

– "excellent": the applicant has perfectly mastered the theoretical material, demonstrates in-depth knowledge of the relevant topic or discipline, the main provisions;

– "well": the applicant has mastered the theoretical material well, knows the main aspects of the primary sources and recommended literature, presents it in an argumentative manner; has practical skills, expresses his/her views on certain problems, but makes certain inaccuracies and errors in the logic of the presentation of theoretical content or in the analysis of practical content;

– "satisfactory": the applicant has basically mastered the theoretical knowledge of the subject or discipline, is familiar with the primary sources and recommended literature, but gives unconvincing answers, confuses concepts, is uncertain about answering additional questions, does not have stable knowledge; when answering practical questions, reveals inaccuracies in knowledge, is unable to evaluate facts and phenomena, to relate them to the future profession;

– "unsatisfactory": the applicant has not mastered the educational material of the topic (discipline), does not know scientific facts, definitions, is almost not familiar with primary sources and recommended literature, lacks scientific thinking, and has not developed practical skills.

The final score for the current activity is recognised as the arithmetic mean of the points for each class, for individual work, current control works according to the formula:

$$K^{nomou} = \frac{K1 + K2 + \dots + Kn}{n},$$

where. K^{nomou} – final assessment of success based on the results of the current control;

$K1, K2, \dots, Kn$ – assessment of the success of the nth current control measure;

n – number of current control measures.

The grades are converted into points according to the conversion scale (Table 1).

Table 1 - Conversion of the average score for current activities to a multi-point scale

4-point scale	100-point scale	4-point scale	100-point scale	4-point scale	100-point scale	4-point scale	100-point scale
5	100	4,45	89	3,90	78	3,35	67
4,95	99	4,4	88	3,85	77	3,3	66
4,9	98	4,35	87	3,80	76	3,25	65
4,85	97	4,3	86	3,75	75	3,2	64
4,8	96	4,25	85	3,7	74	3,15	63
4,75	95	4,20	84	3,65	73	3,1	62
4,7	94	4,15	83	3,60	72	3,05	61
4,65	93	4,10	82	3,55	71	3	60
4,6	92	4,05	81	3,5	70	from 1,78 to 2,99	from 35 to 59
						re-taking	
4,55	91	4,00	80	3,45	69	from 0 до 1,77	from 0 to 34
4,5	90	3,95	79	3,4	68	re-taking	

Final assessment

1. The student receives a credit at the last class in the discipline based on the results of the current assessment. The average grade for the current activity is converted into points on a 100-point scale, according to the conversion table (Table 1).

Higher education applicants who have an average current grade in the discipline below "3" (60 points) in the last class can improve their current score by taking tests in the discipline.

The assessment of students' knowledge through testing is carried out on a scale:

- "Excellent": at least 90 % of correct answers;
- "Very well": from 82% to 89% of correct answers;
- "Well ": from 74% to 81% of correct answers;
- "Satisfactory": 67% to 73% of correct answers;
- "Satisfactory enough": 60 % to 66 % of correct answers;
- "Unsatisfactory": less than 60% of correct answers.

2. A prerequisite for receiving credit is:

- making up all missed classes;
- the average current grade in the discipline is not lower than "3" (60 points).

3. For individual independent work and participation in scientific events, applicants are awarded additional points.

3.1 Additional points are added to the sum of points gained by the higher education student for the current academic activity (for disciplines for which the final form of control is a test), or to the final grade in the discipline for which the final form of control is an examination.

3.2 The number of additional points awarded for different types of individual tasks depends on their volume and significance:

- prize-winning places in the discipline at the international / all-Ukrainian competition of scientific student works - 20 points;
- prize-winning places in the discipline at all-Ukrainian Olympiads - 20 points;
- participation in the international / all-Ukrainian competition of scientific student works - 15 points
- participation in international/national scientific conferences of students and young scientists - 12 points;
- participation in all-Ukrainian competitions in the discipline - 10 points
- participation in competitions and scientific conferences of KhNADU in the discipline - 5 points;
- performance of individual research (educational and research) tasks of increased complexity - 5 points.

.3.3 The number of additional points cannot exceed 20 points.

4. The learning outcome is assessed (select the appropriate one):

- on a two-point scale (passed/not passed) according to Table 2;
- on a 100-point scale (for differentiated credit) according to Table 3.

The final grade together with additional points may not exceed 100 points.

Table 2 - Scale for converting points to the national grading system

On a 100-point scale	According to the national scale
from 60 points to 100 points	enrolled
less than 60 points	not enrolled

Table 3 - Scale for assessing students' knowledge based on the results of the final control in the discipline

Score in points	Grade on the national scale credit	ECTS grades	
		Score	Criteria.
90-100	Enrolled	A	The theoretical content of the course has been mastered in full, without gaps, the necessary practical skills to work with the material have been formed, all the learning tasks provided for in the curriculum have been completed, the quality of their performance has been assessed with a number of points close to the maximum
80-89		B	The theoretical content of the course has been mastered in full, without gaps, the necessary practical skills to work with the material have been basically formed, all the learning tasks provided for in the curriculum have been completed, the quality of most of them has been assessed with a number of points close to the maximum
75-79		C	The theoretical content of the course is fully mastered, without gaps, some practical skills of working with the material are insufficiently developed, all the learning tasks provided for by the curriculum are completed, the quality of any of them is not assessed with the minimum number of points, some types of tasks are completed with errors
67-74		D	The theoretical content of the course is partially mastered, but the gaps are not significant, the necessary practical skills to work with the material mastered are basically formed, most of the learning tasks provided for in the curriculum have been completed, some of the completed tasks may contain errors
60-66		E	The theoretical content of the course is partially mastered, some practical skills have not been developed, many of the learning tasks provided for in the curriculum have not been completed, or the quality of some of them is assessed with a score close to the minimum.
35-59	Not enrolled	FX	The theoretical content of the course is partially mastered, the necessary practical skills have not been formed, most of the assignments provided for in the curriculum have not been completed, or the quality of their completion is assessed with a score close to the minimum; with additional independent work on the course material, it is possible to improve the quality of the assignments (with the possibility of retaking)
0-34		F	The theoretical content of the course has not been mastered, the necessary practical skills have not been formed, all completed assignments contain gross errors, additional independent work on the course material will not lead to any significant improvement in the quality of the assignments (with a mandatory repeated course)

Course policy:

- the course involves teamwork, the environment in the classroom is friendly, creative, and open to constructive criticism;
- mastering the discipline requires mandatory attendance at lectures and practical classes, as well as independent work;
- independent work involves the study of individual topics of the discipline, which are submitted in accordance with the programme for independent study, or have been considered briefly;
- all tasks provided for in the programme must be completed on time;
- if a higher education student is absent from classes for a valid reason, he/she presents the completed tasks during independent preparation and consultation with the teacher;

- while studying the course, higher education students must adhere to the rules of academic integrity set out in the following documents: "Rules of Academic Integrity of Participants in the Educational Process of KhNADU" (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_67_01_dobroch_1.pdf), "Academic Integrity. Checking the text of academic, scientific and qualification works for plagiarism" (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_85_1_01.pdf), "Moral and ethical code of participants in the educational process of KhNADU" (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_67_01_MEK_1.pdf).
- in case of detection of the fact of plagiarism, the applicant receives 0 points for the task and must repeat the tasks provided for in the silent book;
- cheating during tests and exams is prohibited (including using mobile devices). Mobile devices are allowed to be used only during online testing.

Recommended reference.

Basic reference:

1. Oleshko T., Kasyanova N., Smerichevsky S. et al (2022). *Digital economy: textbook*. Kyiv: Nau., 200 p.
2. Barikova A. (2016) *Electronic state: new efficiency of management: monograph*. Kyiv: Yurinkom Inter publ., 224 p.
3. Lepeyko T., Mazorenko O. (2012). *Osnovy informatsionnogo ekonomika: textbook*. Kharkiv: Khneu Publishing House, 136 p.
4. Palekh Yu. (2015). *Information business: textbook*. Kiev: lira Publishing House-K. 492 p.
5. Buryachok V. (2015). *Information and cyberspace: problems of security, methods and means of struggle*. Kiev: LLC "Sok Group Ukraine", 449 p.
6. Krysovaty A., Guley A., Yazlyuk B., Lipyanina-Goncharenko Kh., Maksimovich V., Butov A. (2021). *Fundamentals of digital economy : textbook*. Ternopil: ZUNU, 274 p.
7. Aleksanyan, A. (2018). Information Economy: influence on human development opportunities. *Socio-Labor Relations: Theory and practice: sat. Nauk.PR*. Kiev: KNEU publ., No. 1., pp. 397-403.
8. Gerasimenko S. (2020). The Role of statistical information in informatized society. *Statistics of Ukraine*. No. 2-3. pp. 4-11.
9. Davydov D., Ryabovol D., Kramarenko A. Kvitka A. (2020). The role of cloud technologies in the digital economy. *Business-Inform*. № 8. pp. 171-177.

Additional reference:

1. Distance learning course: <https://dl2022.khadi-kh.com/course/view.php?id=4813>
2. Bukht R., Heeks R. Defining, Conceptualising and Measuring the Digital Economy. Development Informatics Working Paper. 2017, No. 68. URL: <https://sIWn.com/abstract=3431732> (available at: 27.08.2023 p.)
3. Challenges for Competition Policy in a Digitised Economy. URL: [https://www.europarl.europa.eu/RegData/etudes/STUD/2015/542235/IPOL_STU\(2015\)542235_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2015/542235/IPOL_STU(2015)542235_EN.pdf) (available at: 27.08.2023 p.)
4. Fayyaz S. A review on measuring digital trade & e-commerce as new economic statistics products. The 16th Conference of IAOS, 2018 URL: https://www.oecd.org/iaos2018/programme/IAOS-OECD2018_Fayyaz.pdf (available at: 27.08.2023 p.)
5. Is n't Working. The Economist. Technology 2014 URL: <https://www.economist.com/special-report/2014/10/02/technology-isntworking> (available at: 27.08.2023 p.)
6. Deloitte. What is Digital Economy? 2019 URL: <https://www2.deloitte.com/mt/en/pages/technology/articles/mt-what-is-digitaleconomy> (available at: 27.08.2023 p.)

7. Expert Group on Taxation of the Digital Economy. European Commission, 2014. URL: https://ec.europa.eu/taxation_customs/sites/taxation/files/resources/documents/taxation/gen_info/good_governance_matters/digital/report_digital_economy.pdf (available at: 27.08.2023 p.)
8. OECD, «ST1 Micro-data Lab: Intellectual Property Database,» 2019. [Онлайновий]. URL: <http://oe.cd/ipstats> (available at: 27.08.2023 p.).
9. Official website of the Ministry and the Committee for Digital Transformation of Ukraine. URL: <https://thedigital.gov.ua/> (available at: 27.08.2023 p.).
10. UAFIC Catalogue of FinTech companies in Ukraine 2019. URL: <https://map.FinTechua.org/> (available at: 27.08.2023 p.)
11. «ROZETKA». URL: <http://style.rozetka.ua/2/> . (available at: 27.08.2023 p.).
12. Litvinov V. (2016). *Modeling and analysis of security of distributed information systems*. Chernihiv: Nat. Technol. UN-T, 254 p.
13. Luzhetsky V., Voinovich O., Dudatiev A. (2012). *Information security*. Vinnytsia: Universum-Vinnytsia publ., 240 p.

Syllabus developer
of an academic discipline



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