



## Syllabus Course Program



# [Business Digitalization]

### Specialty

071 – Accounting and Taxation

### Institute

Educational and Scientific Institute of Economics,  
Management and International Business

### Educational program

Accounting, Auditing and Taxation

### Department

Accounting and Finance

### Level of education

Master's level

### Course type

Mandatory

### Semester

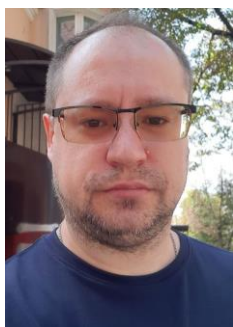
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### Language of instruction

English, Ukrainian

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## Lecturers and course developers



### Ievgen Strokov

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Candidate of Economic Sciences, Associate Professor, Associate Professor of the Department of Accounting and Finance (NTU "KhPI")

Work experience of 18 years

The author of more than 50 scientific and educational and methodical publications. Leading lecturer on courses: "Business digitalization", "Management Information systems in finance and accounting", "Information systems in financial sector", "Accounting software", "Electronic document management", "Financial technologies in digital economy"

[More about the lecturer on the department's website](#)

## General information

### Summary

This course explores the transformative impact of digital technologies on business processes, models, and strategies. Students will learn how businesses can leverage digital tools and platforms to improve operations, innovate products, and create value in a dynamic, competitive environment.

### Course objectives and goals

The purpose of this discipline is the formation knowledge and practical skills of the fundamental concepts of business digitalization, analyze how digital technologies influence business processes and decision-making, evaluate different digital tools and strategies applicable to various industries, develop digital transformation strategies for businesses, understand the ethical, legal, and social implications of business digitalization, apply digital technologies to optimize core business functions

### Format of classes

Lectures, practical work, independent work, consultations. The final control – test

### Competencies

GC03. Skills in using information and communication technologies.

GC07. Ability to work in an international context.

GC09. Appreciation and respect for diversity and multiculturalism.

SC08. Ability to perform administrative and managerial functions in the activities of business entities and public sector bodies.

SC09. Ability to provide consulting services to owners, enterprise management, and other users of information in the areas of accounting, analysis, control, auditing, and taxation.

SC10. Ability to conduct scientific research to solve current issues in the theory, methodology, organization, and practice of accounting, auditing, analysis, control, and taxation..

### **Learning outcomes**

LO03. Communicate freely in a foreign language, both orally and in writing, when discussing research results and innovations.

### **Student workload**

The total volume of the course is 90 hours (3 ECTS credits): lectures - 16 hours, practical classes - 16 hours, self-study - 58 hours.

### **Course prerequisites**

To successfully pass the educational discipline, it is necessary to have the knowledge and practical skills in the following disciplines: "Fundamentals of Academic Research", "Management Information Systems in Finance and Accounting".

### **Features of the course, teaching and learning methods, and technologies**

Interactive lectures with presentations, discussions, seminars, individual and team work, research work, work with literature and information sources, problem-based learning.

### **Program of the course**

#### **Topics of the lectures**

Topic 1: Introduction to Business Digitalization.

Historical evolution of digitalization in business. The role of digital technologies in modern business environments

Topic 2: Digital Transformation Frameworks and Strategies.

Understanding digital maturity models. Developing a digital transformation roadmap. Change management and overcoming resistance to digital transformation

Topic 3: Core Digital Technologies

Cloud computing and data storage. Big data and data analytics. Internet of Things (IoT). Artificial Intelligence and Machine Learning

Topic 4: Digital Business Models and Innovation.

Platform-based business models. Subscription and service-based models. E-commerce and digital marketplaces. Case studies of digital business model innovation

Topic 5: Digitalization of Business Functions.

Digital marketing and customer engagement. Supply chain digitalization and logistics. Finance and accounting automation. Human resource management and talent acquisition in the digital age

Topic 6: Cybersecurity and Data Protection.

Data privacy regulations. Risk management and protection of business data. Ethical considerations in data use

Topic 7: International and Industry-Specific Case Studies.

Success stories and failures in digital transformation. Digitalization in various industries (retail, manufacturing, healthcare, finance). Lessons learned and best practices

Topic 8: Future Trends in Business Digitalization.

Emerging technologies: Blockchain, augmented reality (AR), virtual reality (VR). The role of automation and robotics in business. Sustainable digital transformation. Preparing for the future of work and digital disruption.

#### **Topics of the workshops**

Topic 1: Digital Transformation Roadmap Development

Topic 2: Cloud Computing Implementation

- Topic 3: Data Analytics for Business Decisions
- Topic 4: Building a Digital Marketing Campaign
- Topic 5: Cybersecurity Simulation and Risk Management
- Topic 6: Automation of Business Processes
- Topic 7: Blockchain in Business Operations
- Topic 8: Digital Business Model Canvas

### Topics of the laboratory classes

Laboratory work is not provided within the discipline

### Self-study

Investigate a recent digital transformation success story or failure, analyze the impact of AI on a specific industry, research how blockchain is being adopted in supply chain management, select a case study on a company's digital transformation journey, write a report analyzing the challenges, strategies, and outcomes, propose alternative strategies or improvements, explore tools like Power BI, Tableau, or Google Analytics, create basic dashboards or reports, analyze trends like automation, AI, or remote work.

### Course materials and recommended reading

1. Rogers, David L. Digital Transformation Playbook: Rethink Your Business for the Digital Age. Columbia University Press (2016).
2. Westerman, George, Didier Bonnet, and Andrew McAfee. Leading Digital: Turning Technology into Business Transformation. Harvard Business Review Press (2014).
3. "Digital Transformation: Understanding Business Goals, Risks, Processes, and Decisions". Open Book Publishers (2023) <https://doi.org/10.11647/OBP.0350>
4. Rogers, David L. Digital Transformation Playbook: Rethink Your Business for the Digital Age. Columbia University Press (2016).
5. Christensen, Clayton M. The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail. Harvard Business Review Press (2016).
6. Steve Andriole "The Digital Playbook: How to Leverage Strategic Technology for Competitive Advantage", Publisher: Pearson/Financial Times (2023).

### Assessment and grading

#### Criteria for assessment of student performance, and the final score structure

100% Final assessment as a result of Final on-line test (40%) and Continuous assessment (60%).

60% Continuous assessment:

- 50% individual assignments (including essays, reporting on fieldwork, and calculation-graphical task)
- 10% mid-term control (2 online tests)

The test contains: 25 test tasks of various difficulty levels.

#### Grading scale

Total points	National	ECTS
90–100	Excellent	A
82–89	Good	B
75–81	Good	C
64–74	Satisfactory	D
60–63	Satisfactory	E
35–59	Unsatisfactory (requires additional learning)	FX
1–34	Unsatisfactory (requires repetition of the course)	F

### Norms of academic integrity and course policy

The student must adhere to the Code of Ethics of Academic Relations and Integrity of NTU "KhPI": to demonstrate discipline, good manners, kindness, honesty, and responsibility. Conflict situations should be

openly discussed in academic groups with a lecturer, and if it is impossible to resolve the conflict, they should be brought to the attention of the Institute's management.  
Regulatory and legal documents related to the implementation of the principles of academic integrity at NTU "KhPI" are available on the website: <http://blogs.kpi.kharkov.ua/v2/nv/akademichna-dobrochesnist/>

## Approval

Approved by

Date, signature

**Head of the department**  
Oleksandr MANOYLENKO

Date, signature

**Guarantor of the educational program**  
Tetiana DAVYDIUK

