

<b>Identification</b>	<b>Department</b>	Computer Science
	<b>Program</b>	Undergraduate
	<b>Subject</b>	<b>CMS 220: Web Programming 1</b>
	<b>Term</b>	Fall 2023
	<b>Instructor</b>	<b>Rashad Aliyev</b>
	<b>E-mail</b>	rashad@aliev.info
	<b>Classroom/hours</b>	11 Mehseti str. (Neftchilar camp.)
<b>Prerequisites</b>	CMS 115: Computer Applications in Engineering	
<b>Language</b>	English	
<b>Compulsory/Elective</b>	Compulsory	
<b>Text books and course materials</b>	<p><b><u>Core Textbooks:</u></b></p> <ol style="list-style-type: none"> <li>1. Modern HTML &amp; CSS From The Beginning (Including Sass): Build modern responsive websites &amp; UIs with HTML5, CSS3 &amp; Sass! Learn Flex &amp; CSS Grid. Shruti Balasa, 2022</li> <li>2. CSS Flex &amp; Grid: Complete Guide with Real World Examples and Code Snippets. Liz Thompson , 2023</li> <li>3. Learning Web Design, 4<sup>th</sup> Edition by Jennifer Robbins. A Beginners Guide to HTML, CSS, JavaScript and Web Graphics. O'Reilly Media, 2012</li> <li>4. Learning PHP, MySQL and JavaScript with JQUERY, CSS and HTML 5 (E-book, 4<sup>th</sup> Edition) by Robin Nixon. O'Reilly Media, 2015</li> <li>5. JavaScript &amp; jQuery. Interactive Front-End Web Development by John Wiley &amp; Sons, 2014</li> </ol> <p><b><u>Websites:</u></b></p> <ol style="list-style-type: none"> <li>1. <a href="http://www.w3schools.com/">http://www.w3schools.com/</a></li> </ol>	
<b>Teaching methods</b>	<b>Case analysis</b>	
	<b>Group discussion</b>	+
	<b>Lab</b>	+
	<b>Lecture</b>	+
	<b>Course paper</b>	+

	<b>Others</b>	
<b>Evaluation Criteria</b>	<b>Methods</b>	<b>Percentage (%)</b>
	<b>Midterm Exam</b>	<b>20%</b>
	<b>Case studies</b>	
	<b>Class Participation + Activity</b>	<b>10%</b>
	<b>Quizzes (3)</b>	
	<b>Project</b>	<b>30%</b>
	<b>Presentation</b>	
	<b>Laboratory Work (Assignments)</b>	
	<b>Final Exam</b>	<b>40%</b>
	<b>Other</b>	
	<b>Total</b>	<b>100%</b>
<b>Course objectives</b>	This course will introduce the fundamental scripting languages and technologies of the web including HTML5, CSS3, Flexbox, Grid, JavaScript, Bootstrap framework and Introduction to REACT.	

<p><b>Learning outcomes</b></p>	<p>By successfully completing this course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Learn all syntax of HTML &amp; HTML 5 scripting language.</li> <li>• Learn all powerful features of CSS 3 like animation, transition.</li> <li>• Learn to write responsive styles for all screen resolutions and devices.</li> <li>• Learn to design dynamic websites that meet specified needs and interests.</li> <li>• Learn to write well-structured, easily maintained JavaScript code.</li> <li>• Learn to use JavaScript libraries (e.g. jQuery) to create dynamic pages.</li> <li>• Learn to design web pages with powerful framework Bootstrap.</li> </ul>
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<p><b>Course outline</b></p>	<p>Introduction to Web Programming   HTML and CSS Styles   HTML Tables &amp; HTML Elements   HTML Forms   CSS Box Model   CSS Positioning   HTML Media   Responsive Web Design   Advanced CSS3: Transforms, Transitions and Animations   HTML5 – SVG (Scalable Vector Graphics)   Responsive Grid System   Introduction to Bootstrap   Bootstrap CSS   Working with Bootstrap Layouts &amp; Themes   Flexbox   CSS Grid  Introduction to JavaScript   JS Conditions   JS Forms   JS DOM   JS BOM   jQuery</p>
<p><b>Course policy</b></p>	<p><b>Lesson organization:</b> General information on the subject will be provided for the students during lectures.</p> <p><b>Attendance:</b> Participation of students at class is important. Students should inform dean’s office about missing lessons for particular reasons (illness, family issues and etc.).</p> <p><b>Lates:</b> Students have to get to class on time.</p> <p><b>Exams:</b> All the issues related to the participation and admission to the exam are regulated by the faculty dean. Topics of midterm and final exams are provided for the students before the exams.</p> <p><b>Violation of the rules of the exams:</b> Cheating and plagiarism is equal to Zero.</p> <p><b>The rule for completing the course:</b> In accordance with the University rules the overall success rate to complete the course should be 60% or above. The students who failed the exam would be to take this subject next semester or next year.</p> <p><b>Rules of conduct for Students:</b> Disruption of the lesson and not following ethical norms during the lesson, as well as conduction of the discussions by the students without permission and using mobile phones is forbidden.</p> <p><b>Project Topic Selection:</b> Students will receive email about projects in start of course and has time till end of course to complete it.</p> <p><b>Project Submission Timeline:</b> In this course, students will be assigned one or more projects that contribute to their overall learning and assessment. It is important to adhere to a structured timeline for project submissions to ensure effective</p>

	<p>learning and assessment.</p> <p><b>Project Late submission:</b> Projects have specific deadlines and must be submitted on time via email. In general, a late submission will not be graded and receive a score of zero. With prior arrangements, students may be allowed to submit their late projects after the due date. However, students who submit project up to 3 days late will be penalized by 10 percent per day applied to the grade achieved on the late project. Students who submit projects more than 3 days late will receive a grade of zero on the project.</p>
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Tentative Schedule			
Week	Date	Topics	Textbook/Assignments
1		<b>Introduction to Web Programming.</b>  Introduction to Web Design & Web Development   Introduction to Dynamic Web Content   Basics of HTML   HTML Tags  (Theory: 90 minutes + Practice: 50 minutes + Group discussion: 40 minutes)	Presentation; Chapter 1, 2, 3, 4 in Core Textbook [1]; Website 1
2		<b>HTML and CSS basics.</b> HTML Formatting Elements   HTML Links   HTML Images   HTML Styles-CSS   CSS Syntax   HTML Head   HTML Background   HTML Block and Inline Elements  (Theory: 90 minutes + Practice: 90 minutes)	Presentation; Chapter 5, 6, 7 in Core Textbook [1]; Website 1
3		<b>HTML Tables &amp; Lists. Forms in HTML.</b>  HTML Tables   HTML Lists and Nested Lists   HTML Form Elements  (Theory: 45 minutes + Practice: 45 minutes + Quiz#01: 90 minutes)	Presentation; Chapter 8, 13 in Core Textbook [1]; Website 1
4		<b>CSS Selectors. CSS3 Elements.</b> CSS Selectors   CSS Border   CSS Margin   CSS Padding	Presentation; Chapter 9, 14 in Core Textbook [1];

		(Theory: 90 minutes + Group work: 45 minutes + Practice: 45 minutes)	Section 18 in Core Textbook [2]; Website 1
5		<b>CSS Positioning and Layouts.</b> The Position Property   Overlapping Elements   CSS Floating   CSS Blocking   CSS Image Gallery  (Theory: 90 minutes + Practice: 90 minutes)	Presentation; Chapter 15, 16 in Core Textbook [1]; Section 19 in Core  Textbook [2]; Website 1
6		<b>Responsive Web Design.</b> HTML Multimedia Formats   HTML Responsive   Media Queries   Grid View   Framework  (Theory: 90 minutes + Practice: 90 minutes)	Presentation; Section 24 in Core Textbook [2]; Website 1
7		<b>Advanced CSS3: Transforms, Transitions and Animations.</b> CSS3 2D and 3D Transforms   CSS3 Transitions   Animation Properties  (Theory: 90 minutes + Group work: 45 minutes + Practice: 45 minutes)	Presentation; Chapter 17 in Core Textbook [1]; Website 1
8		<b>Creating Nested Navigation Menus and Web Pages</b>  Vertical Navigation Bar   Horizontal Navigation Bar   Nested Navigation Bars	Presentation;

		(Theory: 45 minutes + Practice: 45 minutes + Quiz#02: 90 minutes)	
<b>9</b>		<b>Midterm Exam Preparation + Midterm Exam</b>	
<b>10</b>		<b>Introduction to JavaScript. Syntax &amp; Datatypes. Loops &amp; Conditions.</b>  Introduction to Java Script   JS Syntax   JS Datatypes   Loops & Conditions  (Theory: 90 minutes + Practice: 90)	Presentation; Section 13, 14 in Core  Textbook [2]; Chapter 2 in Core Textbook [3];  Website 1
<b>11</b>		<b>Strings, Arrays and Objects in JavaScript</b>  JS String   JS String Methods   JS Arrays   JS Array Methods   JS Objects	Presentation; Section 14, 15 in Core Textbook [2]; Chapter 3 in Core Textbook [3]; Website 1
<b>12</b>		<b>JavaScript Forms.</b>  Event Handling in Java Script   JavaScript Forms   Form validation using JavaScript  (Theory: 90 minutes + Practice: 90 minutes)	Presentation; Chapter 4, 6, 13 in Core Textbook [3];  Website 1
<b>13</b>		<b>jQuery Basics &amp; Simple Effects</b> jQuery Syntax   jQuery Selectors   jQuery Events   jQuery Effects  (Theory: 90 minutes + Practice: 90 minutes)	Presentation; Section 21 in Core Textbook [2]; Chapter 7 in Core Textbook [3]; Website 1



<b>14</b>		<b>jQuery Advanced Effects. jQuery HTML.</b> jQuery Advanced Effects   jQuery HTML   jQuery Traversing  (Theory: 45 minutes + Practice: 45 minutes + Quiz#03: 90 minutes)	Presentation; Section 22 in Core Textbook [2]; Chapter 8 in Core Textbook [3]; Website 1
<b>15</b>		<b>Bootstrap Basics. Creating Templates in Bootstrap.</b> Bootstrap CSS   Creating Bootstrap Pages and Themes  (Theory: 45 minutes + Practice: 45 minutes + Project Presentation: 90 minutes)	Presentation; Website 1
<b>16</b>		<b>PHP introduction</b> Introduction to PHP   Web Servers   First PHP Script  (Theory: 45 minutes + Practice: 45 minutes + Project Presentation: 90 minutes)	Presentation; Website 1
	<b>Final exam</b>		

This syllabus is a guide for the course and any modifications to it will be announced in advance.