



## Syllabus Course Program



# Management Information Systems in Finance and Accounting

### Specialty

072 – Finance, banking and insurance

### Institute

Educational and Scientific Institute of Economics,  
Management and International Business

### Educational program

Finance and banking

### Department

Accounting and finance

### Level of education

Master's level

### Course type

Special (professional), Mandatory

### Semester

1

### Language of instruction

English, Ukrainian

## 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

The discipline is aimed at preparing specialists who are able to analyze current trends in the software market for business entities; to work in the field of building and functioning of information systems and computer technologies and the possibilities of their use in financial management and Accounting.

### Course objectives and goals

The purpose of teaching the academic discipline " Management Information Systems in Finance and Accounting" is the formation knowledge and practical skills to creation and operation of information systems and computer technologies and the possibilities of their use in finance and accounting

### Format of classes

Lectures, laboratory classes, consultations. Final control - exam

### Competencies

GC 01. Ability to think abstractly, analyze, and synthesize.

GC 03. Ability to conduct sound research.

GC 04 Ability to identify, state, and solve problems

GC 05 Ability to make informed decisions

GC 06 Interpersonal interaction skills

GC 07 Ability to motivate people and move towards a common goal  
GC 09 Ability to act based on ethical considerations (motives)  
PC 01. Ability to use the fundamental laws of development of finance, banking, and insurance in combination with research and management tools for professional and academic activities.  
PC 02. Ability to use theoretical and methodological tools to assess and model financial activities.  
PC 03. Ability to apply management skills in finance, banking, and insurance.  
PC 04. Ability to evaluate the effectiveness of academic, analytical, and methodological tools to justify finance, banking, and insurance management decisions.  
PC 05. Ability to assess the limits of their professional competence and improve their professional skills.  
PC 06. Ability to apply interdisciplinary approaches to solving complex problems in finance, banking, and insurance.  
PC 07. The ability to search, use, and interpret information is necessary for solving professional and academic problems in finance, banking, and insurance.  
PC 09. Ability to develop technical specifications for the design of information systems in finance, banking, and insurance.

### **Learning outcomes**

LO 01. To apply fundamental laws of finance, banking, and insurance development in combination with research and management tools for professional and academic activities.  
LO 02. To be aware of the latest achievements, concepts, and academic methodologies in finance, banking, and insurance.  
LO 03. To adapt and modify existing academic approaches and methods to specific situations that occur during work.  
LO 04. To search, process, systematize, and analyze information necessary for solving professional and academic problems in finance, banking, and insurance.  
LO 09. To apply management skills in finance, banking, and insurance.  
LO 11. To apply in-depth knowledge in financial, banking, and insurance management decision-making.  
LO 12. To justify the choice of management decision options in finance, banking, and insurance and evaluate their effectiveness, considering the goals, existing constraints, and legal and ethical aspects.  
LO 13. To assess the degree of task complexity at the planning and results processing stages.

### **Student workload**

The total volume of the course is 150 hours (5 ECTS credits): lectures - 32 hours, practical classes - 32 hours, self-study - 86 hours.

### **Course prerequisites**

The discipline Management Information Systems in Finance and Accounting in accordance with the structural and logical scheme of teaching disciplines provided by the curriculum, is taught in the first year in the first semester

### **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. Basic concepts of digital economy  
Topic 2. Spreading of new business models  
Topic 3. Digital technologies in public administration  
Topic 4. Labor market and human resources competencies in the digital age  
Topic 5. The essence and features of the fourth industrial revolution  
Topic 6. Digital business transformation  
Topic 7. Introduction to FinTech  
Topic 8. FinTech technologies  
Topic 9. E-commerce  
Topic 10. RegTech and SupTech

- Topic 11. Modern payment systems
- Topic 12. Cryptocurrencies and their legal regulation
- Topic 13. Place of Big Data in Finance and Accounting
- Topic 14. Artificial intelligence systems
- Topic 15. The essence of the Internet of Things
- Topic 16. Prospects for the use of IoT in Finance and Accounting

### Topics of the workshops

Workshops are not provided

### Topics of the laboratory classes

- Topic 1. Digital economy and economic growth
- Topic 2. Digital systems in public and regional finance
- Topic 3. Assessment of the development of the digital economy in Ukraine
- Topic 4. Scenarios of labor market development in the digital economy
- Topic 5. Financial sector in the context of digitalization
- Topic 6. The importance of digital finance for the country's economic processes
- Topic 7. Digitalization of finance in the enterprise
- Topic 8. FinTech: Benefits for customers
- Topic 9. The role of social media marketing
- Topic 10. Development of the banking system in the context of digitalization
- Topic 11. Digitalization in payment technologies
- Topic 12. Development of cryptocurrency markets
- Topic 13. Development of the banking system in the context of digitalization
- Topic 14. Digitalization of financial services market
- Topic 15. Robo-advising and Internet of Things
- Topic 16. Philosophy and goals of artificial intelligence

### Self-study

OpenAPI: terms of use and prospects; Open banking; Security issues in information systems; Introduction to InsurTech; Ukraine and the fourth industrial revolution; E-commerce and online trading; Regulatory features of FinTech; The essence of digital marketing; Common and distinctive features with e-commerce, digital marketing and internet marketing; Digitalization of Ukraine's banking sector; Evaluating the effectiveness of content placement on various platforms; Blockchain in insurance; AI and BigData; The place of Big Data in the management decision-making system; Main research areas in the field of AI; Potentially negative consequences of artificial intelligence development for society

## Course materials and recommended reading

1. LE, Quang Bon, et al. "The Determinants of management information systems effectiveness in small-and medium-sized enterprises." *The Journal of Asian Finance, Economics and Business* 7.8 (2020): 567-576.
2. Puspitawati, Lilis. "Strategic information moderated by effectiveness management accounting information systems: Business strategy approach." *Jurnal Akuntansi* (2020).
3. Khalid, Bilal, and Michal Kot. "The impact of accounting information systems on performance management in the banking sector." *IBIMA Business Review* 578902 (2021).
4. Ibrahim, Fahmi, Diyana Najwa Haji Ali, and Nur Suaidah Awang Besar. "Accounting information systems (AIS) in SMEs: Towards an integrated framework." *International Journal of Asian Business and Information Management (IJABIM)* 11.2 (2020): 51-67.
5. Turner, Leslie, Andrea B. Weickgenannt, and Mary Kay Copeland. *Accounting information systems: controls and processes*. John Wiley & Sons, 2022.
6. Berdik, David, et al. "A survey on blockchain for information systems management and security." *Information Processing & Management* 58.1 (2021): 102397.
7. Rana, Nripendra P., et al. "Understanding dark side of artificial intelligence (AI) integrated business analytics: assessing firm's operational inefficiency and competitiveness." *European Journal of Information Systems* 31.3 (2022): 364-387.

8. Kraus, Nataliia, and Kateryna Kraus. "Digitalization of business processes of enterprises of the ecosystem of Industry 4.0: virtual-real aspect of economic growth reserves." *WSEAS Transactions on Business and Economics* 18 (2021): 569-580.
9. Bouncken, Ricarda B., Sascha Kraus, and Norat Roig-Tierno. "Knowledge-and innovation-based business models for future growth: Digitalized business models and portfolio considerations." *Review of Managerial Science* 15.1 (2021): 1-14.
10. Westerlund, Mika. "Digitalization, internationalization and scaling of online SMEs." *Technology Innovation Management Review* 10.4 (2020).
11. Bican, Peter M., and Alexander Brem. "Digital business model, digital transformation, digital entrepreneurship: Is there a sustainable "digital"?" *Sustainability* 12.13 (2020): 5239.
12. Jonathan, Gideon Mekonnen, Lazar Rusu, and Wim Van Grembergen. "Business-IT alignment and digital transformation: Setting a research agenda." 29th International Conference on Information Systems Development (ISD2021), València, Spain, September 8-10, 2021. Association for Information Systems, 2021.

## 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 exam is on-line and 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 NAZAROVA

