

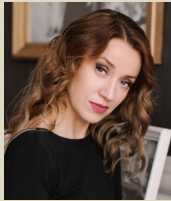
INFORMATION TECHNOLOGY IN MANAGEMENT

SILABUS

Code and name of specialty	073 – Management	Institute	Institute of Education and Science in Economics, Management and International Business
Program name	Management of Organizations and Administration / Business Administration	Department	Management and taxation
Type of program	Educational and Professional	Language of instruction	English

LECTURER

Kateryna Sokol, kateryna.sokol@khpi.edu.ua



PhD (Economics), Associate Professor, Associate Professor of the Department of Economic Cybernetics and Marketing Management, NTU "KhPI". Experience more than 10 years. Author of more than 20 scientific and educational works on current economic issues. Leading lecturer in the discipline: "Economic Informatics", "Information Technology in Management", "Information Systems and Technology in Management"

GENERAL DESCRIPTION OF THE COURSE

Summary	The discipline is aimed at developing new knowledge about: creation and operation of information systems and technologies, their use for economic management, study of economic information theory, structure and stages of construction of information systems in management, acquaintance with modern information technologies and their use in management information systems
Course objectives	Formation of a system of knowledge about modern information technologies, as well as stable skills of their analysis, implementation and use depending on the economic and production tasks.
Types of classes and control	Lectures, practical classes, consultations. Final control - exam.
Term	5

Student workload (credits) / Type of course	4/ Mandatory	Lectures (hours)	16	Practical works (hours)	32	Self-study (hours)	72
--	--------------	-------------------------	----	--------------------------------	----	---------------------------	----

Program competences	G03. Ability to abstract thinking, analysis, synthesis. GT04. Ability to apply knowledge in practical situations GT05. Knowledge and understanding of the subject area and understanding of professional activity. GT08. Skills in the use of information and communication technologies. GT09. Ability to learn and master modern knowledge.
----------------------------	---

Learning outcomes	Teaching and learning methods	Forms of assessment
--------------------------	--------------------------------------	----------------------------

		(continuous assessment CAS, final assessment FAS)
LO03. Demonstrate knowledge of theories, methods and functions of management, modern concepts of leadership.	Interactive lectures with presentations, discussions, practical classes, method of feedback from students	Practical tasks (CAS), assessment of knowledge in practical classes (CAS), exam (FAS)
LO04. Demonstrate skills to identify problems and justify management decisions.	Interactive lectures with presentations, discussions, practical classes, method of feedback from students	Practical tasks (CAS), assessment of knowledge in practical classes (CAS), exam (FAS)
LO06. Demonstrate skills of search, collection and analysis of information, calculation of indicators to substantiate management decisions.	Interactive lectures with presentations, discussions, practical classes, method of feedback from students	Practical tasks (CAS), assessment of knowledge in practical classes (CAS), exam (FAS)
LO16. Demonstrate skills of independent work, flexible thinking, openness to new knowledge, be critical and self-critical.	Interactive lectures with presentations, discussions, practical classes, method of feedback from students	Practical tasks (CAS), assessment of knowledge in practical classes (CAS), exam (FAS)

ASSESSMENT AND GRADING

	Total score (points) for all types of learning activities	ECTS grading scale	The national grading scale	
Ranges of points corresponding to grades	90-100	A	excellent	Allocation of grade points 100% final assessment in the form of an exam (40%) and current assessment (60%). 40% exam: 2 theoretical questions and laboratory task 60% current rating: • 30% assessment of tasks in laboratory classes; • 30% intermediate control (2 online tests)
	82-89	B	good	
	74-81	C		
	64-73	D	satisfactory	
	60-63	E		
	35-59	FX		
	0-34	F	Unsatisfactory (with mandatory repetition of the course)	

Course policy

The student is obliged to attend all classes on schedule, not to be late. Adhere to ethics of behavior. When skipping lectures, an oral interview is held on the topic. In order to master the required quality of knowledge in the discipline requires attendance and regular preparation for classes. Laboratory tasks must be submitted by the deadline. Without the personal presence of the student, the final control is not carried out.

COURSE STRUCTURE AND CONTENT

Lecture	Content	Practical classes	Tools/Topics	Self-study
Lecture 1	Information systems and their role in economic management	Practical classes 1-2	Use of Logical Functions in MS Excel	Self-study Promising tools and directions of information systems development Methods of classification and coding of economic information. Ways to improve the system of economic information in the management of economic object Technological processes of automated processing of economic information. Typical technological operations and their implementation in information systems Business reengineering. Strategies for implementing
Lecture 2	Economic information and means of its formalized description	Practical classes 3-4	Working with arrays and references in MS Excel: Functions VLOOKUP and HLOOKUP	
Lecture 3	Information technologies and technological processes of economic information processing	Practical classes 5-6	Databases in MS Excel, use of Filters	
Lecture 4	Organization of the information	Practical classes 7-8	Descriptive data analysis in MS	

	base of economic information processing systems		Excel: Constructing Frequency Tables and Histograms		information systems
Lecture 5	Conceptual-technological and organizational-methodical bases of creation of management information systems	Practical classes 9-10	Descriptive data analysis in MS Excel: Contingency Tables		Functionally-oriented approach to the construction of ISM. Structuring management functions in the automation of information processing. Statement and algorithmization of management tasks
Lecture 6	The use of modern technological means of information processing in ISM	Practical classes 11-12	Data analysis in MS Excel: Correlation and Regression		Expert systems, management knowledge systems, strategic information systems, business information systems, integrated IS
Lecture 7	Production management information system	Practical classes 13-14	Solving equations and optimization problems in MS Excel: Solver Tools		Trends in changes in the management of modern information systems. Conditions for successful operation of managerial information systems.
Lecture 8	Commercial software systems for automation of enterprise management, organization	Practical classes 15-16	Calculation of commercial efficiency of an investment project with the help of IS «PROJECT EXPERT		Human resources management in the field of information technology

RECOMMENDED READING

Compulsory	<ol style="list-style-type: none"> 1. Information technology for management: New ideas and real solutions. Ewa Ziemia (Ed.) Springer, 2017, p.277 2. Efraim Turban, Linda Volonino, Gregory R. Wood. Information Technology for Management Advancing Sustainable, Profitable Business Growth .Wiley, 2018. p. 476 3. Efraim Turban, Carol Pollard, Gregory Wood. Information Technology for Management: Driving Digital Transformation to Increase Local and Global Performance, Growth and Sustainability, 12th Edition. Wiley, 2021. P.640 4. Arthur M. Langer, Lyle Yorks. Strategic IT: Best Practices for Managers and Executives. Wiley, 2015. P. 240 5. George W. Reynolds. Information technologies for managers. Second edition. Cengage Learning, 2016, p. 415 6. Management and Information Technology: New Challenges. Joanna Paliszkiwicz (Ed. by). Warsaw University of Life Sciences Press, 2020. P. 268 	Recommended	<ol style="list-style-type: none"> 1. Information Technology for Management: Emerging Research and Applications: 15th Conference, AITM 2018, and 13th Conference, ISM 2018, Held as Part of FedCSIS, Poznan, Poland, September 9–12, 2018, Revised and Extended Selected Papers. Springer International Publishing, 2019 . p. 235 2. Проценко Н.М. Інформаційні технології: навч. посіб. Харків. СтильИздат. 2019. 125 с. 3. Стеценко І. Інформаційні технології - для всіх: інформація: від пошуку першоджерела до зберігання. К. : Олег Філюк, 2017. 241 с. 4. Massimo Ballerini, Alberto Clerici, Maurizio De Pra. Excel for students in economics and finance. Egea. 2020, p.206 5. Giovanni Romeo. Elements of Numerical Mathematical Economics with Excel. 1st Edition. Static and Dynamic Optimization. Academic Press, 2019. P. 816 6. Chiu Yu Ko Applied Financial Economics -- Programming: Excel, VBA and R, 2018. P. 267 7. Informatics in Economy. Ed. by Silaghi G.C., Buchmann R.A., Boja C.15th International Conference, IE 2016, Cluj-Napoca, Romania, June 2-3, 2016, Revised Selected Papers
-------------------	---	--------------------	---

Academic integrity

Students are expected to adhere to the Code of Ethics of Academic Relations and Integrity of NTU "KhPI".

The content of this syllabus is consistent with the course program.