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INTERNATIONAL EUROPEAN UNIVERSITY

SYLLABUS

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EUROPEAN SCHOOL OF BUSINESS

Information technology in enterprise management

2023

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Discipline	Information technology in enterprise management
Lecturer	Oleksandr Nesterenko, Professor at the Department of Information Technology, Doctor of Technology, associate professor
Lecture's profile	https://it.ieu.edu.ua/pro-yeash/struktura-yeash/kafedra-informatsiinykh-tekhnolohii/sklad#zzz-001
Consultations:	
online consultations	Wednesday 3 p.m. – 5 p.m. online consulting https://classroom.google.com/c/NTUxNTc0MDQ1NDIx
Contact number	097-757-27-96
E-mail	oleksandr_nesterenko@ieu.edu.ua
Subject matter page	https://business.ieu.edu.ua/navchannia/orhanizatsiia-osvitnoho-protsesu/robochi-prohramy/mahistratura

Form of final control	Test	Differentiations test	Exam
	☒	☐	☐

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1 Brief discipline annotation

The Information technology in enterprise management discipline is aimed at training Masters of knowledge area: 07 Management and administration, specialty: 073 Management.

2 Background of studying the subject matter

The academic discipline is not related to other disciplines.

3 Goal and objectives of the subject matter

The **goal** of the Information technology in enterprise management discipline is to make students learn the key terms, categories, and theoretical issues concerning the construction of using information technology and enterprise management systems (EMIS).
Objectives of the discipline:
• to learn the basic analysis of enterprise management processes in the subject area;
• to understand the necessity of applying international recommendations and models and their selection;
• to know the particularities of data presentation and organization;
• to acquire skills in constructing EMIS, knowledge of architecture of this kind of systems and user interface features;
• to develop the ability to work with a particular class of information technology;
• to examine the examples of EMIS implementation in different sectors;
• to develop skills in applying acquired knowledge to solve typical management tasks.

4 Learning outcomes

To design efficient organization management systems.
To apply specialized software and information systems to solve organization management tasks.
To be able to plan and implement information, methodical, material, financial, and personnel support of the organization (department)

5 ECTS credits

3 ECTS credits, 90 hours

6	Subject matter structure

Topics	Type of classes/hours		
	Lectures	Practical	Independent work
Topic 1. Information processes of enterprise management	2	2	16
1.1. Introduction to the discipline			
1.2. Concept of organizational systems management			
1.3. Tasks of organizational systems management			
1.4. Information uncertainty in organizational systems			
1.5. Technological aspects of enterprise management			
1.6. Information management standards			
1.7. Role and place of EMIS in management improvement			
1.8. EMIS components			
1.9. International management techniques			
Topic 2. Architecture of modern EMIS	2	8	16
2.1. Concept of information system architecture			
2.2. Business architecture			
2.3. EMIS IT architecture			
2.4. Functional architecture			
2.5. Functional support for management systems			
2.6. Electronic document management			
2.7. Features of Automatic Process Control System (APCS) architecture			
2.8. World leaders in control system supplies			
Topic 3. Data analysis information technology	2	12	16
3.1. Concept of data analysis			
3.2. Brief historical overview			
3.3. Data analysis and storage technology			
3.4. Application areas of intelligent data analysis technology			
3.5. Data analysis tasks			
3.6. Classification tasks			
3.7. Clustering task			
3.8. Prediction task			
3.9. Search for associative rules			
3.10. Visualization task			
Topic 4. Information management systems in public authorities	2	2	10
4.1. Key concepts and definitions			
4.2. Brief historical overview			
4.3. E-government			
4.4. Informatization of public authorities			
4.5. Management systems of public authorities			
4.6. Electronic document management systems of public authorities			

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7 List of obligatory tasks

1. Preparation and processing of data for decision-making.
2. Models in decision support systems.
3. Working with Excel lists.
4. Summary tables in Excel.
5. Data storage and processing in the MS Access database control system.
6. Working with the CRM system.
7. Data processing of the State Statistics Service of Ukraine.

8 List of selective tasks

1. Key tasks and functions of organizational management at the enterprise.
2. Solutions by the world's leading manufacturers to design EMIS at the enterprise.
3. The use of the Excel environment and specialized software packages for statistical calculations, analysis and graphical presentation of data.

9 Discipline features

Period of teaching	Semester	International discipline integration	Year of study	Courses: general training/professional training/elective
1 semester	1	available	1	general training

10 Hardware and software

Personal computer, Windows OS, office software packages, specialized software tools

11 Assessment system and requirements

As part of discipline teaching, one carries out the current and final control of students' knowledge. The final grade is given according to the total rating of students.
The results of the current control of students' knowledge is assessed in general between 0 and 60 points. Students are admitted to the final control if they fulfil the requirements of the training program and obtain at least 36 points for the current learning activity.
Final assessment of students' knowledge is conducted in the form of test.
The maximum amount of points that can be obtained during the test is 40 points.
The overall points of the discipline are 100. The total grade for the discipline is given according to the national and European scale.

12 Discipline policy

Teaching of the discipline is based on cutting-edge educational technologies aimed at increasing the level of students' interest in the course, providing theoretical and practical knowledge of the discipline.
To activate the learning and cognitive activity of students, the discipline includes the consolidation of knowledge obtained at the lecture and acquisition of practical skills in lecture topics during practical classes and performance of independent work.

13 Absence policy

Points are not given for missed lectures. If students miss a laboratory work, they should perform all tasks of the missed laboratory work before the next laboratory work and present the results to the lecturer. The grade is reduced by one point.
Students who have missed classes without valid reasons and have not participated in current control activities are not admitted to the final semester control. In this case, a mark 'non-admission' is put in the exam record on the day of the exam. Repeated taking of the exam of the discipline is appointed in case of accomplishing all types of educational and independent work stipulated by the working program of the academic discipline and is carried out according to the approved schedule of academic failure liquidation.

14 Policy of late task performance

Tasks and laboratory works submitted later are assessed with a lower grade. The grade is reduced by one point for each week of lateness.

15 Academic integrity policy

Participants in the educational process rely on the academic integrity principles. One should provide references to sources of information when using someone else's ideas, statements, data, as well as verified information.

16 Recommended information sources

Primary:
1. Glushkov V.M. Fundamentals of paperless informatics. M.: Nauka, 1982. 552 p.
2. Bidiuk P.I., Korshevniuk L.O. Designing computer information systems for decision support (textbook). K.: Educational and Research Institute for Applied System Analysis of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", 2010. 340 p.
3. Nesterenko O.V. Information systems of enterprise management / Textbook. Kyiv: Ukrainian Scientific Center for Information Technology Development, 2019. 135 p.
4. Nesterenko O.V. Fundamentals of constructing automated information and analytical systems of public authorities. K.: Naukova Dumka, 2005. 628 p.
5. Yermoshenko M.M., Nesterenko O.V., Shtuler I.Y. Information technology of marketing data analysis: Textbook. Kyiv: National Academy of Management, 2021. 141 p.
6. Informatization of social systems management: Organizational and legal issues of theory and practice: Textbook / V.D. Pavlovskyi, R.A. Kaliuzhnyi, V.S. Tsymbaliuk, et al.; Edited by M.Y. Shvets, R.A. Kaliuzhnyi. K.: IAPM, 2003. 336 p.
7. Dovhyi S.O., Kopiika O.V., Cherepin Y.T. Principles of regional informatization. [Edited by S.O. Dovhyi]. K.: Tyrazh Publishing and printing center, 2004. 304 p.

Additional:
1. Integrated production management: Organizational and technological aspects of enterprise management / V.I. Arkhangelsky, I.I. Bogayenko, G.G. Grabovsky, N.A. Ryumshin, ed. by V.I. Arkhangelsky. K.: Tekhnika, 2005. 328 p.
2. Larichev O.I. Theory and methods of decision-making. M: Logos, 2000. 296 p.
3. Glushkov V.M. Introduction to automatic control systems. K.: Tekhnika, 1972. 312 p.
4. Glushkov V.M., Valakh V.Y. What is the Nationwide Automated System? M.: Nauka, 1981. 160 p.
5. Klebanova T.S., Moldovskaia Y.V., Chang Hongwen. Models and methods of coordination in large-scale economic systems. Kharkiv: Business Inform, 2002. 148 p.

16 Recommended information sources

Internet resources:

1. Microsoft website. – Available at: https://www.microsoft.com/uk-ua/
2. Online textbooks for students. – Available at: https://stud.com.ua/informatika/
3. IT website. – Available at: https://dou.ua/
4. Information Technology. Analytical Materials Journal. – Available at: http://it.ridne.net/
5. Vernadsky National Library of Ukraine: http://www.nbuv.gov.ua
6. Ministry of Digital Transformation of Ukraine: https://thedigital.gov.ua/

17 Tips on successful study during the course

Note: examine lecture materials and perform tasks and laboratory works synchronously with the curriculum. Thus, your abilities and insistence will be the key to success!

See you!