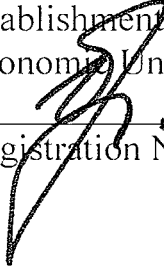


Educational establishment  
«Belarus State Economic University»

APPROVED

Rector of Educational  
establishment «Belarus State  
Economic University»

  
\_\_\_\_\_, V.N. Shimov  
Registration No UD 3107-17 / st.

## MANAGEMENT AND ECONOMIC INFORMATION SYSTEMS

Syllabus for Master's program  
1-26 81 05 «Marketing»

2017

This syllabus for master program in English is developed on the base of syllabus №UD 2778-16/st., approved 06.07.2016.

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(minutes № 4 on «19» 04. 2017)

## EXPLANATORY NOTE

**The purpose of educational discipline** «Management and economic information systems» (MEIS) is to study information technologies and training of master students to use them as a tool of the scientific and practical tasks solving in its subject area.

**Tasks of educational discipline** «Management and economic information systems» are:

- getting of the knowledge about information technologies and their application for solving of the problems in economics and management;
- mastering of the theoretical foundations about management information systems;
- studying of dataflow at the enterprise;
- getting of the knowledge about development trends in information technologies, information society and the digital economy.

**Master should have the following academic competencies, should be able:**

- AC-5. To use databases and software in the subject area.
- AC-6. To use fundamental economic knowledge in professional activity.

**Master should have the following socio-personal competencies, should be able:**

- SPC-1. To improve and to develop the intellectual and common cultural level, to try to obtain moral and physical improvement of the personality.
- SPC-2. To form and to argue own judgments and a professional position.
- SPC-3. To analyze and to make decisions on the social, ethical, scientific and technical problems arising in professional activity.
- SPC-4. To work in team, to direct and to be directed.
- SPC-5. To show an initiative and creativity, including in unusual situations.
- SPC-6. To make a personal example positive impact on people around and participants of professional activity from the point of view of respect for norms and rules of a healthy lifestyle, active creative living position.
- SPC-7. To adapt to new situations in social-professional activity, to realize accumulated experience, the opportunities.

**Master should have the following professional competencies, should be able:**

- PC-3. To develop and to implement modern innovative approaches in management, economics, marketing.
- PC-5. To develop and to implement marketing products with different complexity level in production-trading process.

As a result of studying discipline «Management and economic information systems» master student must:

*to know:*

- concepts of information technologies;
- concepts of information systems;
- principles of information systems organization in the subject area;

- structure of information systems;
- modeling of business processes;
- principles of the IT-project management;
- methods of information security support.

*be able to:*

- model business processes;
- develop software requirement specification;
- manage IT-projects in subject area;
- use information systems functional abilities in the economic and managerial tasks solving;

*possess:*

- skills in business analysis, using the latest computer statistical software packages;
- business process modeling methods based on the use of information technology (including CASE software);
- methods of business process reengineering.

Educational technologies include studying of the principles of managerial information processing by means of special software.

Independent work includes studying of the theoretical material on the base of references in this syllabus.

Studying of the educational discipline «Management and economic information systems» is necessary for master students for successful learning of the educational discipline «Econometrics», and also for preparing of the master thesis.

Educational discipline consists of 128 academic hours, including:

- for full-time form of education – 36 classroom hours, among them 16 hours – lectures, 20 hours – laboratory classes;
- for correspondence form of education – 18 classroom hours, among them 8 hours – lectures, 10 hours – laboratory classes;

Form of the current control is exam.

# **THE CONTENT OF EDUCATIONAL MATERIAL**

## **Topic 1. Information society and the digital economy**

Basic concepts of the information society. Stages of the information society development. The distinctive features of the information society.

The concept of information and information resources. Information as an economic category. An informational product, its main features in the information society. Types of information products. Information services. Area and sector information market (business information, information for professionals, mass information). The basic concepts of the digital economy. Components of the digital economy. Characteristics of the digital economy. Information technologies and digital economy. The impact of modern information technologies on economic subjects. Changing of the approaches to enterprise management. Changing of business models of industrial enterprises in the information society (Industry 4.0).

## **Topic 2. Status and trend of management information technologies development**

The concept of information technology. Stages of information technologies development. Information technologies classification. Economic laws of information technologies development (Moore's law, Metcalfe's law, the law of the photon). Network information technologies. Technology of integrated information systems for general purpose: GIS-technology, distributed processing, data warehousing, e-workflow, organization of group work and the Internet/intranet/extranet. Management information systems: technology of ERP-systems construction, expert systems and decision support systems, data mining, CASE-technologies.

## **Topic 3. Information systems in economy**

The concept of information systems (IS). Stages of IS development. IS classification. IS structure . Information-controlling structure of the production plant, the types of production processes. IS in the production sphere: automatic process control systems, automated production control systems, control systems of financial and economic activity of the enterprise, analytical data processing.

IS in the non-productive sector.

## **Topic 4. Management information systems**

Basic concepts of control systems. ERP-systems: architecture, requirements and design principles. Functional and service ERP-subsystems. Interaction between subsystems of the ERP and their characteristics. Influence of management information systems for the reorganization of the company.

Organizational management information systems.

Information systems of staff management.

Information technologies of project management.

Business processes reengineering. The role of information technology in reengineering.

**EDUCATIONAL-METHODICAL DISCIPLINE MAP**  
**«MANAGEMENT AND ECONOMIC INFORMATION SYSTEMS»**  
**FOR FULL-TIME FORM OF MASTER EDUCATION**

The number of the partition, theme	The title of the partition, theme	The number of classroom hours					Otherwise *	Form of the knowledge control	
		Lectures	Workshops	Seminars	Laboratory classes	The number of control independent work hours			
						Lectures			Labs
1	Information society and the digital economy	2			4			[1, 4, 6]	
2	Status and trend of management information technologies development	2			4			[1-4]	Control task on the computer
3	Information systems in economy	4			14			[1-7]	Control task on the computer
4	Management information systems	2			8			[4, 7, 8]	Control task on the computer
	<b>Total hours</b>	<b>10</b>			<b>30</b>				<b>Exam</b>

\* References should be included in the partition Otherwise.

**EDUCATIONAL-METHODICAL DISCIPLINE MAP**  
**«MANAGEMENT AND ECONOMIC INFORMATION SYSTEMS»**  
**FOR CORRESPONDING FORM OF MASTER EDUCATION**

The number of the partition, theme	The title of the partition, theme	The number of classroom hours					The number of control independent work hours	Otherwise *	Form of the knowledge control	
		Lectures	Workshops	Seminars	Laboratory classes					
						Lectures				Labs
1	Information society and the digital economy	1,5			2			[1, 4, 6]		
2	Status and trend of management information technologies development	1,5			2			[1-4]	Control task on the computer	
3	Information systems in economy	1,5			4			[1-7]	Control task on the computer	
4	Management information systems	1,5			6			[4, 7,8]	Control task on the computer	
	<b>Total hours</b>	<b>10</b>			<b>30</b>				<b>Exam</b>	

\* References should be included in the partition Otherwise.

## INFORMATIONAL AND METHODOLOGICAL PART

### *Methodical recommendations on the organization of master students independent work in academic discipline «Management and economic information systems»*

An important stage in the studying of the educational discipline is independent work of master students. Budget of the time for independent work is recommended as, on average, 1-2,5 to 2-hour classroom lesson.

The main directions of the master student independent working are:

- initially detailed acquaintance with the program of the educational discipline;
- acquaintance with the list of recommended literature for the educational discipline as a whole and on the topics, studying of the necessary literature on the subject, selection of additional literature;
- studying and extension of lecture material through literature and consultations;
- preparation for laboratory works on the specially designed plans with studying of the basic and additional literature;
- preparation for the implementation of diagnostic monitoring forms (control tasks on the computer);
- preparation to the exam.

### References

#### *Basic:*

- 1 Laudon, K.C. Management Information Systems: Managing the Digital Firm (15th Edition) / K.C. Laudon, J. P. Laudon. – Publisher: Pearson, 2017. – 648 p.
- 2 Kelly Rainer, R. Management Information Systems (4th Edition) / R. Kelly Rainer. – Publisher: Wiley, 2016. – 528 p.
- 3 Sousa, K.J. Management Information Systems (7th Edition) / Ken J. Sousa, E. Oz. – Publisher: Course Technology, 2014. – 560 p.
- 4 Железко, Б.А. Информационные технологии в управлении: ЭУМК [Электронный ресурс] / Б.А. Железко. – Режим доступа: <http://edoc.bseu.by:8080/handle/edoc/22981>. – Дата доступа: 1.02.2017.

#### *Additional:*

- 5 O'Brien, J. Management Information Systems (10th Edition) / J. O'Brien, G. Marakas. – Publisher: McGraw-Hill Education Hardcover, 2010. – 712 p.
- 6 Haag, S. Management Information Systems for the Information Age (9th Edition) / S. Haag, M. Cummings. – Publisher: McGraw-Hill Education, 2012. – 608 p.
- 7 Baltzan, P. Business Driven Information Systems (5th Edition) / P. Baltzan, A. Phillips. – Publisher: McGraw-Hill Education, 2015. – 512 p.
- 8 Pearlson, K.E. Managing and Using Information System (5th Edition) / K.E. Pearlson, C.S. Saunders. – Publisher: Wiley, 2012. – 416 p.



## MINUTES OF SYLLABUS ENDORSEMENT

Title of the academic discipline with the current discipline should be endorse	Department	Suggestions of changes in the syllabus content	Decision of the department (with the number and date of the minutes)
Project management	Cross-cultural economic communication	No	Minutes № <u>9</u> on "20". <u>03</u> .2017 