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MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

Federal State Autonomous Educational Institution of Higher Education

"Moscow Polytechnic University"

(Moscow Poly)

APPROVE
Vice-President
for International Affairs
/Yu.D. Davydova/
"30" 05 2022

Dean,
Faculty of Economics and Management
/A.V. Nazarenko/
"30" 05 2022

WORKING PROGRAM OF THE DISCIPLINE

"Management Processes Digitalization"

Field of study
38.03.02 Management

Educational program (profile)
"Business Process Management"

Qualification (degree)
Bachelor

Form of study
Part-time

Moscow 2022

1. The goals of mastering the discipline.

The main goals of mastering the discipline "Digitalization of management processes" include:

– formation of knowledge about modern principles, methods and means of modern information technologies in relation to management, methods and means of their application in business;

- preparing students for activities in accordance with the qualification characteristics of a bachelor in the direction, including the formation of skills to identify the necessary improvements in the organization; ensuring the use of information technologies to improve the efficiency of professional activities.

The main tasks of mastering the discipline "Digitalization of management processes" include:

– mastering the methodology, analysis and selection of information technologies for application in the conditions of professional activity in the organization. mastering the methods and conditions for using information technologies, choosing evaluation criteria, quality indicators, determining the parameters to be checked, the procedure for determining and processing the information received and its protection.

2. The place of the discipline in the structure of the EP of the bachelor's degree.

The discipline "Digitalization of management processes" is one of the academic disciplines of the part formed by the participants in educational technologies (B1.2.03) of the bachelor's degree program.

The discipline "Digitalization of management processes" is interconnected logically and content-methodically with the following disciplines and practices of the EP:

– "Digital Literacy";

- "Technologies for organizing managerial interaction";
- "Process management";
- "Business process management tools";
- "Fundamentals of Technological Entrepreneurship".

3. The list of planned learning outcomes for the discipline (module), correlated with the planned results of mastering the educational program.

4.

As a result of mastering the discipline (module), students develop the following competencies and the following learning outcomes should be achieved as a stage in the formation of the relevant competencies:

Competency code	As a result of mastering the educational program, the student must have	List of planned learning outcomes by discipline
OPK-5	Able to use modern information technologies and software in solving professional problems, including the management of large data arrays and their intellectual analysis	**know:** **-**modern methods of using information technologies and software, including the management of large data arrays and their intellectual analysis. **be able to:** - solve standard tasks of professional activity and apply information and communication technologies **own:** - the skills of using modern information technologies and software tools in solving professional problems, including the management of large data arrays and their intellectual analysis.

4. Structure and content of the discipline.

The total complexity of the discipline is:

part-time form - 4 credit units, i.e. 144 academic hours (of which 108 hours are students' independent work).

Second term:

Part-time: lectures - 18 hours, practical classes - 18 hours, form of control - exam.

Sections of the discipline "Digitalization of management processes" are studied in the 1st year in the 2nd semester.

The structure and content of the discipline "Digitalization of management processes" by terms and types of work are reflected in Appendix 1.

The content of the sections of the discipline.

Topic 1. Basic concepts and classification of information technologies.

General characteristics of the processes of collection, transmission, processing and accumulation of information. The concepts of information, data, information processes, information technology, automated information systems, etc. The structure of the control system. Classification of information technologies (IT). Information model of an enterprise of a modern organization from the point of view of a systematic approach. Automated systems for enterprise management.

Topic 2. Technical means of implementing management processes.

Logical foundations of computers. The history of the development of computers. The concept and main types of computer architecture. Basic configuration of a personal computer (PC). The composition and purpose of the main elements of a personal computer, their characteristics. PC storage devices: classification, principle of operation, main characteristics. Data input / output devices, their varieties and main characteristics.

Topic 3. Software for the implementation of information processes.

PC software structure. Levels of computer system software. The concept of system and service (service) software: purpose, capabilities, structure. Fundamentals of designing software elements of information systems. CASE-technologies for designing automated information systems. Section 4 Software and programming

technologies Programming systems. The concept of structured programming. Modular principle of programming. subroutines. Top-down and bottom-up software design principles. Object-oriented programming. Objects, their main properties, methods and events. VBA programming language: data and their description; operators, expressions and operations; cycle programming; built-in functions.

Topic 4. Operating systems.

Definition and functions of operating systems. Types of operating systems. The concept of operating systems of the Windows family. File structure of operating systems. File operations. Windows interface. Windows tools: Explorer program, setting up the Windows environment.

Topic 6 Automated office technologies.

Section 6.1. Text information processing technology.

Text editor Microsoft Word. Basic features of word processors: typical interface structure, copying, moving, deleting text, text formatting, working with windows. Working with text in Microsoft Word. The minimum set of typical operations, including operations with the document as a whole, operations with paragraphs of the document, operations with text fragments. An extended set of typical operations, including contextual search and replace, save operations, spelling and syntax checking, synonym dictionary, setting general page settings, autotext, using templates, macros, merging documents. Working with tables.

Section 6.2. Graphics processing technologies Varieties of computer graphics. Graphic formats. Graphics tools. Raster and vector graphic editors.

Section 6.3. Spreadsheets.

Spreadsheet processor Microsoft Excel Spreadsheet interface. Setting up a new workbook. Typical operations with workbooks and sheets. Creating and filling an Excel table with permanent data and formulas: cell format, operations with cells and blocks of cells, formulas in the table and the technology for their use. Absolute and relative cell addressing. Using the built-in functions of Excel: The graphical capabilities of Excel. Building, 4 editing and formatting diagrams. Generalized user

experience technology. Spreadsheet design. Merging spreadsheets. Macros as a means of automating work. List. Sorting data. Filtering (selection) of data. Structuring tables. Grouping data. Calculation of totals.

Section 6.4. Means of electronic presentations.

Microsoft Power Point Program Presentation as a means of presenting ideas. Basic properties of Power Point. Development of presentations. Control playback of presentations.

Topic 7. Database technologies.

Database management systems. Microsoft Access The concept of information support. Definitions of a database (DB), a database management system (DBMS), a databank. Data organization models: hierarchical, network, relational. DB classification. Architectures of centralized database systems with network access: file-server, client-server. Relational database design. Generalized technology of user work in DBMS. Working with Access DBMS. Table structure and data types. Organization of data in relational databases. Data integrity. Creating inter-table links. Entering, editing, sorting, filtering data. Printout. Creation of forms, requests, reports. Automation of work with a DB by means of VBA. Structured query language SQL.

Topic 8. Local and global computer networks

Network technologies for data processing. Fundamentals of computer communication. Principles of organization and basic topologies of computer networks. Network service and network standards. Global network Internet. The structure of the Internet. Ways of transferring information to the Internet (protocols, services). Services provided by the Internet (search engines, file servers, news servers, information channels). Internet connection. Programs for sending and receiving e-mail. Creating an email.

Topic 9. Fundamentals of protection of information and information constituting a state secret.

Information security methods Information security is the basis of national

security. Information security methods. Viruses and anti-virus protection. Protection of information in local and global computer networks.

Topic 10. Modern information systems and technologies in management.

Section 10.1 Corporate Information Systems.

The evolution of enterprise management information systems. Foreign information systems for enterprise management based on ERP standards. Russian corporate enterprise management systems.

Section 10.2 Network information technologies in the economy. Benefits of using Internet technologies in enterprises. Models of business organization in the electronic network market. Internet commerce. Internet marketing. Internet logistics. Payment systems on the Internet.

Section 10.3 Information technology for the development of investment projects and project management.

Classification of decision support systems. Review and comparative analysis of investment design software products. The system of simulation modeling of the activity of the enterprise Project Expert. Preparation and analysis of investment projects in the Alt-invest program. Project management program "MS Project".

Section 10.4 Automated Information Technology in Financial Management.

Organization of financial management. Financial analysis software. Alt-finance program. Automation of budgeting in the enterprise. Technology for solving financial management problems.

5. Educational technologies.

The methodology for teaching the discipline "Digitalization of Management Processes" and the implementation of a competency-based approach in the

presentation and perception of the material provides for the use of the following active and interactive forms of conducting group, individual, classroom classes in combination with extracurricular work in order to form and develop the professional skills of students:

- preparation for the implementation of seminars in the computer classes of the university;
- discussion and reports on the discipline;
- preparation, presentation and discussion of presentations at seminars;
- organizing and conducting current control of students' knowledge in the form of a survey;

6. Evaluation tools for current monitoring of progress, intermediate certification based on the results of mastering the discipline and educational and methodological support for students' independent work.

In the learning process, evaluation tools for midterm monitoring of progress are used: reports; surveys; tasks;

Sample tasks for current control, examination tickets are given in the appendix.

When performing current control, it is possible to use test material.Samples of control questions and tasks for conducting current control are given in the appendix. When implementing the undergraduate program, the organization has the right to use e-learning and distance learning technologies. All materials are placed in the LMS of the Moscow Poly .

When teaching people with disabilities, e-learning and distance learning technologies should provide for the possibility of receiving and transmitting information in forms accessible to them.

6.1. Fund of assessment tools for conducting intermediate certification of students in the discipline (module).

6.1.1. A list of competencies indicating the stages of their formation in the process of mastering the educational program.

As a result of mastering the discipline (module), the following competencies are formed:

Competenc y code	As a result of mastering the educational program, the student must have
OPK-5	The ability to use modern information technologies and software tools in solving professional problems, including the management of large data arrays and their intellectual analysis.

In the process of mastering the educational program, these competencies, including their individual components, are formed in stages during the development of disciplines (modules), practices by students in accordance with the curriculum and calendar schedule of the educational process.

6.1.2. Description of indicators and criteria for assessing competencies formed on the basis of the results of mastering the discipline (module), description of assessment scales.

An indicator of competency assessment at various stages of their formation is the achievement by students of the planned learning outcomes in the discipline (module).

GPC-5 The ability to use modern information technologies and software in solving professional problems, including the management of large data arrays and their intellectual analysis.				
Index	**Evaluation criteria**			
	2	**3**	**four**	**5**
know: modern methods of using information technologies and software, including the management of	The student demonstrates the complete absence or insufficient compliance of the following knowledge: modern	The student demonstrates incomplete compliance with the following knowledge: modern methods of using information	The student demonstrates partial compliance with the following knowledge: modern methods of using information	The student demonstrates full compliance with the following knowledge: modern methods

large data arrays and their intellectual analysis.	methods of using information technologies and software, including the management of large data sets and their intellectual analysis.	technology and software, including the management of large data sets and their intellectual analysis. Significant mistakes are made, lack of knowledge is manifested, for a number of indicators, the student experiences significant difficulties in operating knowledge when transferring it to new situations.	technology and software, including the management of large data sets and their intellectual analysis, but minor errors, inaccuracies, difficulties in analytical operations are allowed.	of using information technology and software, including the management of large data sets and their intellectual analysis, freely operates with the acquired knowledge.
be able to: solve standard tasks of professional activity and apply information and communication technologies	The student is not able or insufficiently able to solve standard tasks of professional activity and apply information and communication technologies	The student demonstrates incomplete compliance with the following skills: solve standard tasks of professional activity and apply information and communication technologies. Significant mistakes are made, lack of skills is manifested, for a number of indicators, the student experiences significant difficulties in operating with skills when transferring them to new situations.	The student demonstrates partial compliance with the following skills: solve standard tasks of professional activity and apply information and communication technologies. Skills are mastered, but minor errors, inaccuracies, difficulties in analytical operations, transferring skills to new, non-standard situations are allowed.	The student demonstrates full compliance with the following skills: solve standard tasks of professional activity, apply information and communication technologies Freely operates with acquired skills, applies them in situations of increased complexity.
own: the skills of using modern information technologies and software tools in solving professional problems, including the management of large data arrays and their intellectual analysis.	The student does not possess or insufficiently possesses the skills to use modern information technologies and software tools in solving professional problems, including the management of large data arrays and their intellectual analysis.	The student has the skills to use modern information technologies and software in solving professional problems, including the management of large data arrays and their intellectual analysis, significant mistakes are made, there is a lack of skills in a number of indicators, the student experiences significant difficulties in applying skills in new situations.	The student partially possesses the skills of using modern information technologies and software in solving professional problems, including the management of large data arrays and their intellectual analysis, but minor errors, inaccuracies, difficulties in analytical operations, transferring skills to new, non-standard situations are allowed.	The student fully owns the skills of using modern information technologies and software in solving professional problems, including the management of large data arrays and their intellectual analysis, freely applies the acquired skills in situations of increased complexity.

Scales for assessing the results of intermediate certification and their description:

Form of intermediate certification:exam.

Intermediate certification of students in the form of an exam is carried out based on the results of all types of educational work provided for by the curriculum for a given discipline (module), while taking into account the results of current monitoring of progress during the semester. The assessment of the degree of achievement by students of the planned learning outcomes in the discipline (module) is carried out by the teacher conducting classes in the discipline (module) by the method of expert assessment. Based on the results of the intermediate certification for the discipline (module), the mark "excellent", "good", "satisfactory" or "unsatisfactory" is given.,

Only students who have completed all types of educational work provided for by the work program for the discipline "Digitalization of Management Processes" are allowed to the intermediate certification (it is indicated what exactly - passed the intermediate control, completed laboratory work, made a report, etc.)

Evaluation scale	***Description***
Excellent	*All types of educational work provided for by the curriculum were completed. The student demonstrates the correspondence of knowledge, skills and abilities given in the tables of indicators, operates with the acquired knowledge, skills, skills, applies them in situations of increased complexity. In this case, minor errors, inaccuracies, difficulties in analytical operations, transferring knowledge and skills to new, non-standard situations can be made.*
Good	*All types of educational work provided for by the curriculum were completed. The student demonstrates a good correspondence of knowledge, skills and abilities given in the tables of indicators, operates with*

	the acquired knowledge, skills, skills, applies them in situations of ordinary complexity. At the same time, some errors, inaccuracies, difficulties in analytical operations, transferring knowledge and skills to new, non-standard situations may be made.
Satisfactorily	*Not all types of educational work provided for by the curriculum have been completed. The student demonstrates incomplete correspondence of knowledge, skills and abilities given in the tables of indicators, does not confidently operate with the acquired knowledge, skills, skills, does not apply them in situations of increased complexity. At the same time, mistakes, inaccuracies, difficulties in analytical operations, the transfer of knowledge and skills to new, non-standard situations can be made.*
unsatisfactory	*One or more types of educational work provided for by the curriculum have not been completed. The student demonstrates incomplete correspondence of knowledge, skills and abilities given in the tables of indicators, significant errors are made, the lack of knowledge, skills and abilities is manifested in a number of indicators, the student experiences significant difficulties in operating knowledge and skills when transferring them to new situations.*

Only students who have completed all types of educational work provided for by the work program for the discipline are allowed to intermediate certification.

The evaluation funds are presented in annex 1 to the work program.

7. Educational, methodological and information support of the discipline

a) basic literature:

1. Galiyeva N. V. Information technologies in management: textbook - M.: MISIS, 2020. - 172 p. - ISBN 978-5-907226-81-4. — Text: electronic // Doe: electronic library system. - url:https://e.lanbook.com/book/147972
2. Brozgunova N. P. Information technologies for project management: textbook - Voronezh: Michurinsky State Agrarian University, 2021. - 79 p. — ISBN 978-5-94664-445-7. — Text: electronic // Doe: electronic library system. - url:https://e.lanbook.com/book/202019

b) additional literature:

1. Chaika, A. M., Bradul N.V., Bradul S.V. Information technologies in anti-crisis management: textbook / - D .: DONAUIGS, 2021. - 208 p. — Text: electronic // Doe: electronic library system. - url:https://e.lanbook.com/book/225800
2. Provalov V. S. Information technologies of management: textbook - 4th ed., Sr. — M.: FLINTA, 2018. — 373 p. - ISBN 978-5-9765-0269-7. — Text: electronic // Doe: electronic library system. - url:https://e.lanbook.com/book/109575

c) software:

Office applications, Microsoft Office 2013 (or lower) - Microsoft Open License. License No. 61984042

eight. Logistics support of discipline.

Audiences for lectures and seminars of the general fund: study tables with benches, classroom board, portable multimedia complex (projector, projection screen, laptop). Teacher's workplace: table, chair.

Office applications, Microsoft Office 2013 (or lower) -Microsoft Open License - License No. 61984042 Agreement No. 08-05/13 dated 06/03/2013 Transfer and Acceptance Certificate No. 961, Transfer and Acceptance Certificate No. 385

Operating system, Windows 7 (or lower) - Microsoft Open License - License No. 61984214, 61984216, 61984217, 61984219, 61984213, 61984218, 61984215; Agreement No. 08-05/13 dated 06/03/2013 Transfer and Acceptance Certificate No. 961

9. Guidelines for independent work of students

Lecture - a systematic, consistent, monologue presentation by the teacher of educational material, as a rule, of a theoretical nature. When preparing a lecture, the teacher is guided by the working program of the discipline. In the course of lectures, it is recommended to keep a summary, which will later allow you to recall the

studied educational material, to supplement the content during independent work with literature.

You should also pay attention to categories, formulations that reveal the content of certain phenomena and processes, scientific conclusions and practical recommendations, positive experience in oratory. It is advisable to leave fields in the working notes on which to make notes from the recommended literature, supplementing the material of the lecture heard, as well as emphasizing the particular importance of certain theoretical positions.

Lecture conclusions summarize the teacher's reflections on educational issues. The teacher provides a list of used and recommended sources for studying a particular topic. At the end of the lecture, students have the opportunity to ask questions to the teacher on the topic of the lecture. When lecturing on the discipline, electronic multimedia presentations can be used.

Guidelines for students when working at the seminar

Seminars are implemented in accordance with the working curriculum with consistent study of the topics of the discipline. In preparation for the seminars, the student is recommended to study the basic literature, get acquainted with additional literature, new publications in periodicals: magazines, newspapers, etc. In this case, the recommendations of the teacher and the requirements of the curriculum should be taken into account. It is also recommended to refine your lecture notes by making appropriate entries in it from the literature recommended by the teacher and provided by the curriculum. Abstracts should be prepared for presentations on all educational issues submitted to the seminar.

Since the student's activity in seminars is the subject of monitoring his progress in mastering the course, preparation for seminars requires a responsible attitude. In interactive classes, students should be active.

Guidelines for students on the organization of independent work

Independent work of students is aimed at independent study of a separate topic of the academic discipline. Independent work is mandatory for each student,

its volume is determined by the curriculum. During independent work, the student interacts with the recommended materials with the participation of the teacher in the form of consultations. The electronic library system (electronic library) of the university provides the possibility of individual access for each student from any point where there is access to the Internet.

If there are students from among persons with disabilities, they will be provided with printed and (or) electronic educational resources in forms adapted to their disabilities.

10.Methodological recommendations for the teacher (Guidelines for making presentations)

A presentation (from the English word - presentation) is a set of color slide pictures on a specific topic, which is stored in a special format file with the PP extension. The term "presentation" (sometimes called "slide film") is associated primarily with the information and advertising functions of pictures that are designed for a certain category of viewers (users).

Multimedia computer presentation is:

- dynamic synthesis of text, image, sound;
- interactive contact of the speaker with the demonstration material;
- mobility and compactness of information carriers and equipment;
- ability to update, supplement and adapt information;

Rules for the design of computer presentations

General Design Rules

Many designers argue that there are no laws and rules in design. There are tips, tricks, tips. Design, like any kind of creativity, art, like any way of some people to communicate with others, like language, like thought, will bypass any rules and laws.

Font design rules:

- Serif fonts are easier to read than sans-serif fonts;
- Capital letters are not recommended for body text.

- Font contrast can be created through: font size, font weight, style, shape, direction, and color.
- Rules for choosing colors.
- The color scheme should consist of no more than two or three colors.
- There are incompatible color combinations.
- Black color has a negative (gloomy) connotation.
- White text on a black background is hard to read (inversion is hard to read).

Presentation design guidelines

In order for the presentation to be well perceived by the audience and not cause negative emotions (subconscious or completely conscious), it is necessary to follow the rules for its design.

The presentation involves a combination of information of various types: text, graphics, musical and sound effects, animation and video clips. Therefore, it is necessary to take into account the specifics of combining fragments of information of various types. In addition, the design and demonstration of each of the listed types of information is also subject to certain rules. So, for example, for textual information, the choice of font is important, for graphic information - brightness and color saturation, for their best joint perception, optimal relative position on the slide is necessary.

Consider recommendations for the design and presentation of various types of materials on the screen.

Formatting text information:

- font size: 24–54 pt (headline), 18–36 pt;
- font color and background color should contrast (the text should be well read), but not hurt the eyes;
- font type: smooth sans-serif for body text (Arial, Tahoma, Verdana),
- italics, underlining, bold, capital letters are recommended to be used only for semantic highlighting of a text fragment.

Formatting graphic information:

- drawings, photographs, diagrams are designed to supplement textual information or convey it in a more visual form;
- it is desirable to avoid drawings in the presentation that do not carry a semantic load if they are not part of the style design;
- the color of graphic images should not contrast sharply with the overall style of the slide;
- illustrations are recommended to be accompanied by explanatory text;
- if a graphic image is used as a background, then the text on this background should be well readable.

The content and location of information blocks on the slide:

- there should not be too many information blocks (3-6);
- the recommended size of one information block is no more than 1/2 of the slide size;
- it is desirable to have on the page blocks with different types of information (text, graphs, diagrams, tables, figures) that complement each other;
- keywords in the information block must be highlighted;
- information blocks should be placed horizontally, blocks related in meaning - from left to right;
- the most important information should be placed in the center of the slide;
- the logic of presenting information on slides and in the presentation should correspond to the logic of its presentation.

In addition to the correct arrangement of text blocks, one must not forget about their content - the text. In no case should it contain spelling errors. You should also take into account the general rules for formatting the text.

After creating a presentation and its design, you need to rehearse its presentation and your performance, check how the presentation will look like as a whole (on a computer screen or projection screen), how quickly and adequately it is perceived from different audience locations, under different lighting conditions,

noise accompaniment, in an environment as close as possible to the real conditions of the performance.

Working The program was compiled on the basis of the Federal State Educational Standard of Higher Education in the direction of training 38.03.02 - "Management", approved by order of the Ministry of Education and Science of the Russian Federation No. 970 dated August 12, 2020 (Registered with the Ministry of Justice of Russia on August 25, 2029 N 59449).

The program was made by:
Senior Lecturer
department "Management" /Mazur V.V./

The program was approved at a meeting of the department "Management"
August 30, 2022, Protocol No. 1

Head of the Department "Management"
k. e. Sc., Associate Professor / Alenina E.E. /

The evaluation funds are presented in annex 1 to the work program.

The structure and content of the discipline "Digitalization of management processes"
in the direction of training, 38.03.02"Management"
Educational program "Business Process Management"
(bachelor) part-time

n/n	Chapter	Semester	A week semester	Types of educational work, including independent student work, and labor intensity in hours					Types of independent work students					Forms of attestation	
				L	F/N	Lab	SRS	DAC	K.R.	K.P	RGR	Ref.	K/p	E	Z
	Second term														
one	Basic concepts and classification of information technologies. General characteristics of the processes of collection, transmission, processing and accumulation of information.	**2**	one	one	2		6							+	
2	Technical means of implementing information processes	2	2	one	one		6							+	
3	Software for the implementation of information processes	**2**	**3**	one	one		6							+	
four	Software and programming technologies	2	four	one	one		6							+	
5	Operating Systems	**2**	**5**	one	one		eight							+	
6.1	Automated office technologies. Text information processing technology. Microsoft Office text editor	2	6	one	one		6							+	

6.2	Graphics processing technologies	**2**	**7**	one	one		6							+	
6.3	Spreadsheets. Microsoft Excel spreadsheet	2	eight	2	one		eight							+	
6.4	Means of electronic presentations. Microsoft Power Point Program	**2**	**9**	one	one		6							+	
7	Database technologies. Database management systems. Microsoft Access	2	ten	one	one		6							+	
eight.	Local and global computer networks	**2**	**eleven**	one	one		6							+	
9.	Fundamentals of protection of information and information constituting a state secret. Information security methods	2	12	one	one		6							+	
ten	Modern information systems and technologies in the economy	**2**	**13**	one	one		eight							+	
10.1	Corporate information systems	2	fourteen	one	one		6							+	
10.2	Network information technologies in the economy	**2**	**fifteen**	one	one		6							+	
10.3	Information technologies for the development of investment projects and project management	2	16	one	one		6							+	
10.4	Automated information technologies in financial management	**2**	**17**	one	one		6							+	
	TOTAL			eighteen	eighteen		108								
	Appraisal Form													**E**	

Appendix 2 to work program

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

FEDERAL STATE AUTONOMOUS EDUCATIONAL INSTITUTION OF HIGHER EDUCATION

"MOSCOW POLYTECHNIC UNIVERSITY"

(MOSCOW POLYTECH)

Direction of training: 38.03.02 "Management"

EP (educational program): "Business Process Management"

Form of study: full-time, part-time

Types of professional activity: organizational and managerial activities
research activity,

Department: "Management"

VALUATION FUND

BY DISCIPLINE

Digitalization of management processes

Composition: 1. Passport of the fund of appraisal funds

2. Description of evaluation tools:

topics of reports, questions for the exam, test tasks.

Compiled by:

Art. teacher Mazur V.V.

Moscow, 2022

Table 1

INDICATOR OF THE LEVEL OF FORMATION OF COMPETENCES

Digitalization of management processes					
GEF VO 38.03.02 "Management" **EP "Business Process Management"**					
In the process of mastering this discipline, the student forms and demonstrates the following **general cultural competencies**:					
COMPETENCES		**List of components**	**Technology for the formation of competencies**	**Assessment Tool Form****	**Degrees of levels of development of competencies**
INDEX	**FORMULATION**				
OPK-5	The ability to use modern information technologies and software tools in solving professional problems, including the management of large data arrays and their intellectual analysis.	know: - modern methods of using information technologies and software, including the management of large data sets and their intellectual analysis. be able to: - solve standard tasks of professional activity and apply information and communication technologies own: - the skills of using modern information technologies and software tools in solving professional problems, including the management of large data arrays and their	lecture, independent work, seminars	uo, T E	**A basic level of** - is able to analyze information security problems, solve standard problems of using information and communication technologies in standard educational situations **Enhanced level** -is able to analyze information security problems, solve standard problems of using information and communication technologies in complex and non-standard situations

		intellectual analysis.			

**- For abbreviations of forms of evaluation tools, see Appendix 2 to the RP.

Annex 2
to work program

List of assessment tools by discipline "Digitalization of management processes"

OS number	Name of the evaluation tool	Brief description of the evaluation tool	Presentation of the evaluation tool in the FOS
2	Oral interview interview, (UO)	A means of control, organized as a special conversation between a teacher and a student on topics related to the discipline being studied, and designed to clarify the amount of knowledge of the student in a particular section, topic, problem, etc.	Questions about topics / sections of the discipline
2	Test (T)	A system of standardized tasks that allows you to automate the procedure for measuring the level of knowledge and skills of a student.	Fund of test tasks
3	Exam	The final form of knowledge assessment. In higher education institutions are held during examination sessions.	Questions for the exam

Exam Preparation Questions by discipline "Digitalization of management processes» formation of the competence of OPK-5

1. What is the essence of information management and what is the place of an IT manager in IP management?
2. What is an information system?
3. What are the functions of an IT manager at a consumer firm and an IP

manufacturing firm?

4. What are the features of information process management?

5. What are the features of managing the processes of creating new knowledge?

6. What are the features of creative potential management?

7. What are the features of innovation management?

8. What are the features of managing the social and psychological aspects of innovation?

9. What is the decision maker's information environment?

10. What is an instrumental environment?

11. What is corporate information resources?

12. What is the organizational structure?

13. What is a technological environment?

14. What is the place of corporate information resources in the structure of FIT?

15. What is the mutual influence of PT and FIT?

16. What is the relationship of FIT with the business process?

17. What are the methods for distributing FIT between participants in a business process?

18. What is IP risk?

19. What is the place of IT risk among management risks?

20. How are IP risks classified and what are the methods of their regulation?

21. What risks exist at various stages of their IP life cycle? 22. How to assess the risk of purchasing, implementing and operating IS?

23. What are MRP, MRPII, ERP, APS, PDM, CRM, SCM, PLM systems?

24. What are the functionality and structure of information systems (MRP; MRPII; ERP; APS; e-commerce systems)?

25. What are the features, positive and negative aspects of the implementation of MRPII; ERP systems?

26. What is TPS; MIS; EPSS; IPSS; EIS; GPSS; DSS - systems?

27. What are the functionality and structure of information systems DSS; EPSS)?

28. What are the features, positive and negative aspects of the implementation of DSS systems?

29. What is a custom, unique, replicated IP?

30. What is a transformer system (constructor system)?

31. What is IP adaptation?

32. What is adaptable IC?

33. What are the ways to acquire IP?

34. What are the advantages and disadvantages of buying IP?

35. What are the advantages and disadvantages of developing IS by an IS developer?

36. What are the advantages and disadvantages of developing IP on your own?

37. What are the advantages and disadvantages of buying and upgrading IP?

38. What are the advantages and disadvantages of custom, unique and replicated information systems?

39. What are the advantages and disadvantages of domestic and foreign information systems?

40. What is outsourcing?

41. What is ASP (Arplications Service Providing)?

42. What are the advantages and disadvantages of outsourcing?

43. What components does the purchase price of IP include?

44. What are the components of the total cost of IP ownership?

45. What stages of the IP life cycle affect the price of IP ownership?

46. What is ABC (Activity Based Costing)?

47. What determines the quality of IP?

48. What are the general requirements for IP?

49. What is TQM (Total Quality Management)?

50. What is CMM (Sarabilitu Maturitu Model)?

51. What is the IP life cycle?

52. What are the IP life cycle models?

53. What are the features of the cascade, phased and spiral model of the IP life cycle?

54. What are the stages of the IP life cycle?

55. What are the features of IP management at various stages of their life cycle?

Test tasks by discipline
"Digitalization of management processes"
formation of the competence of OPK-5

1. What is information?

a) information about the environment;

b) the required amount of information adapted for processing on a computer;

c) a set of methods, personnel.

2. A query to the database is called:

a) a table sorted in ascending or descending order of key values; b) a table obtained from the original one by selecting rows that meet the specified conditions for field values;

c) a table obtained from a set of related tables by selecting rows that meet specified conditions.

3. What properties do information systems have?

a) relativity, divisibility, integrity;

b) correspondence, randomness, grouping;

c) consistency, automation, compactness.

4. What is the syntactic aspect of the presentation of economic information?

a) taking into account the semantic content of information;
b) relation to this control system;
c) consideration of the form of presentation of information, not taking into account the meaning and usefulness.

5. Stages of relational database development:
a) determination of a complete list of all classifiers, determination of classification features, systematization of objects within each classified set;
b) all attributes are divided into groups: constant, variable and design, attributes are determined, which provide for the calculation of checksums;
c) creation of a conceptual data model, construction of a logical structure, design of tables, creation of a data schema, data entry.

6. Components of the data processing system:
a) the organizational structure of the enterprise (organization), staffing, functional subsystems;
b) economic information systems, automation of office work, organizational management;
c) information support, software, technical support, ergonomic support.

7. Office technologies are intended for:
a) processing large volumes of structured information;
b) processing of text information;
c) solving computational problems and ensuring economic activity;
d) processing of real images and sound;
e) creation of software tools for information technology.

8. Main technological structures of local computer networks:

a) rectangular, square, linear;

b) ring, star-shaped, tire;

c) logical, straight, triangular.

9. The concept of a unified documentation system:

a) program documentation necessary to solve problems;

b) a set of interrelated documents built according to a single model;

c) data processing technology.

10. Main parameters of information quality:

a) availability, constancy, consistency;

b) simplicity, stability, periodicity;

c) completeness, fidelity, timeliness.

11. Classification of data processing processes by processing mode:

a) typical operations for processing economic information in batch, online and in real time;

b) typical operations for processing economic information in decentralized processing;

c) typical operations of processing economic information in case of centralized processing.

12. What does one-to-many-valued relationships mean in relational databases?

a) these are such links when each instance of the object (A) can correspond to several instances of the second object (B) and, conversely, to each instance of the second object (B) can also correspond to several instances of the first object (A);

b) these are such relationships when each instance of the object (A) can correspond to several instances of the second object (B), and each instance of the second object

(B) can correspond to only one instance of the first object (A);

c) these are such connections when each instance of the object (A) corresponds to only one instance of the second object (B) and, conversely, each instance of the second object (B) corresponds to one instance of the first object (A).

13. Text editors are the following programs:

a) Excel;

e) Lexicon;

i) Rascal.

b) FoxPro;

e) Sypercalc;

c) Vasic;

g) Coreldaw;

d) Assess;

h) Word;

14. How are economic information codes entered into the Excel spreadsheet?

a) '01;

b) 01;

c) .01.

15. The concept of decentralized information processing:

a) this is the use of all computing facilities in the information and computing center;

b) it is an automated workplace;

c) it is a regional computer network.

16. Spreadsheets are the following programs:

a) Excel;

e) Lexicon;

i) Rascal.

b) FoxPro;

e) Sypercalc;

c) Vasic;

g) Coreldaw;

d) Assess;

h) Word;

17. What is the absolute address of a cell in an Excel spreadsheet?

a) the address of the cell in which the data remains unchanged;

b) cell address that does not change its position when copying formulas;

c) address of a cell that changes its position when copying formulas.

18. Database operation phase technology:

a) filling the database, manipulating data (search, management, modification);

b) collection and analysis of data for entry into the database;

c) structuring of logical and physical connections.

19. DBMS allow you to perform the following operations:

a) present information about objects and phenomena of the real world in a structured form;

b) store information on external storage devices of the computer;

c) transmit and receive information via telecommunication channels.

20. The data table contains:

a) information about the set of objects of the same type;

b) information about the totality of all objects related to a certain subject area;

c) information about a specific object.

21. Function is:

a) actions that are repeated periodically;

b) a group of actions that provide one of the aspects of the organization's activities

c) it is a group of independent actions.

22. Computer technology is:

a) information system;

b) Software and Hardware;

c) all statements above.

23. Data is:

a) information about the environment;

b) individual unordered information about the number of events or the object; c) the required amount of information submitted for processing.

24. The concept of an economic task:

a) the need to accumulate and constantly update regulatory and reference data and operational information;

b) system description of a specific object;

c) a complete sequence of actions that is performed on one or more ordered arrays, resulting in the formation of at least one indicator in documentary form.

25. Information technology is:

a) a set of methods and techniques for solving typical problems of information processing;

b) software used to solve typical problems of information processing;

c) description of the technological process for solving typical information problems;

d) technical devices used in solving typical information problems;

e) a way of organizing the work of developers and users in solving typical information problems.

26. DBMS allow you to perform the following operations:

a) present information about objects and phenomena of the real world in a structured form;

b) store information on external storage devices of the computer; c) transmit and receive information via telecommunication channels.

27. The row of the data table contains:

a) information about the set of objects of the same type;

b) information about the totality of all objects related to a certain subject area;

c) information about a specific object.

28. Classification of information systems (IS) in terms of organizational management:

a) IS of industrial enterprises and organizations, tax IS, banking IS;

b) computer-aided design systems (CAD);

c) expert systems, information systems for scientific research, decision support information systems.

29. Information units of economic information:

a) attribute, indicator, file, logical record;

b) database, data bank, local network;

c) magnetic disk, stability coefficient, table.

30. What properties do information systems have?

a) relativity, divisibility, integrity;

b) correspondence, randomness, grouping;

c) consistency, automation, compactness.

31. Basic principles of functioning of economic information systems (EIS):

a) editing, formatting, systematization;

b) adaptability, self-control, economy?

c) archiving, copying, limitation.

32. Classification of information systems (IS) in terms of organizational management:

a) IS of industrial enterprises and organizations, banking IS;

b) computer-aided design systems (CAD);

c) expert systems, information systems for scientific research, decision support information systems.

33. Classification of information systems (IS) in terms of the use of new information technologies:

a) information and reference systems, process control IS, computer-aided design IS;

b) decision support systems, expert systems, intelligent dialogue systems;

c) information retrieval systems, organizational management IS, accounting IS.

34. Functional components of economic information systems (EIS):

a) database, software, computer system;

b) new organizational structure, job descriptions, personnel;

c) subsystems, tasks, modules, algorithms.

35. Components of the data processing system:

a) the organizational structure of the enterprise (organization), functional subsystems, staffing;
b) economic information systems, automation of office work, organizational management;
c) information support, software, technical support, ergonomic support.

36. Systems for classifying economic information:
a) hierarchical, faceted, combined;
b) ordinal, chess, parallel;
c) classification, positional, decimal.

37. Economic information coding systems:
a) random, parametric, system;
b) subject, program, package; c) ordinal, serial-ordinal, classification.

38. The concept of a unified documentation system:
a) program documentation necessary to solve problems;
b) a set of interrelated documents built in the model;
c) data processing technology.

39. The main forms of location of details in the primary document:
a) zonal, tabular, combined;
b) mathematical, logical, functional;
c) headline, result, content.

40. Intramachine support:
a) classification and coding of information;
b) knowledge base, program bases, databases;

c) primary and result information.

41. The concept of information technology:

a) it is a system of methods and ways of collecting, accumulating, storing, searching, processing and issuing information;

b) it is a user-initiated type of dialog;

c) this is a representation of data in a formalized form.

42. Centralized data processing:

a) this is an automated workplace (AWP);

b) it is a local network;

c) this is the concentration of all computing facilities in the information and computing center.

43. The concept of decentralized information processing:

a) this is the use of all computing facilities in the information and computing center;

b) it is an automated workplace;

c) it is a regional computer network.

44. What is a menu?

a) this is a common type of dialogue;

b) it is the information processing mode;

c) it is a means of control and diagnostics.

45. What is Microsoft Access?

a) it is a graphic application software package;

b) it is a relational database management system;

c) it is a problem-oriented application package.

46. Database operation phase technology:

a) filling the database, manipulating data (search, management, modification);

b) collection and analysis of data for entry into the database;

c) structuring of logical and physical connections.

47. Technology of the preparatory stage for solving economic problems:

a) formulating the goal of the solution, determining the relationship with other tasks, choosing a solution method;

b) data collection, data analysis and modification, identification of problem situations

c) documenting decisions, bringing them to the attention of executors and monitoring the execution of decisions.

48. Technology of the stage of solving economic problems:

a) data collection, determination of the relationship with other tasks;

b) protection against unauthorized access, structuring logical links, editing data requirements;

c) problem statement, choice of solution method and its implementation.

49. What does the statement of the problem include:

a) the organizational and economic essence of the task, the composition and forms of presentation of input and output information;

b) standard programs for the implementation of the solution of the problem;

c) testing and debugging programs.

50. How to write a block of cells in an Excel spreadsheet?

a) A1..C3

b) B2:C4

c) C1; C10

51. What are expert systems?

a) a system for sending messages between users of a computer network;

b) information systems that have developed methods for analyzing conditions for obtaining qualified conclusions and using knowledge bases in certain special subject areas;

c) information systems that use programs that implement decision-making models in specific tasks.

52. The concept of an economic task:

a) the need to accumulate and constantly update regulatory and reference data and operational information;

b) system description of a specific object;

c) a complete sequence of actions that is performed on one or more ordered arrays, resulting in the formation of at least one indicator in documentary form.

53. What characters are forbidden to be entered as initial ones when entering text information in an Excel spreadsheet?

a) =, /, digital information;

b) P, underscore, space;

c) quotes, dashes, t.

54. How to enter a formula in an Excel spreadsheet?

a) A1*B1 14

b) $A1*B1

c) \u003d A1 * B1

55. What software tools are included in the complex automated systems at the enterprise

a) BEST-4, Galaxy;

b) 1C, VSProjest;

c) Projest Expert, Power Point.