MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
IVAN FRANKO NATIONAL UNIVERSITY OF Lviv

Faculty of Economics
Department of Information Security and Business Communications

APPROVED
At the meeting of the department
of Information Security and Business Communications
Ivan Franko National University of Lviv
Protocol No. 8 dated February 05, 2024

Head of the department _____
Prof. Mariya Khmelyarchuk

SYLLABUS OF THE EDUCATIONAL DISCIPLINE

"Knowledge Based and Digital Transformations Economy",
which is a discipline of free choice of a cycle of professional and practical training,
second master's level of higher education
EP "Economy and Information Security"

Lviv 2024

The title of the discipline	**Knowledge Based and Digital Transformations Economy**
The address of teaching the discipline	Ivan Franko National University of Lviv
Faculty and department	Faculty of Economics, Department of Information Security and Business Communications
Field of knowledge, code and title of specialty	Field of knowledge - 05 Social and behavioral sciences, specialty - 051 Economics.
Lecturer of the discipline	Mariya Igorivna Khmelyarchuk, Doctor of Economic Sciences, Professor, Acting Head of the Department of Information Security and Business Communications
Contact information of the lecturer	mariia.khmeliarchuk@lnu.edu.ua
Consultations regarding the educational process of the discipline are held	Consultations on the day of practical classes by prior arrangement.
Discipline page	
Information about the discipline	The discipline "Knowledge Based and Digital Transformations Economy" is a discipline of free choice of the cycle of professional and practical training, which is delivered in the 2nd semester (1st year of study) in the amount of 3 credits (according to the European Credit Transfer System ECTS).
A brief summary of the discipline	The discipline "Knowledge Based and Digital Transformations Economy" is developed in such a way that the student can understand the modern trends of social progress, which are based on the growing importance of knowledge as a dominant resource in socio-economic development, as well as to learn the modern economic concepts (knowledge based economy, digital economy, network economy, new economy, etc.), which focus on the increasing value of knowledge resources in creating added value, growing importance of intellectual capital, ICT technologies and increasing the efficiency of their use in society. The study of the discipline is also aimed at forming the student's ability to investigate and solve complex economic problems and tasks, to

	make decisions in the management of the functioning of economic systems of various levels, which are characterized by the uncertainty of conditions and requirements, risks and information threats that require the accumulation and effective use of intellectual capital at the macro-, meso- and microeconomic levels.
The purpose and goals of the disciplines	The purpose of the discipline “Knowledge Based and Digital Transformations Economy” is the formation of the system of students' knowledge regarding the theoretical and methodological foundations of the concept of economy based on knowledge, human capital, innovations and scientific and technical progress and the ability to use it practically in managing the functioning of the economic system at the macro-, meso- and micro- economic levels. The tasks of studying the discipline "Knowledge Based and Digital Transformations Economy" are: – to study the conceptual and theoretical-methodological foundations of the modern concept of the knowledge-based economy, which justifies paradigmatic changes in the modern economy and is a determining factor in the leadership and competitiveness of business entities at the macro-, meso- and micro-economic levels; - to acquire knowledge about the foundations of the formation of knowledge based and digital transformations ekonomy, to determine factors of intellectualization and digitalization of the modern economy and to understand its driving forces in the conditions of globalization, high risks and uncertainty in the functioning of the economic system; - to be able to use the fundamental principles of the concept of the knowledge and digital economy to solve the current economic problems and form strategies and scenarios for the development of socio-economic systems; - to be able to analyze cause-and-effect relationships in the modern economic system, to determine the key vectors of socio-economic development based on methods of measurement

	and analysis of the knowledge-based economy; - to conduct an adequate assessment of the current state of the national economy and make effective management decisions regarding the prospects for its development at the macro, meso, and microeconomic levels in the context of the conceptual foundations of the knowledge and digital economy.
Literature for studying the discipline	**Basic:** 1. Leydesdorff L. The knowledge-based economy: modeled, measured, similated. Universal Publishers Boca Raton, Florida, USA. 2006. – 381 p. 2. Drucker P. F. Post-capitalist Society. Butterworth Heinemann, 1993. - 198 p. 3. Європейські цінності та традиції економічної науки: монографія / кол. авторів; за ред. д.е.н., проф. Хмелярчук М. І. – Л.: Університет банківської справи, 2021. - 257 с. Supportive: 1. Дяків, О. Розвиток економіки знань в організації, яка самонавчається / О. Дяків, Д. Шушпанов, В.Пошелюжний // Вісник Тернопільського національного економічного університету. — 2020. — Вип. 1. — С.113–125. 2. Зінченко, О. А. Інформаційна економіка: концепція, сутність та розвиток / О.А. Зінченко, П. Даріюш, Д.С. Зінченко // Економічний вісник НТУУ «КПІ». — 2019. — №16. — С. 3-13. 3. Ілляшенко, С. М. Управління знаннями в системі інноваційного розвитку організації / С.М.Ілляшенко, Ю.С. Шипуліна, Н.С. Ілляшенко, Г.О. Комарницька // Маркетинг і менеджмент інновацій. — 2017.— №1. — С. 231-241. 4. Мельник, Л.Ю. Еволюція наукових уявлень про економіку знань / Л. Ю. Мельник // Економічний вісник університету. — 2015. — Вип. № 26/1. — С.37-42.

	Мусіна, Л.О. Основні засади переходу до економіки знань: перспективи для України / Л. О. Мусіна //Електронний ресурс. Режим доступу: http://eip.org.ua/docs/EP_03_3_87_uk.pdf
The scope of the course	**The total amount of 90 hours, of which classroom classes - 16 hours of lectures, 16 hours - seminar classes, 58 hours - independent work**
Expected learning outcomes	The student must acquire knowledge about the theoretical and methodological foundations of modern concepts of the knowledge based and digital transformations economy (knowledge based economy, digital economy, network economy, new economy, etc.) as a methodological basis for developing scenarios and strategies for socio-economic development and post-war reconstruction of Ukraine, as well as conducting modern scientific research in the economic sphere. The student students will be able to demonstrate an understanding of the importance of knowledge as a fundamental basis for the functioning of the modern economy and the ability to manage knowledge in the interests of progressive socio-economic development at the macro-, meso- and micro-economic levels. The student should have the ability to identify the driving forces of the knowledge economy, analyze their leading trends in Ukraine and the world, in particular in the European Union, in order to bring Ukraine's economy as close as possible to European standards. The studenti will be able to measure, analyze and evaluate the level of development of the knowledge economy and digital transformations at the macro-, meso- and micro-economic levels, to provide an adequate assessment of the current state of the national economy and its development prospects in the context of advanced modern achievements of science and technology. The student will be able to demonstrate the ability to critically evaluate the potential of the

	level of intellectualization and digitization of the economy at the macro- and microeconomic levels and the ability to apply a scientific approach to making effective management decisions in solving practical economic problems. The student will be able to use the acquired knowledge in relation to the current conditions for solving complex economic problems in Ukraine, taking into account its Euro-Atlantic integration aspirations, trends and development prospects
Key words	knowledge based and digital transformations economy, new economy, smart growth, inclusive growth, global knowledge index, added value of knowledge.
Format of the course	full-time
	Delivering lectures in online format (ZOOM service), practical classes - in auditorium format.
The structure of the academic discipline	
Titles of content modules and topics	Number of hours

Title of the topic	**Number of hours**			
	lectures	**practical classes**	**self study work**	
Content module I. FORMATION OF THE MODERN PARADIGM OF THE KNOWLEDGE-BASED ECONOMY				
Topic 1. Knowledge economy: the process of formation and main components.	2	2	8	
Topic 2. Formation and development of the knowledge based economy in Europe	2	2	8	
Topic 3. Methods of analysis and measurement of the development of the knowledge based economy at the macro- and microeconomic levels	4	4	10	
Content module II. PREREQUISITES AND PROSPECTS FOR THE DEVELOPMENT OF THE KNOWLEDGE BASED AND DIGITAL TRANSFORMATIONS ECONOMY				
Topic 4. Human and intellectual capital in the development of the. knowledge based and digital transformations economy	2	2	8	
Topic 5. Innovations and their importance in the development of the knowledge based economy at the macro- and microeconomic levels.	2	2	8	
Topic 6. Digitization of the modern economy and the importance of information and communication technologies in the formation of the knowledge based and digital transformations economy	2	2	8	
Topic 7. The importance of the institutional environment in the formation and development of the knowledge	2	2	8	

based economy at the macro-, micro-, and micro-economic levels.					
		16	16	58	
Final control: exam					
Totally:	hours	90			
	credits	3			

Final control, form	**Test**
Prerequisites	To study the course, students need basic knowledge of "Macroeconomics", "Microeconomics", "International Economy", "History of Economics and Economic Thought", "Macroeconomic Analysis", "Microeconomic Analysis" in order to understand the categorical apparatus of the discipline "Knowledge Based and Digital Transformations Economy»
Educational methods and techniques that will be used during the course teaching	**Problem-based lectures, lecture-discussions** using presentation and multimedia equipment. **Practical classes** (educational discussions in the form of a seminar, presentations, scientific and analytical individual works). **Self-study** (individual work with recommended literature, performance of analytical tasks). Lectures provide students with the main theoretical material from the topics list of the discipline, which is the basis for independent understanding and elaboration using the recommended literature, and also contribute to the ability to generalizing and critical thinking based on participation in discussions. **Self-study** (individual work with recommended literature, presentation of analytical tasks). Lectures provide applicants with the main theoretical material from the list of topics of the discipline, which is the basis for independent understanding and elaboration using the recommended literature, and also contribute to the development the students ability to generalize and critical thinking based on the participation in discussions**.** Lectures are complemented by practical (seminar) classes, which give students the opportunity to apply theoretical knowledge in the form of scientific discussions during seminars, presentations and discussions of modern

	scenarios of the development of economic science and practice. Seminar (practical) classes are designed with the use of practice-oriented learning methods and involve scientific and analytical work by students of higher education based on the study of the latest modern economic theories, as well as the analysis of practical situations and the presentation of individual research tasks. Self-study facilitates preparation for lectures, practical classes, individual work and work in groups to prepare presentations to be presented to other groups, as well as to perform individual and group research tasks.
Necessary equipment	The study of the academic discipline does not require the use of software, except for commonly used programs and operating systems.
Evaluation criteria	**Evaluation** is carried out on a 100-point scale. Points are awarded according to the following ratio: – practical (seminar) classes: 50% of the semester grade; the maximum number of points is 50 points. – control tests (modules): 50% of the semester grade; the maximum number of points is 50 points. **The form of final control is an score.** **Written works:** Students are expected to be able to complete an individual written task (project, research paper). **Academic Integrity:** Students' papers/projects are expected to be their own original research or reasoning. Failure to cite used sources, fabrication of sources, plagiarism, interference with the work of other students are, but are not limited to, examples of possible academic dishonesty. The detection of signs of academic dishonesty in a student's written work is grounds for its failure by the teacher, regardless of the scale of plagiarism or deception. Attending classes is an important component of learning. All students are expected to attend all lectures and practical sessions of the course.

	Students must inform the lecturer about the impossibility to attend classes. In any case, students are obliged to comply with all deadlines for the completion of all types of written work provided for by the course. **Literature.** All literature that students cannot find on their own will be provided by the lecturer for educational purposes only, without the right to transfer it to third parties. Students are also encouraged to use other literature and sources that are not among the recommended ones. **Scoring policy.** Points scored for written module control, oral reports of students, performance of scientific research tasks and independent work are taken into account. At the same time, attendance at classes and the student's activity during practical classes must be taken into account; the following aspects are not allowed: absences and lateness to classes; using a mobile phone, tablet or other mobile devices during class for non-educational purposes; plagiarism; late completion of the task, etc.
Questions for the exam	The list of questions and tasks for the final assessment of knowledge (score) is given during the consultation before the exam.
Survey	An evaluation questionnaire for the purpose of assessing the quality of the course is provided at the end of the course.