



Syllabus Course Program



Management Information Systems in Finance and Accounting

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

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 19 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

GC01. Ability to identify, pose, and solve problems.

GC02. Ability to communicate in a foreign language.

GC03. Skills in using information and communication technologies.

GC04. Ability to conduct research at an appropriate level.

GC05. Ability to generate new ideas (creativity).
GC06. Ability to search for, process, and analyze information from various sources.
GC07. Ability to work in an international context.
GC08. Ability to communicate with representatives of other professional groups at various levels (with experts from other fields of knowledge/types of economic activity).
GC09. Appreciation and respect for diversity and multiculturalism.
GC10. Ability to act on the basis of ethical considerations (motives).

SC01. Ability to generate and use accounting information for making effective managerial decisions at all levels of enterprise management to improve the efficiency, effectiveness, and social responsibility of the business.

SC02. Ability to organize the accounting process and regulate the activities of its performers in accordance with the requirements of legislation and enterprise management.

SC03. Ability to apply theoretical, methodological, and practical approaches to organizing accounting, control, planning, and optimization of tax calculations.

SC04. Ability to prepare financial statements according to international standards, correctly interpret, disclose, and use relevant information to make effective managerial decisions.

SC05. Ability to apply methods and techniques of analytical support for modern management systems, taking into account the enterprise development strategy under conditions of uncertainty, risk, and/or information asymmetry.

SC06. Use international standards for quality control, auditing, review, assurance engagements, and related services while adhering to professional ethics in the process of practical activities.

SC07. Ability to formulate tasks, improve methodologies, and implement modern methods of financial and management accounting, analysis, auditing, and taxation in accordance with the strategic goals of the enterprise.

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

LO05. Master innovative technologies, justify the choice, and explain the use of new methodologies for preparing and providing accounting information for business management purposes.

LO06. Determine the information needs of users of accounting information in enterprise management and provide consultations to management personnel regarding accounting information.

LO09. Prepare financial statements in accordance with national and international standards for business entities at the corporate level, publish and use the relevant information for managerial decision-making.

LO10. Collect, evaluate, and analyze financial and non-financial data to form relevant information for managerial decision-making.

LO13. Know international standards for quality control, audit, review, assurance engagements, and related services, while adhering to professional ethics.

LO14. Justify the choice and procedure for applying management information technologies for accounting, analysis, auditing, and taxation in decision-making systems to optimize them.

Student workload

The total volume of the course is 150 hours (5 ECTS credits): lectures - 32 hours, laboratory 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

Topics 1: Core Concepts of the Digital Economy

Definition of the digital economy. Cross-cutting digital technologies (CDTs)

Topics 2: The Spread of New Business Models

Impact of new technologies on the market. New business models: features and examples

Topics 3: Digital Technologies in Public Administration

E-government: types and characteristics. Digital services in public service delivery (Diia in Ukraine)

Topics 4: The Labor Market and Human Resource Competencies in the Digital Age

The labor market in the digital economy. Key competencies and emerging professions

Topics 5: The Nature and Features of the Fourth Industrial Revolution

The essence of Industry 4.0. Core technologies of Industry 4.0

Topics 6: Digital Transformation of Business

Four key paradoxes of Industry 4.0. Digital transformation: models and implementation outcomes

Topics 7: Introduction to FinTech

Prerequisites for the emergence and stages of FinTech development. The FinTech ecosystem and its key elements. Global FinTech development

Topics 8: FinTech Technologies

Distributed ledger technology and blockchain in FinTech. Cloud technologies. Big data. Artificial intelligence in the financial market. Robo-advisory. Internet of Things (IoT) in the financial market. RegTech and SupTech in the financial market

Topics 9: Segments of the FinTech Market

Concept and core elements of fast payment systems. Fast payment systems in various countries. Virtual payment systems. Peer-to-peer (P2P) lending. Crowdfunding

Topics 10: Cryptocurrencies and Their Legal Regulation

The cryptocurrency asset market. Cryptocurrency assets as financial instruments. Legal regulation of cryptocurrencies. Blockchain as the foundation for cryptocurrency transactions. Emission capabilities of blockchain technology. Smart contract technologies. Cryptocurrency exchanges and markets

Topics 11: Modern Technologies in Insurance (InsurTech)

Digitalization of insurance: advantages and risks. The global InsurTech market. Artificial intelligence in the InsurTech market. Big Data and IoT in the insurance industry

Topics of the workshops

Workshops are not provided

Topics of the laboratory classes

Topics 1: Core Concepts of the Digital Economy

Topics 2: The Spread of New Business Models

Topics 3: Digital Technologies in Public Administration

Topics 4: The Labor Market and Human Resource Competencies in the Digital Age

Topics 5: The Nature and Features of the Fourth Industrial Revolution

Topics 6: Digital Transformation of Business

Topics 7: Introduction to FinTech

Topics 8: FinTech Technologies

Topics 9: Segments of the FinTech Market

Topics 10: Cryptocurrencies and Their Legal Regulation

Topics 11: Modern Technologies in Insurance (InsurTech)

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 DAVYDIUK