MINISTRY OF HIGHER EDUCATION, SCIENCE, AND INNOVATION OF
THE REPUBLIC OF UZBEKISTAN
SAMARKAND INSTITUTE OF ECONOMICS AND SERVICE

"APPROVED"
Rector of SamIES M.E. Pulatov
2025 "___" _____

DEPARTMENT OF DIGITAL ECONOMY

DIGITAL ECONOMY
SUBJECT SYLLABUS
(DIGECO06)
for full-time education

Field of knowledge:	400000	– Business Management and Law
Education field :	410000	– Business and Management
Field of study:	60411100	– World Economy and International Economic Relations

Samarkand – 2025

This syllabus was approved by the protocol of the Council of the Samarkand Institute of Economics and Service No. _1_ dated "_28_" - _08_ 2025.

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Contents

The total score a student accumulates during the semester for the subject is calculated based on the points collected from each type of assessment according to the established rules using the following formula:

$$FA=CC+MC+FC$$

Here:

CC-Current control; MC-midterm Control; FC-Final Control

Note: A student who fails to collect at least 60% (42 points) of the total points allocated for participation in lessons, ongoing assessment, and midterm assessments (70 points) is not allowed to take the final exam. If a student fails to obtain at least 60% (18 points) of the points allocated for the final exam (30 points), the student's final exam score on the HEMIS platform will be recorded as 0. If the total points accumulated from all types of assessments are less than 60 points, the student is considered to have failed the course.

Final grading:

- 0–59 points: Grade 2
- 60–69 points: Grade 3
- 70–89 points: Grade 4
- 90–100 points: Grade 5

11.Academic requirements

The relationship between the teacher and the student must be sincere and impartial. Students are required to submit their independent assignments through the designated educational platform (HEMIS) in accordance with the established procedure (excluding laboratory work). The teacher checks the independent work completed by the student, provides feedback, and assigns a grade. Independent assignments that are not completed within the specified deadline will not be accepted for resubmission.

This Syllabus was discussed at the meeting No. 1 of the Department of "Digital economy"
on " 26 " 08 , 2025 and approved by the resolution of the meeting.

Head of the Educational-Methodological
Support Department: Z.K.Raximov

Head of Department: K.J. Mirzaev

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			2. Methods of financing digital projects.			
14.	Priority areas and features of development of e-government and the digital economy in Uzbekistan.	1. Development of information and communication technologies in Uzbekistan. 2. Concept of digital economy development in Uzbekistan. 3. Trends in the development of e-commerce in Uzbekistan and the world.	2	2	0
15.	Security issues in the digital economy.	1. Digital security issues and their provision. 2. Types of internet fraud and ways to detect them. 3. Intellectual property protection system.	2	2	0
Total hours:			**30**	**30**	**0**

Coursework in the subject is not planned in the curriculum.

10. Student Assessment

Procedure for evaluating students' knowledge.

Types of rating.	Max. Score	Form of execution	Assigned tasks	Deadlines for tasks.
Current control (CC)	35	Independent work - 10 points "For learning during the session - 25 points. The assessment process for practical (seminar, laboratory) sessions is evaluated on a 100-point scale. Assessment procedure: Grade 2 - 0-59 points; Grade 3 - 60-69 points; Grade 4 - 70-89 points; Grade 5 - 90-100 points."	In the established form *. In the course of the practical session, each session assesses the student's grasp of material, activity, and homework."	Before the last practical session of the semester." In the practical session
1-Intermediate control (IC)	17	For independent work - 5 points For intermediate control - 12 points	In the established form* Written	By the date of the 1st intermediate control Based on the approved schedule
2-Intermediate control (IC)	18	For independent work - 5 points For intermediate control - 13 points	In the established form* Written	By the date of the 2nd intermediate control Based on the approved schedule
Final control (FC)	30	Final control-30 points	Test	Based on the approved schedule
Total	**100**			

*
1. Preparing an analytical essay;
2. Performing a calculation-drawing MI;
3. Preparing an analytical presentation (presentation);
4. Finding a specific solution to the problem and analyzing it;
5. Extensive analysis of the problem, giving it a definition and conclusions;
6. In-depth study of the topic and high-level analysis;
7. Carrying out experimental and test work;
8. Preparing calculation-graphic-design developments;
9. Finding a solution to an existing problem in practice, forming the skills of working on projects by preparing tests, debatable questions and assignments;
10. Preparing a scientific article, theses and reports;
11. Solving non-standard problems of practical content and working creatively.

DIGITAL ECONOMY (DIGECO06)

1. Course Description

The teaching of the subject "Digital Economy" holds particular significance in determining the prospects for the development of society, the state, and individual economic entities amid the rapidly evolving processes of the digital economy, the digitalization of production processes across various industries, the creation of e-commerce systems for providing economic and analytical services, electronic document management in government agencies and other organizations, as well as services for individuals and legal entities. Additionally, it plays a crucial role in the development of digital economic activities across industries through the application of digital economy technologies, the organization of business processes, and the provision of information security.

It is advisable to consider the discipline "Digital Economy" as a course included in the block of industry-specific and sectoral disciplines and to teach it in the 2nd and 3rd years. In the course of studying the subject, it is necessary to use the laws of the Republic of Uzbekistan, government resolutions on the development of the digital economy, regulatory documents and instructions, as well as the digital economy classifier. A key focus in this field is on issues related to the development of the digital economy, the scope of ongoing and necessary expansion efforts, as well as questions concerning efficiency, financial performance, and revenues of enterprises and organizations utilizing digital economy tools.

This subject involves the study of analyzing and planning economic indicators of enterprises and organizations in accordance with the demands of the modern era, as well as their economic justification using digital economy tools. Practical classes will develop the necessary skills using computers and electronic calculators. These classes will cover the theoretical foundations of the formation and development of the digital economy, along with other critical topics.

2. Prerequisites

The discipline "Digital Economy" is closely interconnected with "Economic Theory," "Fundamentals of Small Business and Entrepreneurship," "National and Global Economy," "Marketing," "Management," "Innovative Economy," "Digital Marketing," and several other related disciplines.

3. Course purposes

Training students in the role and importance of the digital economy in business and the social sphere involves the digitization of business processes, the development of knowledge, skills, and competencies relevant to their field of study, as well as the application of business models, e-commerce, and blockchain technology. Additionally, the discipline focuses on fostering modern economic thinking, studying the impact of information and communication technologies on practical aspects of society from the perspective of the economic system, and teaching students that the new characteristics of the modern economic environment and the digital economy must already be taken into account in practical activities.

4. Educational results

Upon successful completion of this course, students will be able to:
– Independently perform calculations and precise analyses of various digital economic and organizational processes;
– Develop recommendations for improving the efficiency of digital technology use to increase production volumes and provide various services;
– Assess, analyze, and draw necessary conclusions regarding the state of production, goods and services delivery, and e-government services for the population;
– Utilize digital components in modern models of organization, planning, and production management; collect and summarize information on the state and prospects of global economic

development and international economic relations from scientific literature, journalistic sources, and publications of national and international economic organizations;

– Apply and integrate Industry 4.0 technologies for the efficient use of available resources

– Evaluate expected revenue from produced goods and services and enhance efficiency through Artificial Intelligence technology;

– Implement digital economy principles in industries and production sectors, understanding legal regulations on digital economy development and applying them in practice;

– Draw conclusions on network security based on an in-depth study of digital technologies, enterprise potential, and resource utilization;

– Understand the reasons behind the emergence of digital technologies, gain insights into industrial revolutions, and recognize the necessity and essence of the Internet of Things in the digital economy;

– Analyze the state of development of distributed computing and cloud technologies in the digital economy;

– Use information and interactive technologies in the learning process;

– Acquire practical knowledge and skills in ensuring economic security and cybersecurity in the digital economy.

5. Teaching Methods

- Performing practical work based on real-life situations;
- Writing essays, abstracts, and articles;
- Solving situational tasks (case studies);
- Process-oriented education;
- Participating in discussions;
- Organizing group work in small teams;
- Completing project work;
- Undertaking independent study;
- Preparing presentations;
- Solving tests of varying difficulty;
- Conducting surveys;
- Solving problems.

6. Independent Learning and Independent Work

No.	Topics for Independent Work	Hours
1	Key areas of digital economy development: Strategy "Digital Uzbekistan 2030" and its essence	6
2	Regulatory framework of digital economy in Uzbekistan and ways to improve it	4
3	International experience in the development of digital economy and ways to apply it in our republic	4
4	Assessing the relationship between digital economy and economic growth	4
5	M2M technologies in the development of digital economy	4
6	State and development of the culture of using mobile and internet technologies	4
7	Impact of digital technologies on business, commerce, and trade: opportunities and risks	4
8	Improving the use of blockchain technology in industries and sectors	4
9	Legal regulation of blockchain technology and its improvement	6
10	Development of data storage and processing centers based on "cloud" computing	4
11	The importance of cryptocurrency as a phenomenon of the digital economy	6
12	Development of legal regulation of artificial intelligence	4

6.	Neurotechnologies and artificial intelligence in the digital economy.	1.The history of the development of artificial intelligence. Properties of neural networks. 2.Intellectual capital in the socio-economic development of the country. 3.Issues of forming and using intellectual resources.	2	2	0
7.	The Internet of Things and cognitive technologies in the digital economy.	1.The role of the Internet of Things in the digital economy. 2.M2M technologies as the foundation of the Internet of Things. 3.Features of the "Smart Home" technology in the context of the transition to the digital economy. 4.Cognitive technologies and their significance in the digital economy.	2	2	0
8.	New opportunities of crowdsourcing and crowdfunding in digital business.	1.Theoretical and methodological foundations of crowdsourcing and crowdfunding in digital business. 2.Crowdsourcing and crowdfunding as technologies for capitalizing companies. 3.Effective use of new opportunities in crowdsourcing and crowdfunding.	2	2	0
9.	Development of human capital in the digital economy. Features of e-government in Uzbekistan.	1.Human resource management in the digital economy. 2.The impact of the digital economy on the quality of human capital. 3.Organizational and legal foundations for the development of e-government in Uzbekistan. 4.The role of e-government in ensuring the efficiency, speed, and transparency of government activities.	2	2	0
10.	The service sector in the digital economy.	1.Development of the tourism market in Uzbekistan in the context of the digital economy. 2.Digital changes in the housing and utilities system. 3.E-commerce in the transportation services sector.	2	2	0
11.	Development of digital educational platforms.	1.Development of the digital education market and types of educational platforms. 2.Formation of an educational environment for the digital economy. 3.Ways to develop distance learning.	2	2	0
12	Effective use of digital technologies in industry. The concept of "Industry 4.0."	1.The essence and development of the "Industry 4.0" concept. 2.Components of Industry 4.0. 3.Differences between Industry 4.0 and other industrial revolutions and its significance in global economic changes.	2	2	0
13.	Banking and financial technologies in the digital economy.	1.Models of sustainable development of the banking system in the digital economy. 2.The process of digitalization of financial services (Fintech).	2	2	0

No.	Topics	Hours
13	Challenges in the development of augmented and virtual reality technologies and features of the global market	4
14	Features of crowdsourcing and crowdfunding technologies in the business model of modern companies	4
15	Development of the e-learning market and international educational platforms	4
16	Evolution and future of digital marketing	4
17	The role and importance of mobile technologies in the digitalization of mobile banking and FinTech	6
18	Challenges of digital security and ways to ensure it	4
19	Requirements of international standards for ensuring the quality of digital services	4
20	Features of the UN Index Evaluating the Effectiveness of ICT Use (E-Participation Index) (e-SQI)	6
	Total	**90**

7. Literature
Main literature

1. Brynjolfsson E. and Kahin B. (editors), *Understanding the Digital Economy*, The MIT Press, Cambridge, Massachusetts, and London, England, 2000. – 408 pages.
2. Markova V.D. *Digital Economy: A Textbook for Universities* (Higher Education: Bachelor's Degree). – Moscow: Infra-M, 2019. – 186 pages.
3. R.H. Ayupov, G.R. Boltaboeva. *Fundamentals of the Digital Economy*. Textbook. Tashkent: TMI, 2020, 575 pages.
4. K.J.Mirzaev, S.B. Boboqulov, B.K. Janzakov. *Digital Economy*. /Textbook/ Samarkand: SamISI, "STAP-SEL" LLC. Publishing and Printing Department, 2022. – 288 pages.
5. Porsaev G'.M., Safarov B.Sh., Usmanova D.Q. *Fundamentals of the Digital Economy*. Textbook. Samarkand: SamDU Publishing, 2020.

Additional Literature:

6. Constitution of the Republic of Uzbekistan. - T.: Uzbekistan, 2023.
7. Decree of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev on the approval of the "Digital Uzbekistan - 2030" Strategy and measures for its effective implementation PF-6079, Tashkent, October 5, 2020. www.lex.uz
8. Gulyamov S.S., Ayupov R.H. Fundamentals of Digital Economy and E-Commerce. T.: TMI, "Iqtisod-Moliya" Publishing, 2020, 510 pages.
9. Abdullaev O.M., Fattakhov A.A., Akhmedov K. Digital Economy. T.: "LESSON PRESS" Publishing, 2020, 686 pages.

Internet sites:

10. www.gov.uz
11. www.lex.uz
12. www.mail.tdiu.uz
13. www.yel.ff.uz
14. www.stat.uz
15. www.ziyonet.uz

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8. Hours/Credits
Fourth semester credit module amount – 5 ECTS (mandatory subject)

Form of study	Lecturers	Practical class	Laboratory	Independent education	Total
Full time	30	30	0	90	150
Total	30	30	0	90	150

9. Structural structure of subject

No.	Topics	Practical lesson plan	Lecture session	Practical lessons	Laboratory
1	Introduction to the subject 'Digital Economy'	1.Informatization – the basis of society's development. 2.Features of the digital economy. 3.Concept, goals, and objectives of the digital economy.	2	2	0
2	Basics of electronic business in the digital economy. Features of the development of digital (electronic) commerce.	1.The essence and features of the development of electronic business. 2.Features of creating a business on the Internet. 3.Characteristics and differences between electronic commerce and electronic trade. 4.Electronic business models.	2	2	0
3	Cloud technologies and "Big Data" technologies in the digital economy.	1.The concept of cloud technologies and the history of their development. 2. Cloud technologies and cloud computing. 3.Models of cloud computing service delivery. 4.Big data and analytics, database organization.	2	2	0
4.	Blockchain technologies in the digital economy.	1.Key concepts and economic characteristics of blockchain. 2.Characteristics of blockchain consensus algorithms. 3.Applications of blockchain technology.	2	2	0
5.	Cryptocurrency technologies and mining farms.	1.The history of the emergence of cryptocurrencies. 2.Basics of cryptocurrency. 3.The working process of cryptocurrency and mining farms. 4.Types and features of cryptocurrencies.	2	2	0