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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**

**\_\_\_\_\_\_\_\_\_Web texnologiyalar fənninin**

**sillabusu**

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| Fakültə: | Tətbiqi riyaziyyat və kibernetika | İxtisas/  şifri: | Kompüter elmləri |  |
| Kafedra: | Proqramlaşdırma | Fənn/  şifri: | **Web texnologiyalar 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: | 45 saat, 4 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](mailto:Kafedra.informatika.302a@gmail.com) | Tədris ili  (semestr): | 2022-2023  (II semestr) |  |

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| Description of the subject: |
| The relevance and importance of the subject "Web technologies" in the bachelor's training in the field of computer science is that electronic information means play an important role in people's lives today in meeting the society's need for information. The subject "Web technologies" consists of the following sections: HTML; CSS; ASP and PHP technologies. |

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| The purpose of the subject: |
| The main goal of the subject "Web technologies" is the development of websites using modern web technologies |

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| Learning outcomes of the subject: |
| The subject "Web technologies" is based on courses in computer graphics, databases, modern programming languages, theory of algorithms. |

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| In teaching the subject, the student: |
| Must know:  - Rules for using HTML language for building the structure of web pages;  - Methods of using CSS for designing and giving effects to web pages;  - Coordination of HTML language and CSS for more effective design of web pages;  - Methods of using JavaScript to provide functionality to web pages;  - general concepts about ASP.NET (Active Server Pages);  - Concepts about PHP and its general structure; |
| Must be able to:  - Establishing the general structure of the web page;  - Creating different styles with CSS;  - Linking styles with HTML document;  - Providing functionality to web pages using JavaScript;  - Development of interactive websites in ASP.NET;  - Development of interactive websites in PHP; |
| Must master:  - Rules for building the structure of the page using the HTML language;  - Rules for applying CSS styles to HTML elements;  - Rules for developing effective, functional websites using ASP.NET technology.  In the teaching of the subject, it is advisable to have a laptop and a projector for the presentation of slides prepared according to the topics. |

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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: |
| Atayev Q.N., Qurbanov A.İ. Web proqramlaşdırmaya giriş. Propolis MMC nəşriyyatı –2016, 302 s.   1. 10. Imar Spaanjaars “Begining ASP.NET in C# and VB ” . 2009; 346р.  Ильичевой Л..М.. HTML, XHTML и CSS.  Диалектика, 2007, 742 с. 4. Devid Flanaqan. JavaScript. O'Reilly Media, 2011, 1096 p.   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | |  | |  | |  | |  | | | | | |
| Additional literature: |
| 1. [Management Information Systems Managing the Digital Firm](https://www.amazon.com/dp/0135191793?tag=uuid10-20) [Kenneth Laudon](https://bookauthority.org/author/Kenneth-Laudon), [Jane Laudon](https://bookauthority.org/author/Jane-Laudon)   2.Стефен Уолтер “ASP.NET. Искусство создания web- сайтов”. 2006; 672с.  3. “Программирование на ASP.NET ”http://www.internet-technologies.ru/articles/category\_35.html;  4. “ASP.NET” https://ru.wikipedia.org/wiki/ASP.NET  5. “.NET Framework и ASP.NET — платформы для веб-разработки” https://web-creator.ru/articles/dot\_net\_and\_asp |

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

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| Week | Date  (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 cultural Professional competencies | Questions about the topic | Homework | Number of hours |
| 1 | 22.02.23 | Introduction to web technologies. HTML language. | Lecture  Seminar | HTML (Hypertext Markup Language) is a special hypertext for creating any document or page that can be read by a browser. | Modern Web technologies expand the functions of websites, give them dynamism, create beautiful design effects, and provide interactive communication between the user and the information source. | HTML is the fundamental base technology of the Internet and is a language based on descriptors that define the type and function of a web page. | Examining the topic passed | 2 |
|  | [1] p 4-11, [2] | | | | | | | |
| 2 | 01.03.23 | Basic elements of HTML language. Paragraph and headings in HTML. | Lecture  Seminar | Every web page or html document has a standard structure. So, each html document consists of nested html elements. HTML elements are defined using html tags. There are a number of tags in the html language for designing the text elements of a web page. | HTML elements are defined using html tags. | These tags define the parameters of paragraphs and headings, choose the size and type of font used for the text, define the newline mode with automatic hyphenation in the text, etc. serve | Examining the topic passed | 2+2 |
|  | [1] p 11-27 | | | | | | | |
| 3 | 9.03.23 | Graphical objects in HTML. HTML tables | Lecture  Seminar | Since web pages are hypermedia documents, they carry audio and video information as well as pictures. Tables are widely used when creating HTML documents | The table is mainly used to place text, numerical information, design elements in an organized form on the pages | creating HTML documents | Examining the topic passed | 2 |
|  | [1], p 49-79 | | | | | | | |
| 4 | 15.03.23 | Forms in Html. Frames in Html | Lecture  Seminar | Forms are a key element of dynamic websites. Using form elements, the user can transfer certain information to the server plugin, navigate to certain pages of the Website and perform other operations. | Frames – ensure multiple documents are displayed in a single browser | Frames – ensure multiple documents are displayed in a single browser window. When using frames, the browser's workspace window is divided into several small areas where different html documents are displayed | Examining the topic passed | 2+2 |
|  | [1] p 79-100 | | | | | | | |
| 5 | 29.03.23 | Lists in HTML. Styles in HTML | Lecture  Seminar | The HTML language allows you to create 3 different types of lists on a Web page:  1. Bullet list;  2. Numbered list;  3. Appointment lists;  Styling HTML elements can be done with style attributes.  HTML |  | Background Color property, HTML Text Color property, HTML Fonts property, HTML Text Alignment  Styling HTML elements | Examining the topic passed | 2 |
|  | [1] p 49-79 | | | | | | | |
| 6 | 5.04.23 | CSS. Basic concepts. Syntax of CSS | Lecture  Seminar | Cascading Style Sheets (en. Cascading Style Sheets, en. Cascading Style Sheets, ru. Каскадные таблики стилей) - language, arbitrary HTML - maintains the appearance of the document and ensures that the codes written in HTML are more visual in terms of appearance | Each CSS rule consists of a selector and a declaration part. | An optional element of HTML is a possible CSS selector. The selector property sets the style of the specified element. | Examining the topic passed | 2+2 |
|  | [1], p 212-251, [2] | | | | | | | |
| 7 | 12.04.23 | CSS text. CSS tables | Lecture  Seminar | Certain changes (manipulation) can be made on the given text through CSS properties. Sports, economics, statistics, forums, etc. tables are widely used on sites with other formats. | tables are widely used on sites with other formats. | With the help of CSS, it is possible to build tables with a fairly neat and interesting design. | Examining the topic passed | 2 |
|  | [1], p 212-251, [3] | | | | | | | |
| 8 | 19.04.23 | CSS margins, padding, borders, width, height features. CSS links | Lecture  Seminar | CSS-defines margins,padding,borders,width,height properties for all XHTML elements.  Padding is the area between the text area and the margin. padding-top, padding-right, padding-bottom, padding-left, padding  Height specifies the height of the block or its replacement elements (such as the <img> element). | Any accepted length units can be specified for height, such as pixels (px), inches (in), etc.  Width specifies the width of the block or its replacement elements.  A border is one or more lines around the text area and padding. | 1.The margin  2.Padding | Examining the topic passed | 2+2 |
|  | [1-3], p 289-300 | | | | | | | |
| 9 | 19.04.23 | Introduction to JavaScript. JavaScript client and JavaScript client usage | Lecture  Seminar | JavaScript is an untyped language, which means that it is required to define the types of variables in this language. In JavaScript, objects represent free values ​​in their name properties. In this respect, they resemble Perl PD's associative arrays, C structs, or C++ or Java objects. The JavaScript core supports simple data types, numbers, strings, and Bull values. | The JavaScript interpreter integrates with the web browser through a JavaScript client. Accordingly, when people think of JavaScript, the first ten JavaScript clients come to mind. A web browser equipped with a JavaScript interpreter can display content executed over the Internet in the form of JavaScript scripts. | JavaScript client | Examining the topic passed | 2 |
|  | [2]. p.150-178 | | | | | | | |
| 10 | 26.04.23 | Lexical structure of JavaScript (character separators and line breaks, non-essential semicolons). Comments, literals in JavaScript | Lecture  Seminar | JavaScript, as well as Java and C++, support C-style comments. Literal – is the value shown directly in the text of the program. | The lexical structure of the programming language - determines the rules of writing programs  is a set of elements. Low-level syntax of the language; | variable names, symbols used for comments, to distinguish one instruction from another, etc. This short chapter documents the lexical structure of JavaScript. | Examining the topic passed | 2+2 |
|  | [4], p.5-11, 75-88 | | | | | | | |
| 11 | 03.05.23 | Identifier in JavaScript. Reserved words in JavaScript | Lecture  Seminar | Programming languages ​​use various objects such as variables, constants, functions, etc. identifiers are used to name.  Identifiers consist of letters, numbers and some special characters. Although the rules of writing identifiers in different programming languages ​​are different, their basic principles are as follows:  1. The identifier can consist of letters and numbers. It must start with a letter only.  2. The identifier cannot contain spaces or punctuation marks. Some special characters are allowed, such as "\_" or "$".  3. All programming languages ​​have keywords to write language operators. The identifier must not overlap with any keywords.  4. The identifier can be written in both lowercase and uppercase letters.  JavaScript has some kind of reserved word. These words cannot act as identifiers (as variable, function, and loop tag names) in JavaScript programs. | JavaScript has some kind of reserved word. These words cannot act as identifiers (as variable, function, and loop tag names) in JavaScript programs. | 1. The identifier can consist of letters and numbers. It must start with a letter only.  2. The identifier cannot contain spaces or punctuation marks. Some special characters are allowed, such as "\_" or "$".  3. All programming languages ​​have keywords to write language operators. The identifier must not overlap with any keywords.  4. The identifier can be written in both lowercase and uppercase letters.  JavaScript has some kind of reserved word | Examining the topic passed | 2 |
|  | [4], p. 90-118 | | | | | | | |
| 12 | 10.05.23 | Data types and values ​​in JavaScript. Functions, functional literals in JavaScript | Lecture  Seminar | Computer programs work as a result of price manipulation. Represented and manipulated in a programming language, values ​​consist of a data type (data types) and a set of data types that support this type, which is one of the most fundamental characteristics of a programming language. JavaScript allows you to work with elementary data types: numbers, text strings (or just strings), and boolean values ​​(or just boolean values).  A function is a fragment of executable code that is predefined in a JavaScript program or JavaScript implementation. | A function is defined only once in a JavaScript program, but can be executed or called whenever Functions can take arguments, a value or parameters that specify values ​​and perform calculations; the function can also return a value that is the result of these calculations. | JavaScript implementation. | Examining the topic passed | 2+2 |
|  | [1], p 267-282, | | | | | | | |
| 13 | 17.05.23 | Boolean values ​​and value transformations in JavaScript. Strings in JavaScrippt | Lecture  Seminar | A logical data type consists of only possible logical values ​​represented by two literals true and false. A logical value is executed around true | A string is a data type in JavaScript that allows sequences of letters, numbers, punctuation marks, and other Unicode characters, as well as text input. | The results of comparisons performed in JavaScript programs are usually boolean values. | Examining the topic passed | 2 |
|  | [5,6 ] p 258-266 | | | | | | | |
| 14 | 24.05.23 | Numbers in JavaScript. General information about ASP. Syntax of ASP | Lecture  Seminar | Numbers are a basic data type that does not require special explanation. Unlike PDs such as C and Java, JavaScript does not distinguish between integers and natural numbers. | In JavaScript, all numbers are represented by 64-degree natural values. This format is defined | IEEE 754.1 standard | Examining the topic passed | 2+1 |
|  | [1, 10, 11]. | | | | | | | |
| 15 | 31.05.23 | General information about ASP Session,Cookies. General information about PHP | Lecture  Seminar | ASP (Active Server Pages) technology was created by MicroSoft. To make the web page interactive with the application of ASP technology, it is necessary to refer to the script written in the macro language from the web page. The script is located and interpreted directly on the server. After that, a ready-made HTML document is sent to the user's browser along with the results of the ASP script. Therefore, | it is rightly said that it does not matter what software is on the user's computer to implement ASP technology. However, it is important to determine the type of Web server that ASP will be used on. So, not all of them accept this technology. Session ensures that user data is stored in the browser. It is a very reliable method. | 1.When the user exits the site, the data for that user is deleted from the browser memory.  2. If important data is to be stored, this method should be used. | Examining the topic passed | 2 |
|  | [1-3, 9]. | | | | | | | |

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| NN | The name of the topic | Delivery  date |
| 1. | Introduction to web technologies. HTML language. | 20.02 – 20.03 |
| 2. | Basic elements of HTML language. Paragraph and headings in HTML. |
| 3. | Graphical objects in HTML. HTML tables |
| 4. | Forms in Html. Frames in Html |
| 5. | Lists in HTML. Styles in HTML |
| 6. | CSS. Basic concepts. Syntax of CSS | 27.03 – 24.04 |
| 7. | CSS text. CSS tables |
| 8. | CSS margins, padding, borders, width, height features. CSS links |
| 9. | Introduction to JavaScript. JavaScript client and JavaScript client usage examples |
| 10. | Lexical structure of JavaScript (character separators and line breaks, non-essential semicolons). Comments, literals in JavaScript |
| 11. | Identifier in JavaScript. Reserved words in JavaScript | 01.05 – 29.05 |
| 12. | Data types and values ​​in JavaScript. Functions, functional literals in JavaScript |
| 13. | Boolean values ​​and value transformations in JavaScript. Strings in JavaScript |
| 14. | Numbers in JavaScript. General information about ASP. Syntax of ASP |
| 15. | General information about ASP Session,Cookies. General information about PHP |

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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**