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| **Изображение выглядит как текст, внешний, знак, столб  Автоматически созданное описание** | **Azərbaycan Respublikası Təhsil Nazirliyi**  **Bakı DÖvlət Universiteti**  **TƏTBİQİ RİYAZİYYAT VƏ KİBERNETİKA FAKÜLTƏSİ** |  |

**TƏSDİQ EDİRƏM**

\_\_\_\_\_\_\_\_\_\_\_\_ **prof. Ə.Ə. Əliyev**

**“16” fevral 2023-cü il**

**\_\_\_\_\_\_\_\_\_informasiyanın İdarə Olunması fənninin**

**sillabusu**

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| Fakültə: | Tətbiqi riyaziyyat və kibernetika | İxtisas/  şifri: | Kompüter elmləri |  |
| Kafedra: | Proqramlaşdırma | Fənn/  şifri: | **informasiyanın İdarə Edilməsi**  **ÜF-B07** |  |
| Fənn  müəllimi: | Paşazadə Mələk Telman qızı | Qrup:  kurs: | Eng-30  II kurs |  |
| Dərəcəsi,  elmi adı: |  | Təhsil pilləsi: | Bakalavr |  |
| Vəzifəsi: | Müəllim | Kredit  və saat: | 30 saat, 2 kredit |  |
| E-mail: | melekpashazada@gmail.com | Fənnin  növü: | əsas |  |
| Əlaqə  telefonu: | 559406223 | Prerekvizit  fənn: |  |  |
| Linkedin  profili: |  | Təhsilalma  forması: | əyani |  |
| TRK-nın  rəsmi internet səhifəsi: |  | Tədris  dili: | ingilis |  |
| Kafedranın  e-mail: | Kafedra.informatika.302a@gmail.com | Tədris ili  (semestr): | 2022-2023  (II semestr) |  |

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| Description of the subject: |
| Information system is a complex of technical, software, linguistic and methodological tools that ensure the collection, storage, processing and delivery of information related to the field of application. |

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| The purpose of the subject: |
| The main purpose of teaching the course is to teach people technical skills and habits in the field of being able to get the necessary information required to solve the problems they face daily through the computer. Currently, the development of society and all its areas is related to the wide use of the growing intellectual capabilities and information resources of the Internet. Therefore, the main goal and task of teaching the course in this particular case is to acquaint students with the possibilities and scope of application of the most modern information and communication technologies, such as the field of information industry. |

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| Learning outcomes of the subject: |
| Students should be able to develop their own views on the theoretical and practical issues of the automated information system, as well as to be able to interpret their views on this area. |

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| In teaching the subject, the student: |
| Must know:  - • Basic concepts of information systems  • IS processes  • IS development stages  • Factographic, documented systems of IS types  • The structure of IS  • Service and application areas of IS  • Database concepts  • Data models  • Operations on relational data  • Normalization forms  • Database management systems |
| Must be able to:  • Setting the issue for automated IS creation for any subject area  • To choose the appropriate model for the given problem  • To choose the algorithm of normalization of the issue in the relational model  • Creating databases in SQL language  • To describe the teams that respond to certain queries on databases |
| Must master:  • To the basics of IS construction  • Project and its management  • System commissioning rules  • To choose a database management system according to the classification of the information system |

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| Teaching and learning methods: |
| Lecture: |
| Relevant materials on the topics are prepared and applied in the audience as a discussion. This method is implemented directly under the supervision of the teacher. |
| Tasks on the topic: |
| According to this method, students are presented with appropriate tasks on topics prepared by the teacher before class time. Students are given a total of 30 minutes to solve the task. Then the answers are discussed based on the lesson. This method forms critical thinking skills in students. |
| Presentations: |
| Students prepare presentations according to predetermined lecture topics. These presentations are one of the important methods for developing presentation skills in students. This method also helps students to develop individual skills. |
| Debates: |
| By means of this method, team spirit is formed in students, they develop a more critical approach to issues, connections between all topics are established by means of counterarguments. |
| Interview method: |
| With the help of this method, recruitment and interview processes are realistically revived with the participation of two or more students. In this way, students are given advice on how to properly assess the difficulties and situations they may encounter in real practice, find a solution, etc. |

**Note:** During the lecture, the teacher may use other methods and techniques (which may change depending on the topic) taking into account innovative educational practices.

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| Tövsiyyə olunan əsas və əlavə ədəbiyyat: |
| Recommended primary and additional reading: |
| 1. S.Kərimov İnformasiya sistemləriş Elm Nəşr. 2009, 564s. 2. Дейт К. Руководство по реляционной СУБД DB2. - М.: Финансы и статистика, 1988. - 320 с. 3. Дейт К. Введение в системы баз данных //6-издание. - Киев: Диалектика, 1998. - 784 с.  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | |  | |  | |  | |  | | | | | |
| Additional literature: |
| 1. Андрейчиков, А.В. Интеллектуальные информационные системы: учебник, 2002, 458c. 2. Ханенко В.Н. Информационные системы Машиностроение 1988, 127с. 3. Глушаков С.В. Ломотько Д.В. Базы данных Учебный курс Харьков, 2000, 504 с. |

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| Recommended subject-related electronic resources, articles (foreign and domestic): |
| https://www.w3schools.com/office/ |
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**The content and teaching procedure of the subject lecture**

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| Week | History  (planned) | The name of the topic | Teaching and learning method | What the student should know at the end of teaching the subject  (training results) | General and specific professional competencies | Questions about the topic | Homework | Number of hours |
| 1 | **22.02.23**  02.03.23 | Information, its forms and methods of description. | **Lecture**  Seminar | Information, its forms and methods of description. Signals and data. Dialectical unity of data and methods in the information process. Creation, transmission, reception, storage and processing of information. Number systems. of EHMs. | Conversion from one number system to another number system. Components of computer science. Generations | 1.Information, its forms and methods of description. 2.Signals and data. | Examining the topic passed | **2**+2 |
|  | [Management Information Systems Managing the Digital Firm](https://www.amazon.com/dp/0135191793?tag=uuid10-20" \t "_blank) [Kenneth Laudon](https://bookauthority.org/author/Kenneth-Laudon), [Jane Laudon](https://bookauthority.org/author/Jane-Laudon) | | | | | | | | |
| 2 | **09.03.23**  16.03.23 | Information management hardware. | **Lecture**  Seminar | Basic and peripheral devices of a personal computer. Classification of FCs, working principle. | The main components of FCs and their functions. Monitor, keyboard, Mouse. Types of monitors. The structure of the keyboard. | 1.The main components of FCs and their functions.  2.Classification of FCs, working principle. | Examining the topic passed | **2**+2 |
|  | [Management Information Systems Managing the Digital Firm](https://www.amazon.com/dp/0135191793?tag=uuid10-20" \t "_blank) [Kenneth Laudon](https://bookauthority.org/author/Kenneth-Laudon), [Jane Laudon](https://bookauthority.org/author/Jane-Laudon) | | | | | | | | |
| 3 | **20.03.23**  30.03.23 | Software tools of information management. Types of software. | **Lecture**  Seminar | Definition and Classification of Software. Programs and their types, base, system, service and application programs. OS development history, functions, software overlays. File and its main characteristics, attributes, file path. | Key features and versions of Windows OS. Operations with the file structure in Windows OS. Windows OS objects and controls, main menu structure, context menu. Operations on files and folders. Structure and types of windows | 1. Programs and their types, base, system, service and application programs. | Examining the topic passed | **2**+2 |
|  | [Management Information Systems Managing the Digital Firm](https://www.amazon.com/dp/0135191793?tag=uuid10-20" \t "_blank) [Kenneth Laudon](https://bookauthority.org/author/Kenneth-Laudon), [Jane Laudon](https://bookauthority.org/author/Jane-Laudon) | | | | | | | | |
| 4 | **06.04.23**  13.04.23 | Processing of information with text editors and table processors. | **Lecture**  Seminar | Definition and classification of text editors and processors. General information about the MS Word text editor, the structure of the program window, the main interface elements. Command group and toolbar functions. Operations on a text fragment. Entering, editing, formatting, saving and printing text. Creating tables and graphics capabilities of the Word word processor. Data processing tools with spreadsheets. | Interface elements of MS Excel spreadsheet processor. Workbook and worksheets. Types of data. Entering and editing formulas. Absolute and relative references. Creating, editing and formatting charts in the Excel spreadsheet processor. Data ordering and filters | 1. Interface elements of MS Excel spreadsheet processor. | Examining the topic passed | **2**+2 |
|  | [Management Information Systems Managing the Digital Firm](https://www.amazon.com/dp/0135191793?tag=uuid10-20" \t "_blank) [Kenneth Laudon](https://bookauthority.org/author/Kenneth-Laudon), [Jane Laudon](https://bookauthority.org/author/Jane-Laudon) | | | | | | | | |
| 5 | **20.04.23**  27.04.23 | Database management systems and use in the educational environment. MS Access. | **Lecture**  Seminar | Basic concepts of database technologies: database, tuple, attribute, domain, ratio, etc. Database management systems (DBMS), their functions and types. | Data models: hierarchical, relational, network. Objects in MS Access. Fields and data types. Work with data. Entering and editing a post. Information search terms. Data search, deletion and sorting operations | 1. Objects in MS Access. | Examining the topic passed | **2**+2 |
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| 6 | **04.05.23**  11.05.23 | Local and global networks. Internet global network. Internet search engines. | **Lecture**  Seminar | Definition and classification of computer networks according to various characteristics. Network equipment: bridge, gateway, router, concentrator, repeater. Client-server technologies. Information exchange in computer networks. | Topology of local networks: bus, star, ring and hybrid. History of the Internet, basic concepts. Features of the TCP/IP base protocol of the Internet. The principle of addressing resources on the Internet. DNS – domain name system. Internet connection methods. Types of Internet services. Internet browsers. The working principle of search systems and information search. Mobile communication and Intranet technology. Didactic overview of the Internet in education, its possibilities and functions. | 1.Network equipment: bridge, gateway, router, concentrator, repeater. | Examining the topic passed | **2**+2 |
|  | [Management Information Systems Managing the Digital Firm](https://www.amazon.com/dp/0135191793?tag=uuid10-20" \t "_blank) [Kenneth Laudon](https://bookauthority.org/author/Kenneth-Laudon), [Jane Laudon](https://bookauthority.org/author/Jane-Laudon) | | | | | | | | |
| 7 | **18.05.23**  24.05.23 | Information security. Application of electronic signature. Electronic government. | **Lecture**  Seminar | Information protection methods. Viruses and antiviruses. Symmetric and asymmetric encryption methods. Secret and public key concepts. | Importance of digital signature. General information about digital certificate. Components of electronic government | 1.Information protection methods. | Examining the topic passed | **2**+2 |
|  | [Management Information Systems Managing the Digital Firm](https://www.amazon.com/dp/0135191793?tag=uuid10-20" \t "_blank) [Kenneth Laudon](https://bookauthority.org/author/Kenneth-Laudon), [Jane Laudon](https://bookauthority.org/author/Jane-Laudon) | | | | | | | | |
| 8 | **25.05.23**  25.05.23 | Structed Query Language | **Lecture**  Seminar | History and development of information technologies (IT). Hardware and software tools of automated information and communication technologies. Informatization of society. | The main characteristics of the information society - technological, social, economic, political, cultural. Informatization of society as one of the regularities of modern social progress. Formation of information culture. Application of ICT in education | 1. The main characteristics of the information society - technological, social, economic, political, cultural. | Examining the topic passed | **1**+1 |
|  | [Management Information Systems Managing the Digital Firm](https://www.amazon.com/dp/0135191793?tag=uuid10-20" \t "_blank) [Kenneth Laudon](https://bookauthority.org/author/Kenneth-Laudon), [Jane Laudon](https://bookauthority.org/author/Jane-Laudon) | | | | | | | | |

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| NN | The name of the topic | Delivery  date |
| 1. | Information, its forms and methods of description. | 20.02 – 20.03 |
| 2. | Information management hardware. |
| 3. | Information management hardware. |
| 4. | Software tools of information management. Types of software. |
| 5. | Software tools of information management. Types of software. |
| 6. | Processing of information with text editors and table processors. | 27.03 – 24.04 |
| 7. | Processing of information with text editors and table processors. |
| 8. | Database management systems and use in the educational environment. MS Access. |
| 9. | Database management systems and use in the educational environment. MS Access. |
| 10. | Local and global networks. Internet global network. Internet search engines. |
| 11. | Local and global networks. Internet global network. Internet search engines. | 01.05 – 29.05 |
| 12. | Information security. Application of electronic signature. Electronic government. |
| 13. | Information security. Application of electronic signature. Electronic government. |
| 14. | Structed Query Language |
| 15. | Structed Query Language |

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| Rules: |
| The requirement for organizing a lecture class: |
| * General information about the subject should be delivered to students during lectures (electronic versions of lectures should be given to students);Fənnin mühazirəsinə aid sillabus tədris prosesinin başlamasının ilk 10 günündə tələbələrə çatdırılmalıdır; * Subject-related exam questions should be delivered to students in the first 10 days of the educational process; * The new topic should be explained with the demonstration of visual aids (PPT and video files) (the nature of the lesson and the topic should be taken into account). |
| Requirements for the organization of a workshop (seminar) class: |
| * Different teaching methods should be used in the organization of the workshop (seminar) class. These methods should promote a student-centered approach and the active role of the student in the learning process. The teaching and learning methods that can be used are reflected in the Teaching and learning section (section 4) in the Education programs of each specialty. * Before the mid-term and final exams, students' mastery levels should be checked (different methods can be used, e.g. quiz). * During the seminar sessions, the students' mastery of the previous topic should be evaluated by conducting an oral and written survey for each lesson. * At the end of the semester, the joint grade of the students for the workshop (seminar) lesson should be calculated (Activity). |
| Requirements for laboratory work: |
| * It is important to conduct individual laboratory work during the semester. (the nature of the subject should be taken into account). * A white coat should be worn in the laboratory class (the nature of the subject should be taken into account). * The results of the laboratory work should be recorded in a notebook. In each protocol, the name, principle, progress, results of the laboratory work, and the results should be checked by the teacher and evaluated by conducting an oral survey. * At the end of the semester, the grade point average should be calculated. |
| Requirements for performing freelance work (individual): |
| Subjects and submission dates of the free work (the free work can consist of a single topic, provided that the topic covers 70% of the content of the subject).  During the semester, the completion of free (individual) topics must be given by the student in the form of presentations. No more than 15 minutes should be allocated to the discussion of free work. The presentation itself (presentation) must be submitted in electronic and printed version. |
| Colloquium requirements: |
| 3 colloquiums are held during the semester. Depending on the topic, the teacher can freely choose the form of the colloquiums (oral, written, quiz, comparison table, etc.). |
| Attendance: |
| * Participation of students in all classes is important. Students must submit information about missing classes for certain reasons (illness, family situation, etc.) to the dean of the faculty. Students who miss more than 25% of classes should not be admitted to the exam. |
| Lateness to class or other class violations: |
| * A student who is more than 5 minutes late to the class will not be admitted to the class. Nevertheless, the student can be admitted to the second lesson. |
| Check work (Quiz): |
| * A student who does not participate in the examination due to the reasons given to the teacher and the dean in advance can write the examination in the following week. |
| Exams: |
| * All issues related to the student's participation in the exam or passing the exam are resolved by the faculty management. * Midterm and final exam questions should be given to students at the beginning of the semester before the exam. The questions of the midterm exam are not repeated in the final exam. |
| Violations of examination rules: |
| * Disruption of the course of the exam and transfers by the student during the midterm and final exams are prohibited. Students who do not comply with this rule will have their exam canceled and expelled from the exam. |
| Rules of conduct for students: |
| * It is forbidden to violate the teaching process and ethical rules, as well as unauthorized discussions between students and use of mobile phones during the lesson. |

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| Evaluation  (of the subjects of each ATM  considering the specificity  is carried out by purchasing) | Components | Date/deadline |
| Individual laboratory work | 7 works during the semester (from subject hour  subject to change) |
| Quiz | During the semester, depending on the nature of the subject and classroom hours, 1 or more may be held (before the midterm and final exam). |
| Freelance jobs  ( individual )  presentation | 1 time during the semester (or 10 presentations if there are 10 topics) |
| Attendance | At the beginning of each class during the semester |
| Midterm exam  (colloquium) | According to the schedule |
| Final exam | According to the schedule |
| Students who do not participate in the colloquiums and the exam for a valid reason can retake the exam during the same semester. A student who does not follow this rule is evaluated with 0 (zero) points. Avoidance of colloquiums and exams related to social activities is not allowed. | | |

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| Assessment and distribution of marks during the semester |
| The evaluation of the subject is carried out according to the multi-point system. In order to be successful, the student must score a minimum of 17 points in the end-of-semester exam, a minimum of 51 points in total.  Evaluation according to the semester result (based on the points collected before the exam and the exam):   |  |  |  | | --- | --- | --- | | 91 – 100 points | excellent | A | | 81 – 90 points | Very Good | B | | 71 – 80 points | Good | C | | 61 – 70 points | Enough | D | | 51 – 60 points | satisfactory | E | | Below 51 points | insufficient | F | |

**Müəllim: \_\_\_\_\_\_\_\_\_\_\_ Mələk Paşazadə**

**Tarix:15/02/2023**