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Faculty of Business Communication and Computer Science
Department of Applied Informatics and Records Management



APPROVED:

Rector for Education

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Syllabus

Discipline Б1.В.ДВ.02.03 Adaptive Information Technologies

Major: All fields of study

University Degree: Bachelor

Full-time, part-time, extramural (the program is implemented entirely via e-learning and distance educational technologies)

Recommended by Department of Applied
Informatics and Records Management
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Department Chair A.V. Rokhin

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I. GOALS AND OBJECTIVES OF THE DISCIPLINE (MODULE)

Goal: To form a set of theoretical knowledge and practical skills in students with disabilities sufficient to manage the organization's information systems, achieve its strategic goals, competently use automated and non-automated information technologies, and form a management information support system.

Objectives:

1. to learn to identify various types of information systems and technologies;
2. to understand the main opportunities and trends in the development of information technologies and systems;
3. to be able to apply the knowledge gained to solve typical problems of selection and application of information technologies and systems;
4. to understand the basic concepts of information systems and technology management and be able to apply them in practice;
5. to master the skills of designing a database for a specific information system

II. PLACE OF THE DISCIPLINE IN THE CPEP STRUCTURE

2.1. The academic discipline (module) "Adaptive Information Technologies" belongs to the section of the curriculum called "Elective disciplines (modules)". The discipline is designed to provide students with disabilities with knowledge and skills in the design, development, implementation and operation of information systems, managing their life cycle and developing practical skills in the field of information and communication technologies.

2.2. To study this academic discipline (module), you need knowledge, skills and abilities formed by the previous disciplines: computer science.

2.3. List of subsequent academic disciplines for which knowledge, skills and abilities formed by this academic discipline are required: final qualification paper.

III. REQUIREMENTS FOR THE DISCIPLINE LEARNING OUTCOMES

The process of mastering the discipline is aimed at the formation of competencies (elements of the following competencies) in accordance with the Federal State Educational Standards of Higher Education and the Educational Programs of Higher Education in this major:

List of Planned Learning Outcomes for the Discipline, Mapped to Competency Achievement Indicators

Competency	Competency Achievement Indicator	Learning Outcomes
UC-1 Is able to search, critically analyze and synthesize information, apply a systematic approach to solve set tasks	UC-1.1	Searches, critically analyzes and synthesizes information necessary for solving set tasks
	UC-1.2	Applies a systematic approach to solving set tasks

IV. CONTENTS AND DISCIPLINE STRUCTURE

The workload of the discipline is 2 credits, 72 hours, including 8 hours for control.
Form of summative assessment: **credit**.

4.1. Discipline Contents, Structured by Topics, with Indicated Types of Classes and Allocated Academic Hours

Full-time education

No	Discipline Section/Theme	Semester	Total Hours	Types of Educational Activities, Including Self-Study, Practical Sessions, and Workload (in hrs)				Formative Assessment Formats; Summative Assessment Formats
				Teacher Contact Hrs			Self-Study	
				Lectures	Seminars (practical classes)	Consultations, Self-Study Monitoring, Summative Assessment		
1	Topic 1. The history of the emergence and development of information technologies.			2	2		4	Oral questioning
2	Topic 2. Personal computer software for users with disabilities.			2	2		4	Oral questioning
3	Topic 3. Applied gram support. Text processors for users with disabilities.			2	2	2	4	Tests
4	Topic 4. Tabular Processes for People with Disabilities			2	2		4	Tests
5	Topic 5. Computer networks. Internet for users with disabilities.			2	2	2	4	Oral questioning
6	Topic 6. Information security for users with disabilities.			2	2	2	4	Oral questioning
7	Topic 7. Professional, Social and Ethical Context of Information Technologies for People with disabilities.			4	4	2	8	Oral questioning
	Summative assessment							Credit
Total Hours			72	16	16	8	32	

Part-time education

No	Discipline Section/Theme	Semester	Total Hours	Types of Educational Activities, Including Self-Study, Practical Sessions, and Workload (in hrs)				Formative Assessment Formats; Summative Assessment Formats
				Teacher Contact Hrs			Self-Study	
				Lectures	Seminars (practical classes)	Consultations, Self-Study Monitoring, Summative Assessment		
1	Topic 1. The history of the emergence and development of information technologies			2	2		4	Oral questioning
2	Topic 2. Personal computer software for users with disabilities.			2	2		4	Oral questioning
3	Topic 3. Applied Software. Word processors for users with disabilities			2	2	2	4	Tests
4	Topic 4. Tabular Processes for People with Disabilities			2	2		4	Tests
5	Topic 5. Computer networks. Internet for users with disabilities			2	2	2	4	Oral questioning
6	Topic 6. Information Security for Users with Disabilities			2	2	2	8	Oral questioning
7	Topic 7. Professional, Social and Ethical Context of Information Technologies for People with Disabilities			2	2	2	8	Oral questioning
	Summative assessment							Credit
Total Hours			72	14	14	8	36	

Extramural education

No	Discipline Section/Theme	Semester	Total Hours	Types of Educational Activities, Including Self-Study, Practical Sessions, and Workload (in hrs)				Formative Assessment Formats; Summative Assessment Formats
				Teacher Contact Hrs			Self-Study	
				Lectures	Seminars (practical classes)	Consultations, Self-Study Monitoring, Summative Assessment		
1	Topic 1. The history of the emergence and development of information technologies						10	Oral questioning
2	Topic 2. Personal computer software for users with disabilities						10	Oral questioning
3	Topic 3. Applied Software. Word processors for users with disabilities					2	10	Tests
4	Topic 4. Tabular Processes for People with Disabilities						10	Tests
5	Topic 5. Computer networks. Internet for users with disabilities					2	10	Oral questioning
6	Topic 6. Information Security for Users with Disabilities health opportunities.			2	2	2	10	Oral questioning
7	Topic 7. Professional, Social and Ethical Context of Information Technologies for People with Disabilities						6	Oral questioning
	Summative assessment							Credit
Total Hours			72	2	2	2	66	

e.12. **Plan for Out-of-Class Student Self-Study of the Discipline**

Semester	Section, Themes	Self-study			Assessment tool	Self-Study Educational and Methodological Support
		Type of self-study	Deadlines	Load (hours)		
6	Topic 1. History of origin and development of information technologies.	<p>To obtain knowledge: reading the text of the textbook, additional literature: drawing up schemes and tables on the text, taking notes of the text; extracts from the text; using audio and video recordings, computer equipment and the Internet, etc.;</p> <p>To consolidate and systematize knowledge: work with lecture notes; drawing up a plan and theses of the answer; compiling tables for systematizing educational material; answering control questions; preparing reports for presentation at the seminar;</p> <p>To develop skills: solving situational problems; reflexive analysis of professional skills using audio and video equipment, etc. Preparation for the test</p>	Week 1-2	4	Oral questioning	Internet, ELS, EIOS
6	Topic 2. Personal computer software for users with disabilities.	<p>To obtain knowledge: reading the text of the textbook, additional literature: drawing up schemes and tables on the text, taking notes of the text; extracts from the text; using audio and video recordings, computer equipment and the Internet, etc.;</p> <p>To consolidate and systematize knowledge: work with lecture notes; drawing up a plan and theses of the answer; compiling tables for systematizing educational material;</p>	Week 3-4	4	Oral questioning	Internet, ELS, EIOS

		answering control questions; preparing reports for presentation at the seminar; To develop skills: solving situational problems; reflexive analysis of professional skills using audio and video equipment, etc. Preparation for the test				
6	Topic 3. Applied software. Word processors for users with disabilities.	To obtain knowledge: reading the text of the textbook, additional literature: drawing up schemes and tables on the text, taking notes of the text; extracts from the text; using audio and video recordings, computer equipment and the Internet, etc.; To consolidate and systematize knowledge: work with lecture notes; drawing up a plan and theses of the answer; compiling tables for systematizing educational material; answering control questions; preparing reports for presentation at the seminar; To develop skills: solving situational problems; reflexive analysis of professional skills using audio and video equipment, etc. Preparation for the test	Week 5-6	4	tests, practical exercises	Internet, ELS, EIOS
6	Topic 4. Spreadsheet processors for people with disabilities.	To obtain knowledge: reading the text of the textbook, additional literature: drawing up schemes and tables on the text, taking notes of the text; extracts from the text; using audio and video recordings, computer equipment and the Internet, etc.; To consolidate and systematize knowledge: work with lecture notes; drawing up a plan and	Week 7-8	4	tests, practical exercises	Internet, ELS, EIOS

		theses of the answer; compiling tables for systematizing educational material; answering control questions; preparing reports for presentation at the seminar; To develop skills: solving situational problems; reflexive analysis of professional skills using audio and video equipment, etc. Preparation for the test				
6	Topic 5. Computer networks. Internet for users with disabilities.	To obtain knowledge: reading the text of the textbook, additional literature: drawing up schemes and tables on the text, taking notes of the text; extracts from the text; using audio and video recordings, computer equipment and the Internet, etc.; To consolidate and systematize knowledge: work with lecture notes; drawing up a plan and theses of the answer; compiling tables for systematizing educational material; answering control questions; preparing reports for presentation at the seminar; To develop skills: solving situational problems; reflexive analysis of professional skills using audio and video equipment, etc. Preparation for the test	Week 9-12	4	Oral questioning	Internet, ELS, EIOS
6	Topic 6. Information security for users with disabilities.	To obtain knowledge: reading the text of the textbook, additional literature: drawing up schemes and tables on the text, taking notes of the text; extracts from the text; using audio and video recordings, computer equipment and the Internet, etc.;	Week 13-16	4	Oral questioning	Internet, ELS, EIOS

		<p>To consolidate and systematize knowledge: work with lecture notes; drawing up a plan and theses of the answer; compiling tables for systematizing educational material; answering control questions; preparing reports for presentation at the seminar;</p> <p>To develop skills: solving situational problems; reflexive analysis of professional skills using audio and video equipment, etc. Preparation for the test</p>				
6	<p>Topic 7. Professional, social and ethical context of information technologies for people with disabilities.</p>	<p>To obtain knowledge: reading the text of the textbook, additional literature: drawing up schemes and tables on the text, taking notes of the text; extracts from the text; using audio and video recordings, computer equipment and the Internet, etc.;</p> <p>To consolidate and systematize knowledge: work with lecture notes; drawing up a plan and theses of the answer; compiling tables for systematizing educational material; answering control questions; preparing reports for presentation at the seminar;</p> <p>To develop skills: solving situational problems; reflexive analysis of professional skills using audio and video equipment, etc. Preparation for the test</p>	Week 17-18	8	Oral questioning	Internet, ELS, EIOS
Total self-study load (hrs)				72		
Of these, the volume of self-study via e-learning and distance learning technologies (hrs)				72		
Total time for self-study provided by the curriculum for a given discipline (hrs)				72		

4.3. Learning Content

Load (hrs)	72
Topics	<p>Topic 1. History of the emergence and development of information technologies. The concept of “information technology”. History of the development of information technologies. Modern types of information technologies. The composition and essence of modern information technologies.</p> <p>Topic 2. Software of personal computers for people with disabilities. Classification of personal computer software: system programs, tool programs, application programs. Operating systems (OS). Concept, functions. Main types of operating systems.</p> <p>Topic 3. Application software. Text Processes for Users with Disabilities. Interface of MS Office and OpenOffice programs. Setting program Parameters. Setting page parameters. Formatting Abstracts and Symbols. Lists, Varieties. Creating and formatting lists. Creating tables in documents. Formatting of data in tables. Sorting data into tables. Calculations and construction of diagrams. Styles and their use in the execution of documents. Insert and embed objects. Inserting and editing mathematical expressions and formulas. MS Equation formula editors.</p> <p>Topic 4. Spreadsheet processors for people with disabilities. Interface of MS Office and Open Office programs. Workbook, its structure. The concepts of range and table (list) for MS Excel. Response of cells and ranges (relative and absolute). Assign a name to a cell, range, table. Data types (numbers, texts, logical data, formulas). Data formatting. Number formats. Conditional formatting. Enter formulas. Functions as Operations of Formulas. Classification of functions. Function wizard. Nested functions. Actions on the contents of cells (editing, copying, moving, deleting).</p> <p>Topic 5. Computer networks. Internet for users with disabilities. Purpose of computer networks. Classification of networks. Local networks, regional, global. Data transfer protocols. Local networks. Topologies for building local networks. Peer-to-peer and hierarchical LANs. Organization and features of peer-to-peer networks. Communication channels. Hierarchical networks. Workstations, servers, communication channels, network equipment (network adaptors, hubs, switches, gateways).</p> <p>Topic 6. Information security for users with disabilities. Information security and its components. Threats to information security and their classification. Legislative acts of the Russian Federation regulating legal relations in the field of information security and protection of state and commercial secrets. Administrative and criminal liability in the information sphere.</p> <p>Topic 7. Professional, Social and Ethical Context of Information Technologies for People with Disabilities Information as the most important resource for the development of society.</p>

	Informatization of society. National information resources. Information products and services. Market of information products and services. Information Technologies in Education. Remote Educational Technologies
Formative assessment	oral questioning, tests, practical exercises
Summative assessment	Credit

4.3.1. List of Seminars, Practical Sessions and Laboratory Work

Full-time education

№	Theme Number	Seminars, Practical Sessions and Laboratory Work	Load (hr.)		Assessment Tools	Developed Competencies (Indicators)
			Total Hours	Including Practical Sessions		
1	1	History of the emergence and development of information technologies.	2		Oral questioning	UC-1
2	2	Personal computer software for users with disabilities	2		Oral questioning	UC-1
3	3	Application software. Word processors for users with disabilities.	2		Tests	UC-1
4	4	Spreadsheet processors for people with disabilities.	2		Tests	UC-1
5	5	Computer networks. Internet for users with disabilities.	2		Oral questioning	UC-1
6	6	Information security for users with disabilities	2		Oral questioning	UC-1
7	7	Professional, Social and Ethical Context of Information Technologies for People with Disabilities	4		Oral questioning	UC-1

Part-time education

№	Theme Number	Seminars, Practical Sessions and Laboratory Work	Load (hr.)		Assessment Tools	Developed Competencies (Indicators)
			Total Hours	Including Practical Sessions		
1	1	History of the emergence and development of information technologies.	2		Oral questioning	UC-1
2	2	Personal computer software for users with disabilities	2		Oral questioning	UC-1
3	3	Application software. Word processors for users with disabilities.	2		Tests	UC-1
4	4	Spreadsheet processors for people with disabilities.	2		Tests	UC-1
5	5	Computer networks. Internet for users with disabilities.	2		Oral questioning	UC-1
6	6	Information security for users with disabilities	2		Oral questioning	UC-1
7	7	Professional, Social and Ethical Context of Information Technologies for People with Disabilities	2		Oral questioning	UC-1

Extramural education

№	Theme Number	Seminars, Practical Sessions and Laboratory Work	Load (hr.)		Assessment Tools	Developed Competencies (Indicators)
			Total Hours	Including Practical Sessions		
1	1	History of the emergence and development of information technologies.			Oral questioning	UC-1
2	2	Personal computer software for users with disabilities			Oral questioning	UC-1

3	3	Application software. Word processors for users with disabilities.			Tests	UC-1
4	4	Spreadsheet processors for people with disabilities.			Tests	UC-1
5	5	Computer networks. Internet for users with disabilities.			Oral questioning	UC-1
6	6	Information security for users with disabilities	2		Oral questioning	UC-1
7	7	Professional, Social and Ethical Context of Information Technologies for People with Disabilities			Oral questioning	UC-1

4.3.2. List of Topics (Questions) Assigned for Independent Work as Part of Student Self-Study

№	Theme	Task	Competency	Indicators
1	Professional, social and ethical context of information technologies for people with disabilities	Information search, reflective analysis of professional skills	UC-1	UC-1.1

4.4. Guidelines for Organizing Student Self-Study

Self-study of students of all forms and types of education is one of the mandatory types of educational activities that ensure the implementation of the requirements of the Federal State Standards of Higher Professional Education. According to the requirements of regulatory documents, self-study of students is an obligatory component of the educational process, as it ensures the consolidation of the knowledge gained in lectures by acquiring skills of comprehension and expansion of their content, skills for solving urgent problems of the formation of general cultural and professional competencies, research activities, preparation for seminars, laboratory work, tests and exams. Self-study of students is a set of classroom and out-of-class activities. Self-study within the framework of the educational process at the university solves the following tasks:

- consolidation and expansion of knowledge and skills acquired by students during classroom and extracurricular activities, turning them into stereotypes of mental and physical activity;
- acquisition of additional knowledge and skills in the disciplines of the curriculum;
- obtaining knowledge and developing skills related to scientific and research activities;
- development of orientation and attitude to the quality development of the educational program;
- development of self-organization skills;

- formation of independent thinking, the ability to self-development, self-improvement and self-realization;
- development of skills for effective independent professional theoretical, practical and educational and research activities.

Preparation for lectures

The quality of mastering the content of a particular discipline directly depends on the extent to which the students themselves, without external coercion, forms the orientation to obtaining new knowledge at lectures that complement the existing knowledge in this discipline. The time to prepare students for a two-hour lecture according to the standards is at least 0.2 hours.

Preparation for practical classes

Preparation for a practical lesson includes the following elements of independent activity: a clear idea of the purpose and objectives of its implementation; highlighting the skills of mental, analytical, scientific activity that will be the result of the upcoming work. The development of skills is carried out by obtaining new information about the processes being studied and with the help of knowledge about the degree to which students are currently able to use the methods of research activity which they will use in a practical lesson. Preparation for a practical lesson often requires the selection of material, data and special sources with which to study. Students should prepare 3-4 examples of the formulation of the research topic presented in monographs, scientific articles, and reports for the lesson at home. Then they independently search for relevant sources, determine the relevance of a particular study of processes and phenomena, and identify the main ways in which the authors of scientific papers prove the value of what they do. During the practical lesson, students present the options they have found for formulating the relevance of the study, discuss them and justify their opinion on the best option. The time to prepare for a practical lesson according to the standards is at least 0.2 hours.

Preparation for seminars

Independent preparation for the seminar is aimed at: developing the ability to read scientific and other literature; searching for additional information that allows you to understand some issues more deeply; highlighting the necessary information when working with different sources, which is required to fully answer the questions of the seminar lesson plan; developing the ability to correctly write out the authors' statements from the available sources of information, draw them up according to bibliographic norms; to develop the ability to analyze selected sources of information; to prepare their own speech on the issues discussed; the formation of the skill of prompt response to different opinions that may arise during the discussion of certain scientific problems. The time to prepare for the seminar according to the standards is at least 0.2 hours.

Preparation for tests

Tests are assigned after studying a certain section (sections) of the discipline and is a set of detailed written answers of students to questions that they receive in advance from the teacher. Independent preparation for the test includes: – studying lecture notes that reveal the material, the knowledge of which is checked by the control work; revision of the educational material obtained in preparation for seminary, practical classes and the time of their conduct; study of additional literature, in which the content of the tested knowledge is specified; composing mental answers to the questions posed in the test; formation of a psychological attitude to the successful completion of all tasks. The time for preparation for the test according to the standards is 2 hours.

Preparation for the final test (credit)

Self-preparation for the final test should be carried out during the entire semester. Preparation includes the following actions: re-read all the lectures, as well as materials that were prepared for seminars and practical classes during the semester, correlate this information with the questions that are given for credit, if the information is not enough. Answers are found in the literature offered by the teacher. Brief notes are recommended. The time to prepare for the final test according to the standards is at least 4 hours.

Forms of out-of-class self-study

Preparation of the report

The purpose of self-study is to expand the scientific horizons, master the methods of theoretical research, develop the student's independent thinking. A report is a public communication or document that contains information and reflects the essence of the issue or research in relation to a given situation.

Types of reports:

1. Oral report is read based on the results of the work done and is an effective means of explaining its results.

2. Written report: – short (up to 20 pages) – summarizes the most important information obtained during the study; – detailed (up to 60 pages) – includes not only the text structure with headings, but also diagrams, tables, figures, photographs, appendices, footnotes, links, hyperlinks.

Completing the task:

1) clearly formulate the topic (for example, a written report);

2) study and select the literature recommended on the topic, highlighting three sources of bibliographic information: – primary (articles, dissertations, monographs, etc.); – secondary (bibliography, abstract journals, signal information, plans, graph schemes, subject indexes, etc.); – tertiary (reviews, compilations, reference books, etc.);

3) write a plan that fully agrees with the chosen topic and logically reveals it;

4) write a report that meets the following requirements: to the structure of the report – it should include: a brief introduction justifying the relevance of the problem; main text; conclusion with brief conclusions on the problem under study; list of references; to the content of the report – general provisions should be supported and explained with specific examples; not to retell individual chapters of a textbook or manual, but to express their own thoughts on the essence of the issues under consideration, to make their proposals;

5) organize the work in accordance with the requirements. Planned results of self-study: the ability of students to analyze the results of scientific research and apply them in solving specific educational and research problems; readiness to use individual creative abilities for original solution of research problems; the ability to solve standard tasks of professional activity on the basis of information and bibliographic culture with the use of information and communication technologies and taking into account the basic requirements of information security.

Compilation of a glossary

The purpose of self-study: to increase the level of information culture; to acquire new knowledge; to develop the necessary skills in the subject area of the course. Glossary is a dictionary of specialized terms and their definitions. Glossary article is a definition of a term.

Task content:

1) collection and systematization of concepts or terms united by a common specific topic, based on one or more sources. Work;

2) to identify the most common terms;

3) make a list of terminations united by a common theme;

4) arrange the terms in alphabetical order;

5) compile glossary entries: – give the exact wording of the term in the nominative case; – to comprehensively reveal the meaning of this term. Planned results of self-study: the ability of students to solve standard tasks of professional activity on the basis of information and bibliographic culture with the use of information and communication technologies and taking into account the basic requirements of information security.

Information retrieval

The purpose of self-study is to develop the ability to design and transform educational activities on the basis of various types of information retrieval. Information retrieval is the search for unstructured documentary information. List of modern tasks of information retrieval: solving

modeling issues; classification of documents; filtering, classification of documents; design of architectures of search engines and user interfaces; extraction information (annotation and abstracting of documents); Selection of information search language in search engines. The content of the task by types of search: bibliographic search – search for the necessary information about the source and establishing its availability in the system of other sources. It is carried out by searching for bibliographic information and bibliographic aids (information publications); search for the information sources themselves (documents and publications) that contain or may contain the necessary information; – search for factual information contained in literature, books (for example, about historical facts and events, biographical data from the life and work of a writer, scientist, etc.).

Completing the task:

- 1) defining the field of knowledge;
- 2) selection of data type and sources;
- 3) collection of materials necessary for filling the information model;
- 4) selection of the most useful information;
- 5) the choice of the method of information processing (classification, clustering, regression analysis, etc.);
- 6) selection of an algorithm for searching for patterns;
- 7) search for regularities, formal rules and structural connections in the collected information;
- 8) creative interpretation of the results obtained.

Planned results of self-study: – the ability of students to solve standard tasks of professional activity on the basis of information and bibliographic culture with the use of information and communication technologies and taking into account the basic requirements of information security; readiness to use knowledge of modern problems of science and education in solving educational and professional problems.

Use of infographics.

The purpose of self-study is to assimilate the relationship between concepts or individual sections of the topic with the help of infographics. Infographics is “an area of communicative design, which is based on the graphic representation of information, connections, numerical data and knowledge” (V. V. Laptev).

- 2) collection of information (documentary and visual);
- 3) systematization of the collected information;
- 4) creation of a presentation plan: – classification of information by type; – selection of the theme of the action (instructive, research, imitation); – the choice of communicative tactics (discussions and debates to accurately convey the idea); – choice of creative tactics (creation of new forms and approaches to the study and presentation of information); – systematization of information according to some principle (alphabetically, by time, by categories, by hierarchy);
- 5) creation of a sketch (for printed infographics) and storyboard (for Internet infographics);
- 6) planning and work on graphics (creation of the main and secondary objects).

Planned results of self-study: – students’ readiness to use individual creative abilities for an original solution of research problems; – assimilation of relations between concepts or separate sections of the topic.

Development of a multimedia presentation

Goals of self-study (options): – mastering (consolidation, generalization, systematization) of educational material; – ensuring quality control of knowledge; – formation of special competencies that provide the ability to work with information technologies; – formation of general cultural competencies. Multimedia presentation – presentation of the content of educational material, educational tasks using multimedia technologies.

Task performance:

1. Design stage: – determining the goals of using the presentation; – collection of the necessary material (texts, drawings, diagrams, etc.); – formation of the structure and logic of the

presentation of the material; – creation of a folder in which the collected material is placed.

2. Design stage: – selection of the MS PowerPoint program in the computer menu; – definition of slide design; – filling slides with the collected text and visual information; – enabling animation and musical accompaniment effects (if necessary); – setting the slide show mode (title slide, including the name of the department where the work was done, the name of the presentations, city and year; content — a list of presentation slides grouped by the topic of the message; the final slide contains conclusions, wishes, a list of references, etc.).

3. Modeling stage – checking and correcting the prepared material, determining the duration of its demonstration.

Planned results of self-study: – improving the information culture of students and ensuring their readiness to integrate into the modern information space; – the ability to solve standard tasks of professional activity on the basis of information and bibliographic culture with the use of information and communication technologies and taking into account the basic requirements of information security; – the ability to critically perceive, generalize, analyze professional information, set a goal and choose ways to achieve it; – the ability to apply modern methods and technologies for the organization and implementation of the educational process at various educational levels in various educational institutions; – readiness to use individual creative abilities for an original solution to research problems.

Construction of a summary (generalizing) table

The purpose of self-study is to assimilate the relations between concepts or individual sections of the topic by constructing a table. A summary (generalizing) table is a concentrated representation of relations between the phenomena under study, expressed in the form of variables. Variants of the task: — to present the functional relations between the elements of a system, expressed in the text in the form of concepts or categories; — to present interdisciplinary connections of the topic (discipline) being studied.

Rules for compiling a table:

1) the table should be expressive and compact, it is better to make several small but illustrative tables that meet the task of the study;

2) the title of the table, the headings of columns and rows should be formulated accurately and concisely;

3) the table must necessarily indicate the object under study and the units of measurement;

4) in the absence of any data in the table, put an ellipsis or write “No information”, if any phenomenon did not take place, then put a dash;

5) the values of the same indicators are given in the table with the same degree of accuracy;

6) the table should have the results for groups, subgroups and as a whole;

7) if summation of data is impossible, then a multiplication sign is put in this column; 8) In large tables, a gap is made after every five lines for ease of reading and analysis.

Planned results of self-study: – students’ willingness to use individual creative abilities for the original solution of research problems; – assimilation of relations between concepts or individual sections of the topic.

In ISU, the organization of students’ self-study is regulated by the Regulation on Students’ Self-Study, adopted by the Academic Council of ISU on June 22, 2012.

e.12. **Approximate topics of term papers (projects)**

In this discipline, the implementation of course projects (works) is not provided.

V. EDUCATIONAL, METHODOLOGICAL AND INFORMATION SUPPORT FOR THE DISCIPLINE

a) Required Reading:

1. Information Technologies in Management (Management) : Textbook and Practicum for Higher Educational Institutions / Y. D. Romanova [et al] ; edited by Y. D. Romanova. — 2nd ed., revised and supplemented — Moscow : Urait Publishing House, 2019. — 411 p. — (Higher Education). — ISBN 978-5-534-11745-5. — Available at : www.biblio-online.ru/book/informacionnye-tehnologii-v-menedzhmente-upravlenii-446052
2. Plakhotnikova M. A., Vertakova Yu. — 2nd ed., revised and supplemented — Moscow : Urait Publishing House, 2019. — 326 p. — (Bachelor. — ISBN 978-5-534-07333-1. — Mode of access: www.biblio-online.ru/book/informacionnye-tehnologii-v-menedzhmente-431843
3. Information Technologies in Economics and Management: A Textbook for Academic Bachelor's Degree / V. V. Trofimov [et al] ; edited by V. V. Trofimov. — 2nd ed., revised and supplemented — Moscow : Urait Publishing House, 2018. — 482 p. — (Bachelor. Academic course). — ISBN 978-5-534-03785-2. — Mode of access: www.biblio-online.ru/book/informacionnye-tehnologii-v-ekonomike-i-upravlenii-412540

Further Reading

1. Morozova O. A., Loseva V. V., Ivanova L. I. Information Technologies in State and Municipal Management: Textbook for Bachelor's and Master's Degrees. — 2nd ed., ispr. Moscow: Urait Publishing House, 2019. — 142 p. — (Bachelor and Master. Academic course). — ISBN 978-5-534-06262-5. — Mode of access :www.biblio-online.ru/book/informacionnye-tehnologii-v-gosudarstvennom-i-municipalnom-upravlenii-441844
2. D. Romanova, T. A. Vintova, P. E. Koval [Information technologies in personnel management: a textbook and a workshop for secondary professional education]. — 3rd ed., revised and supplemented — Moscow : Urait Publishing House, 2019. — 271 p. — (Professional education). — ISBN 978-5-534-07586-1. — Access mode: www.biblio-online.ru/book/informacionnye-tehnologii-v-upravlenii-personalom-428481

b) Databases, Search and Reference Systems, and Information Systems

1. Open Electronic Database of Resources and Research “University Information System RUSSIA” [Electronic resource]. — Access mode: <http://uisrussia.msu.ru> (unlimited)
2. State Information System “National Electronic Library” [Electronic resource] : site. — Access mode: <http://neb.rf> (unlimited)
3. Scientific Electronic Library “[ELIBRARY.RU](http://elibrary.ru)” [Electronic resource] : site. — Mode of access: <http://elibrary.ru/defaultx.asp>. — Contract No 148 of 23.12.2020 Act of 24.12.2020 valid until 31.12. 2021 access: <http://elibrary.ru/>
4. ELS “Lan Publishing House”. Contract No 100 dated 13.11.2020 Act No 671 dated 14.11.2020; Valid until 13.11.2021 access: www.e.lanbook.com,
5. Contract No 100 dated 13.11.2020. Act No E656 dated 14.11.2020; Valid until 13.11/2021 available at www.e.lanbook.com
6. ELS ECZ “Bibliotech”. State Contract No 019 of 22.02.2011 LLC “Bibliotech”. License Agreement to the State Contract No 019 of 22.02.2011. Available at: <https://isu.bibliotech.ru/> Validity period: indefinite.
7. ELS “Rukont” Contract No 98 dated 13.11.2020; Act No bK-5415 dated 14.11.20 Valid until 13.11.2021. access: <http://rucont.ru/>
8. ELS “Ibooks.ru/ibooks.ru” Contract No 99 dated 13.11.2020; Act No 99A dated 13.11.2020 Valid until 13.11.2021 Access: <http://ibooks.ru>
9. LLC “Electronic Publishing House Urait”. Contract No 60 dated 23.09.2020. Acceptance

- Certificate No 3263 dated 18.10.2020; Valid until 17.10. 2021 Access: <https://urait.ru/>
10. License contract No 04-E-0258 dated 09/20/2021 Transfer and Acceptance Act No 5684 dated 10/18/2021; Valid until 10/17/2022 access: <https://urait.ru/>
11. IVIS LLC, contract No 157 dated 25.12.2020; Act dated 25.12.2020 Valid from 01.01.2021 to 31.12.2021 access: <http://dlib.eastview.com>
12. Grebennikov Publishing House, Contract No 147 dated 23. 11.2020; Act of 25.12.2020 Valid from 01.01.2021 to 31.12.2021 Access: <http://grebennikon.ru>

VI. MATERIAL AND TECHNICAL SUPPORT FOR THE DISCIPLINE

6.1. Educational and laboratory equipment:

Name of Specialized Premises and Self-Study Premises	Equipment of Specialized Premises and Self-Study Premises	List of Licensed Software. Details of Supporting Document
Special rooms: Classroom for lectures and seminars, formative assessment, summative assessment.	The classroom is equipped with specialized educational furniture, technical teaching aids that serve to present information to a large audience: Laptop (AserAspirev3-5516 (AMDA10-4600M 2300 MHz)) (1 piece) with unlimited access to the Internet, with unlimited access to the Internet; Vivitek projector, Screen VtdiaEcot- 3200*200MW 1:1, speakers, sets of demonstration equipment and teaching aids, providing thematic illustrations corresponding to the work program of the discipline. Educational laboratory: computers for practical work (System unit AMDAthlon-64 X3 445 3100 MHz), Monitor LG F1742S (2 pcs.), Monitor ViewSonic VA703b (24 pieces) with the ability to connect to the Internet and provide access to electronic information the educational environment of the organization; Sony XGA VPLSX535 Projector, ScreenVtdiaEcot- 3200*200MW 1:1	Windows OS: DreamSpark Premium, Contract No 03-016-14 dated 30.10.2014 Microsoft Office: 0365ProPiusOpenStudents ShrdSvr ALNG subs VL NL I MthAcadmsStdnt w/Faculty (15000 licenses) Kaspersky Endpoint Security for Business – Standard Russian Edition. 1500-2499 Node 1 year Educational License № 1B08170221054045- 730177
Special rooms: a computer class (classroom) for group and individual consultations, course design (course work), organization of self-study, including research	The classroom is equipped with specialized educational furniture, technical teaching aids: computers (AMD Athlon 64 X2 system unit DualCore 3600+ 1900 MHz (15 pcs.), LGFlatron L1742SE Monitor (14 pcs.), ViewSonic VG720 Monitor) with the ability to connect to the Internet and provide access to the electronic information and educational environment of the organization.	Windows OS: DreamSpark Premium, Contract No 03-016-14 dated 30.10.2014 Microsoft Office: 0365ProPiusOpenStudents ShrdSvr ALNG subs VL NL I MthAcadmsStdnt w/Faculty (15000 licenses) Kaspersky Endpoint Security for Business – Standard Russian Edition. 1500-2499 Node 1 year Educational License № 1B08170221054045- 730177

6.2. Software:

№	Software Product Name	Quantity	Rationale for using the software	Date of issuance of the license	Duration of the right Use
1.	Microsoft Office Professional Plus 2007 Russian Academic OPEN No Level	25	Microsoft License Number 46211164 Government Contract № 03-162-09 From 01.12.2009	01.12.2009	Indefinite
2.	Microsoft Office Professional Plus 2007 Russian Academic OPEN No Level	10	Number Microsoft 42095516 licenses	27.04.2007	Indefinite
3.	Microsoft SQL Server 2012	1	Number Licenses Microsoft 65343111		Indefinite
4.	Microsoft Windows Server 2008 r2 Enterprise	1	Number Licenses Microsoft 49413875		Indefinite
5.	Microsoft® Windows® Professional 7 Russian Upgrade Academic OPEN No Level Promo	12	Microsoft License Number 46211164 Government Contract № 03-162-09 From 01.12.2009	01.12.2009	Indefinite
6.	Microsoft® WinSL 8.1 Russian Academic OLP 1License NoLevel Legalization GetGenuine	130	Microsoft Invoice Number: 9564547610 SIBRON IC LLC	22.12.2014	Indefinite
7.	OpenOffice 4.1.3	Conditions of the right holder	Terms of Use at: https://www.openoffice.org/licenses/PDL.html	Terms and conditions of the legal owner	Indefinite

6.3. Technical and Electronic Learning Tools

The methodological concept of teaching provides for the use of technical and electronic means of teaching and monitoring students' knowledge: multimedia presentations, fragments of films.

VII. EDUCATIONAL TECHNOLOGIES

In the implementation of the program of this discipline, various educational technologies are used.

1.	Multi-level training	The teacher has the opportunity to help the weak, pay attention to the strong, the desire of strong students to advance faster and deeper in education is realized. Advanced students assert themselves in their abilities; they get the opportunity to experience educational success, the level of motivation for learning increases.
2.	Project-based teaching methods	Work using this method makes it possible to develop the individual creative abilities of students more consciously but approach professional and social self-determination.

3.	Research Methods in Teaching	It gives students the opportunity to independently replenish their knowledge, delve deeply into the problem under study and suggest ways to solve it, which is important in the formation of a worldview. This is important for determining the individual development trajectory of each student.
4.	Lectures and seminars Credit system	This system makes it possible to concentrate the material in blocks and present it as a whole, and to conduct the control of the students' level
5.	Information and Communication Technologies	Change and unlimited enrichment of the content of the educational use of integrated courses, access to the Internet
6.	Innovation Evaluation System "Portfolio"	Formation of a personalized record of the student's achievements as a tool for pedagogical support of social identification and determination of the trajectory of personal development

Topics of classes using active forms of learning:

№	Topic of the lesson	The type of activity	Form / Methods of interactive Learning	Hours
1	Application software. Text and tabular processes for users with disabilities	Practical class	Practical work	8
Total Hours				8

VIII. MATERIALS FOR FORMATIVE AND SUMMATIVE ASSESSMENT

8.1. Assessment tools of formative assessment

№	Formats of Assessment Tools	Assessed Themes (Sections)	Assessed Competencies/ Indicators
1.	Oral questioning, tests	Topic 1. The history of the emergence and development of information technologies.	UC-1
2.		Topic 2. Personal computer software for users with disabilities	
3.		Topic 3. Applied software. Cookies. Word processors for users with disabilities	
4.		Topic 4. Spreadsheet processors for people with disabilities	
5.		Topic 5. Computer networks. Internet for users with disabilities.	
6.		Topic 6. Information Security for users with disabilities.	
7.		Topic 7. Professional, Social and Ethical Context of Information Technologies for People with disabilities	

Sample tasks (oral questioning)

Topic 1. History of the emergence and development of information technologies

1. Understanding of computer science and information technology, the field of IT application in various industries.
2. Connections between psychology and informatics.
3. Features of information retrieval systems and Internet databases.
4. Fundamentals of safe organization of work with computer and technical training aids.
5. Image files: raster graphics, vector graphics, image file formats supported by browsers
6. Work with texts and data.
7. Information technology security.
8. The influence of ICT on pedagogical technologies.
9. Electronic means of educational purposes.
10. Software and methodological support.
11. Archivers: purpose, types.
12. Computer viruses, their classification.
13. Anti-virus programs, their varieties.
14. Computer networks: purpose, classification. Client-server technology.
15. Types of local networks and their features.
16. Basic computer networks: working stages
17. Main computer networks: network equipment
18. Global computer network Internet. Information services of the Internet.
19. Addressing computers on the network. Domain Name System.
20. The concept of information security. Classification of threats.

Topic 2. Personal computer software for users with disabilities

1. MS Windows operating system.
2. Principles of graphical user interaction.
3. Configuration settings.
4. Desktop. Desktop objects. Context menu of objects. Buffer
5. Methods of launching programs (applications) for execution.
6. MS Windows standard and utility programs.
7. Installing and uninstalling new software. Installation of new technical means.
8. MS Windows File System
9. Basic operations with directories and files.
10. Programs for maintaining the file structure and data carriers (file managers).
11. Application packages.

Topic 5. Computer networks. Internet for users with disabilities

1. Software. Technologies for working with data in the network
2. File-server, client-server.
3. Regional and global networks. Ways of organization.
4. Circuit-switched and packet-switched networks.
5. Communication channels: telephone lines (dial-up and leased), cable fiber-optic lines; radio channels and satellite communications.
6. Modems, their varieties.
7. Duct equipment.
8. Internet: development, areas of application. Addressing to the Internet. Ways to connect to the Internet.
9. Internet information resources: file transfer; e-mail; teleconferences; WorldWideWeb (WWW).
10. Browser programs. Communication in the network.
11. Search for information on the Internet. Search engines.

Topic 6. Information security for users with disabilities.

1. Organizational software tools for protecting information from unauthorized interference.
2. Protection of information in local and wide area networks.
3. Cryptographic methods of protection.
4. Protecting information on your local computer.
5. Disk and folder protection tools for the MS Windows operating system.
6. Computer viruses.
7. Antivirus programs, their varieties and features.
8. Protection of a network computer (password access to the system, restriction of access rights of network users, protection when working with e-mail, firewalls).
9. The concept of information security.
10. Basic definitions and criteria for classification of threats.

Topic 7. Professional, Social and Ethical Context of Information Technologies for People with Disabilities

1. Social Information Technologies.
2. Ethics in Information Technologies.
3. Economic, organizational and legal issues of the creation and use of software and information support.
4. The concept of intellectual property.
5. Paperless information technologies.
6. Electronic public services. E-government.
7. Computer-aided design systems in engineering.
8. Information and knowledge. Formalization of knowledge.
9. The concept of expert systems.
10. Artificial intelligence.

Sample Tests and Practical Tasks**Topic 3. Application software. Word processors for users with disabilities**

1. Information Technologies of Organizational Management (Corporate Information Technologies).
2. Information Technologies in Industry and Economy.
3. Information technologies of computer-aided design.
4. Information technology software.
5. Technical means of information technology.
6. CASE - technologies.
7. Basic standards of multimedia technologies.
8. Multimedia technology hardware.
9. Computer networks. Basic concepts.
10. Global computer networks. Local computer networks.
11. OpenOffice text editor (program interface, program configuration, etc.).

Topic 4. Spreadsheet processors for people with disabilities

1. Autocomplete adjacent cells with numeric and text data.
2. Graphical representation of numerical data: construction of graphs and diagrams.
3. Working with tables (with databases).
4. Use of forms. Data sorting (single-level, multi-level).
5. Filtering (Autofilter, Advanced filter).
6. Summarizing and analyzing data using Pivot Tables.

7. Create subtotals.
8. Data Protection: Sheet protection, protecting workbooks from unauthorized access for local and network use.
9. File protection. Preparation of printing and printing of ranges (tables). Preview, Page Layout mode. Document pagination, page numbering, header and footer.
10. Save tabular documents. Create data-related table systems. Transfer data between sheets and books using two-dimensional and three-dimensional links.
11. Analysis of functional dependencies: construction of a table of values and a graph of the function. Drawing trend lines. Graphical representation of functions of two variables (drawing surfaces).
12. Data transfer between MS Excel and MS Word documents.

Examples of practical tasks:

TASK 1. CREATION OF A NUMBERED LIST USING A LIST OF SOURCES USED.

Using MS Word, create a numbered list of the following sources taking into account the requirements of the methodological recommendations of the ISU Research Library "Bibliographic Formatting of Scientific, Diploma and Term Papers".

- Textbook, textbook by one author, two authors.
- An article in a periodical by one author, two authors.
- The website of an IT company.

The result of the task is a text document containing a list of sources used.

TASK 2. CREATE A COMPANY LETTERHEAD

Using MS Word, create:

- Letterhead of the company (any) using such tools as: tables with invisible borders, hidden text, insertion of a picture (auto shapes) as the logo type of the enterprise. Save the document with the *docx* extension.
- Save the same form as a template with the *docx* extension in the corresponding Word folder.
- Explain how these files are used.

Result of the task: a text document - a letterhead of the enterprise, containing the main details of the enterprise and a logo, a template of the company's letterhead.

TASK 3. CREATION OF A TECHNOLOGICAL SCHEME FOR INFORMATION PROCESSING USING MS WORD AUTO FIGURES.

- While in the MS Word window, click the Insert tab. Select the Shapes tool.
- Selecting the figures from the Flowchart group, create a technological scheme for processing a document (order), including operations (stages): entering the contained order from the keyboard, storing the order in the database, searching and displaying it (Fig. 1). (The shapes in the Flowchart group of the Shapes tool are close to the requirements of the rules for the execution of schemes of GOST 19.701-90 (ISO 5807-85).
- Design the format of the shapes, the text.
- Group the shapes into a single object.

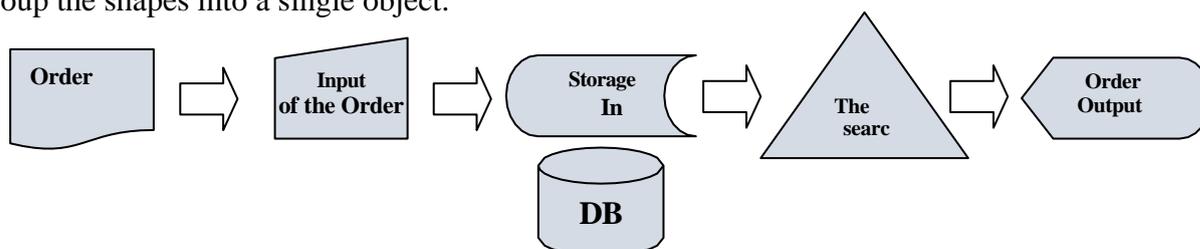


Fig.1. Technological scheme of document processing

The result of the task is a technological scheme of information processing, made using the MS Word Figures tool.

TASK 4. CORRECTION OF SPECIAL CHARACTERS OF A TEXT DOCUMENT in MS WORD 2007

At the correction stage, you can correct repeated errors in the text using the **Find command** (Edit group **on** the HOME tab). Let's consider the specifics of using this command to correct special symbols of a document, the sample of which is in the teacher's folder.

- Copy this document from the instructor's folder to your personal folder.
- Double-click to **open** the document. Turn on the  **Non-Printable Characters** tool (Paragraph group on the HOME tab). *This will allow you to display all the characters in the document on the screen, such as a space sign (a period between words), a paragraph character, in order to check the quality of typing.*
- The copied file contains typical mistakes of a novice user. Some of these errors, as well as how to resolve them, are described in Table 1. Apply these methods by placing the text cursor at its beginning beforehand.

Table 1

Error type	Algorithm of actions
The presence of several spaces between words or at the beginning of a paragraph instead of one	<p>You can fix this error by replacing two spaces with one sequentially, until this situation disappears.</p> <p>Use the Find command. In its dialog box, in the single-name tab, enter the character or combination of characters that you want to find (<i>in our case, double-press the space bar</i>), and in the Replace tab, enter the desired character to replace (<i>in our case, one space</i>).</p> <p>Click the Replace All button, and the specified symbols will be replaced. <i>This button must be pressed several times until the desired combination of characters disappears (message - Replaced - 0).</i></p> <p>Close the dialog window.</p>
The presence of the paragraph (pressed key Enter) at the end of the line that is not the last in the paragraph.	<p>It is necessary to remove unnecessary characters at the end of the paragraph, using the same command. Don't forget to set the text cursor to the beginning of the text again. In the Find and Replace window, click the More button, then by clicking the Special button. Select Paragraph Character from the list. After this sign appeared in the input field, you can reduce the dial window (the Less key). Since not all, but only extra characters of the paragraph are subject to replacement, use the Find Next mode. The text editor will consistently highlight the claim in the text symbol, and you have to decide whether to replace it or continue it. Search. If the dialog window interferes with the view of the text, move it.</p> <p>Close the dialog window.</p>

On your own, using the same command, correct other mistakes, for example, measures

- **the presence of a space** before the punctuation mark,
- **the absence of a space** after the punctuation mark.

After **correcting the** text, start **formatting the** document. You will see those that **the paragraphs of** the document have unnecessary indents/protrusions, **symbols** are made in different fonts, have different sizes, etc. Select all the text and bring its format (page, paragraph, symbol parameters) in line with the rules of text formatting. Save the resulting text document in your folder.

TASK 5. CREATING A SET OF DOCUMENTS OF THE SAME TYPE USING MS WORD

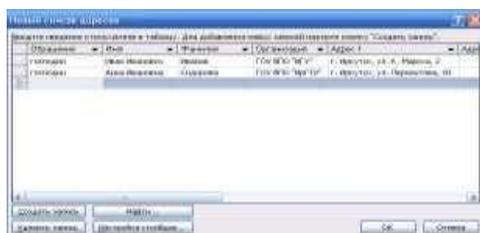
The **Merge** procedure is used when you want to create a set of documents (letters, envelope labels, etc.) to send to a large number of customers.

Each document contains both **general** and **individual** information. General information includes the text of a document, the address, etc. Individual information includes: the full names of the addressees, the addresses of the organization where the documents will be sent. In this way, the general text of the document and the list of individual information (data source) can be drawn up as separate files. During the merge process, they are automatically merged into print-ready documents. The merge process consists of several general actions: setting up the main document, connecting the document to a data source, refining the list of recipients or elements, adding text placeholders (merge fields) to the document, previewing and completing the merge. To create such documents, we will use the step-by-step **Merge Wizard**.

Problem: The secretary of the enterprise (manager) needs to write **letters of invitation to the exhibition** to several addressees on behalf of the organizers of the exhibition.

The order of completing the task:

- Launch MS Word;
- Use the step-by-step **Merge Wizard** (Mailing tab, **Start Merge tool**). The Merge window appears on the right.
- In the **Select Document Type** section, select Letters. Go to the next step of the wizard using the hyperlink **Next. Open the document**.
- We will create the general text of the document in an already open "blank" Word document. Select the Current mode in the **Document selection** section.
- Enter the text of the letter, which will be common for all documents, setting the necessary formatting parameters: **alignment - width, indent of the first line - 1 cm, line spacing - 1.5 lines**;
- Leave the first line free by setting the following format options for it: **middle alignment, first line unindented**.
- Move on to the next step **Next. Select recipients**.
- At this stage (3 out of 6), we will create a list of email recipients. Select the appropriate mode in the **Select recipients** section.
- In the New mailee list **window that opens**, enter the field values as shown in Fig. 2. After filling in the row, click **the Create Record button**. (*Come up with 3 more addressees*).
- After you enter the destination information, click **OK**.
- Save the resulting list in your folder as a **Address List.mbd file**, having previously created a Merge folder there.



We invite you to the exhibition of educational services. The opening of the exhibition will take place on 5.05.2010 at 12 o'clock. 00 min in Sibexpocenter (building 3). Organizing Committee

Address:
Irkutsk, Baikalskaya St., 300 Tram Stop No 5 –
Business Center

Fig.2

- The Merge Recipients **window opens**, which specifies the source of data for merging with the general part of the document – the list of recipients created by you. Using the tools of this window, you can refine, sort the lists, search for the recipient.
- Move on to the next step **Next. Creating an email**. At this point (4 of 6), insert the welcome line by pointing to the first blank line of text (the Welcome Line tool).
- In the Insert Greeting Line **window that opens**, you are offered the format of the string. See how

the greeting line will look in your emails using the appropriate tool (OK). The "**Greeting Line**" **object appears in the document**, which will be replaced by a specific address to the addressee when printed.

- Proceed to the step of viewing messages prepared for merging. In this step (5 out of 6), you can check what the merge result will be. The screen sequentially displays the generated emails containing general and individual information. If necessary, you can go back to the previous steps of the procedure.
- Proceed to the next step **Next. Complete the merge**. At this stage (6 out of 6), the letters can be printed. During the printing process, the desired Welcome Line will be sequentially substituted in the space provided for it in the document. Use the appropriate hyperlink, in the **Compound Printed Documents** window, select **All (OK)**.
- If the printer is not connected, as in our case, select **Print to File (OK)** mode in the **Print dialog window**.
- In the next window, specify where you want the file to be printed, which is the **Merge** folder located in your disk. Name the file **Invitation Letters**, the files to be printed always have the prn extension. End the dialog. The file prepared for printing can be viewed using the **Image and Fax Viewer**.

Result:The **Merge** folder must contain 3 files.

TASK 6. MANAGE DATA IN EXCEL. ACCOUNTING FOR ENTERPRISE CONTRACTS

Problem condition: The secretary (manager) of the company is entrusted with the registration and accounting of rates under contracts concluded by the company "**Modern Interior**" with various organizations. You should carry out these operations as soon as you receive information about the supply of products under a particular contract. To simplify the data analysis, you should manage the rows and columns of the table, as well as search for contracts by various details.

Recommended tools for solving the problem: Excel commands: **Table, Pin Areas, Hide**. To use the capabilities of these commands, perform the following operations:

✓ **Creating a table for accounting for deliveries under contracts**

- Set the pointer to cell **A2**. Use the **Tables** tool on the **Insert** tab. Select the block of cells **A2:E3**, in the window that opens, set the mode to **Table with Title (OK)**. A table appears with sorting and filtering for each column already enabled in the header. A marker for resizing the table appears in the lower-right corner of the table. The **Work with Tables** tab appears on the ribbon.
- Use the **Design** tab to enable the following table style settings: **Header Row, Total Row**. The **Total row** appears, allowing you to select the desired aggregation function for summarizing different types of totals.
- Prepare the header of the table. Select the column headers and set the following cell format: number tab - **text**, alignment tab - **centered**, both horizontally and vertically, enable the mode - **wrap by words**. Replace the column names (**Column 1**, etc.) with those shown in Fig.3.
- Prepare a blank line for data entry (**A3:E3**). For the **Contract Amount, Delivered, Balance** fields, set the **currency** format. To calculate the Balance value, enter a formula in cell **E3** (**Contract Amount - Delivered**).
- Use the Total line buttons to count the number of contracts (**No field of the agreement**) and the **Amount** command for the **Volume of contracts, Delivered, and Balance** fields.
- For the convenience of line-by-line entry, namely moving to another cell after pressing the **Enter** key, set the desired direction to **Right** in the **Edit Options** group (the "**Office**" button / **Excel Options / Advanced** button). Now you can fill in the empty row of the table with the information about the first delivery.

Name of the supplier	No of the contract	Scope of the contract	Delivered by	Balance
Furniture comfort	A-10	200 000 rubles	100 000 rubles	100 000 rubles
Windows and doors	O-20	100 000 rubles	100 000 rubles	0r.

Firefly	S-02	350 000 rubles	50 000 rubles	300 000 rubles
etc.				

Fig. 3. Receipt of products from suppliers

- To enter subsequent entries, you need to add blank lines using a marker. You can replace the entry of **Vendor** names with value substitution using the context menu command of this field – **Select from drop-down list**.

✓ **Analysis of the production situation**

- Analyze how many product deliveries have been accounted for at the moment? What is the amount of contract volumes? What is the maximum amount of the balance, the minimum?
- Change the value of a numeric field. What happens to the string

The result?

- Errors may have occurred when entering entries – re-entry of the same
Simulate this situation. Then use the **Delete duplicates** command in the No column of the **contract** (**Tools** group, **Designer** tab). *Only unique records should remain in the table.*

✓ **Implementation of the production situation – the emergence of an information request from the head of the enterprise**

- Use the Text Filters **command** to find entries that relate only to the **Windows and Doors** vendor, for example. What condition (filter) can be used to search for information? *After filtering, unfilter and display all entries.*

Which supplier, and under which contract, performed the entire scope of delivery? Set the conditions for filtering records, find the desired record. *Display all records.*

TASK 7. DEVELOPMENT OF A HOTEL WEBSITE BY MEANS OF MS PUBLISHER 2007

Problem: The hotel secretary (manager) is instructed to develop a simple website (from 4 pages), advertising the services and room stock of the hotel.

Creating and formatting pages

- Start MS Publisher 2007. In the **Popular Publication Types window**, select Publication – **Web Sites**.
- In the **Modern Layouts** window, double-click any layout you like. The **User-Friendly Web Builder window** opens. Select the site building goals as shown in Figure 1. 4. The window displays the structure of the five-page (OK) Web site that you are creating.
- Design the **Home page yourself** (example in Fig. 4 and 5).
Use a variety of fonts, character sizes, colors, and fill methods to design the page. Insert a drawing that matches the content.



Fig. 4. Website Builder Window



Fig.5. Home page

- Go to the second "**About Us**" page using the page index at the bottom of the page. Design the basic information about your hotel, such as the number of stars, the number of floors, rooms and room types (Economy, Suite, Presidential).
- Format the following pages in the same way: **Our coordinates** (specify the address of the hotel and add a picture with any map), **List of services** (for example: accommodation, breakfast, full meals, sauna). Draw up the list of services in the form of a table, **List of projects** (for example, organization of excursions), **List of employees** (indicate the full name of the hotel director - this is you and the names of two deputy directors: for guest relations and security, indicate their phone numbers).

Organizing transitions

- Go to the first page. Use the **Navigation Bar** to navigate to other pages on your site. To create

this panel, use the INSERT/JUMP BAR/CREATE command.

- In the window that opens, select the **Navigation bar** bar and click the **Add object** button without changing other parameters. A navigation bar appears on the site pages, containing hyperlinks to go to any page of the site.
- Save the resulting publication as a file named **Hotel.pub**

Checking the layout

- Select the **Layout Check** task (left window). The program reports any defects in page formatting (help).
- Save the post.

Web browsing

- While in the window, use **the Browse Web site** command. The website opens in a browser window. Check the location of page elements and the transitions between them.
- As you consistently edit and format pages in MS Publisher 2007, check the quality of your publication in browser view.

TASK 9. CREATING A LIST OF USED SOURCES IN MS WORD

To create a numbered list of sources used for information support of office activities (any, at least 5) in accordance with the requirements of the methodological recommendation of the National Library of ISU "Bibliographic design of scientific, diploma and term papers".

TASK 10. CREATING TEXT FROM A TEMPLATE

To create a text according to the sample (Fig. 7), perform the following technological operations:

- launch the Word text editor, organize the view of the window, convenient for working
- create a document based on the New Document template.
- set the main parameters of the document: page format, paragraph, symbol,
- set the modes of automatic placement, transfer and verification of the right scriptures;
- enter the sample text, add a table if it is in the sample, insert footnotes;
- proofread the text
- format individual fragments of text according to the sample: design lists, columns, borders, filling fragments;
- for text fragments that have a different style from the main one, change the font, style, and size of characters;
- indicate the student's full name in the header;
- save the text as a Word document in your folder.

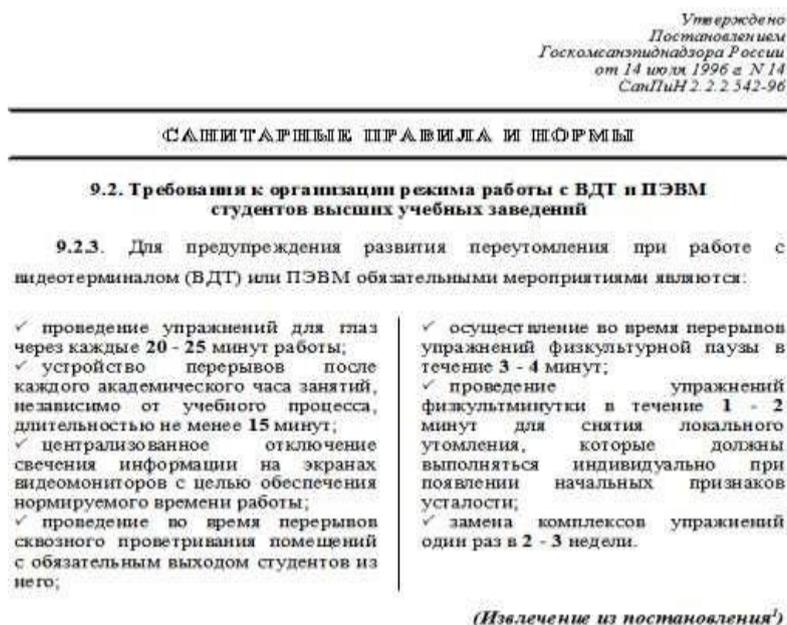


Fig. 7. Sample text document

TASK 11. CREATION OF A DATABASE FOR ACCOUNTING OF PRODUCT DELIVERIES IN MS EXCEL.

Problem: The furniture company produces several types of products. Wholesale buyers of these products are organizations of the cities of the Irkutsk region. Deliveries of products to customers are characterized by **the delivery number**, as well as the following parameters:

- name of the buyer organization,
- the city where the products need to be delivered,
- delivery date,
- type of products,
- volume of supply (in thousand rubles),
- wholesale level (large, medium, small),
- type of product transportation.

In order to keep records of the supplied products and to provide the management with information on the progress of product deliveries, it is necessary to develop a database (directories, main table) by means of EX-CEL, using the means of formatting, sorting, filtering, and table management. Create instructions (memos) for an employee of the office service on working with the database.

TASK 12. CREATION OF A DATABASE FOR ACCOUNTING OF IT COMPANIES DISTRIBUTING SOFTWARE PRODUCTS IN THE IRKUTSK REGION.

Using MS EXCEL tools, create a database (directories, main table) of IT companies (at least 5) distributing software products in the Irkutsk region. The number of main attributes of companies is at least 5.

Provide search for the necessary information by means of an auto filter, an advanced filter. Save examples of information queries and search results.

8.2. Tools of Summative Assessment

Sample questions and tasks for the credit (test)

1. Understanding of computer science and information technology, the field of IT application in various industries.
2. Connections between psychology and informatics.
3. Features of information retrieval systems and Internet databases.
4. Fundamentals of safe organization of work with computer and technical training aids.
5. Image files: raster graphics, vector graphics, image file formats supported by browsers.
6. Work with texts and data.
7. Information technology security.
8. The influence of ICT on pedagogical technologies.
9. Electronic means of educational purposes.
10. Software and methodological support.
11. Archivers: purpose, types.
12. Computer viruses, their classification.
13. Anti-virus programs, their varieties.
14. Computer networks: purpose, classification. Client-server technology.
15. Types of local networks and their features.
16. Basic computer networks: working stages
17. Main computer networks: network equipment
18. Global computer network Internet. Information services of the Internet.
19. Addressing computers on the network. Domain Name System.
20. The concept of information security. Classification of threats.

Demo version of the final test:

1. **Input information in the enterprise information system can be considered as the following resource....***(select the desired answer)*

- Equipment
- Information processing algorithm
- Raw Materials
- Staff

2. **The information product can be considered as***(select the desired answer)*

- information of a new quality about the state of an object, process or phenomenon
- Initial data on the state of the object
- intermediate information obtained when solving the problem

3. **Indicate general information technologies (basic)** *(choose an option from the proposed answers)*

- Text Information Processing Technologies
- Technologies for Work in Intelligent Systems
- Graphic Information Processing Technologies
- Information storage and retrieval technologies
- Materials Management Technologies
- Accounting Technologies

4. **The preparatory stage performed by the personnel when using the information system includes operations...** *(choose an option from the proposed answers)*

- Storage of documents in the form of archival files
- Collection of initial information
- Preparation of reporting documents
- Registration of information (record) in input documents
- Storage of intermediate information
- Input of initial information

ACEF	BDF	BCF
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5. **The main and final stages of computer information processing using an automated data processing system (ADS) include operations** *(choose an option from the proposed answers)*

- Calculation of indicators
- Input of initial information
- Formation of the resulting information
- Management Analysis of Output Information
- Improving the algorithm for calculating indicators
- Output of results as documents

ACDE	BDE	ACF
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6. **Determine the sequence of operations performed when searching for information in the database** *(choose an option from the proposed answers)*

- Control of the correctness of the information request
- Selection (filtering/grouping) of information that meets the specified conditions
- Entering an Information Request
- Issuance of information that meets the request
- Calculation of indicators

CBDA	ACDE	CABD	EDFC
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7. **What are the techniques for visualizing a spreadsheet to make it easy to view and analyze spreadsheet data?** *(choose an option from the proposed answers)*

- Calculation of indicators.
- Fixing the left side header of the table
- Enter formulas.
- Fixing the top header of the table.

- Fill the background of rows.

ABC	WDE	CDE
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8. **What is the main purpose of directories in a database?** (*select the desired answer*)

- Preparation of information for the manager.
- Ensure that data entry is one-time.
- Collecting data for calculating salaries to employees.
- Ensuring information security.

9. **Is an information request when working with a database?** (*choose an option from the proposed answers*)

- Data entry mask.
- A set of criteria for finding a record.
- Data filtering condition.
- Directory contents.

AVD	AD	Sun
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Department Chair



A.V. Rokhin

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