Client-side JavaScript

Instructor: Priyansh Thakar
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Location: BA BA_A 224
Tuesday 6:00 pm – 8:50 om (Hybrid)

Course Description

The use of client-side scripting to implement interactive behaviors within the browser environment is an important part of modern web applications. Standard client-side scripting syntax, operations, conditional statements, loops, functions, methods, and objects are examined. Students learn to manipulate the standard Document Object Model (DOM), by modifying the structure (HTML) and the appearance (CSS) of Web pages and/or interfaces for the purposes of improving the user experience.

Learning Outcomes

Upon successful completion of this course, you will have reliably demonstrated the ability to:

1. employ the most common functions and methods used with current client-side JavaScript techniques.
2. manipulate DOM node element attributes, textual content, and Cascading Style Sheet (CSS) properties.
3. test and debug scripts using validators, DOM inspectors, and error console tools.
4. optimize code for increased functionality, performance, readability, and reusability.
5. construct a variety of programming structures including variables, constants, arrays, objects, functions, conditionals, and constructors.
6. design and build an interface that leverages a popular third-party API.

Resources

MDN web docs (n.d.). JavaScript. Retrieved from https://developer.mozilla.org/en-US/docs/Learn/JavaScript.

Haverbeke, M. (n.d.). Eloquent JavaScript 3rd Ed. [Web version]. Retrieved from https://eloquentjavascript.net/

Course Delivery

There will be in-class lectures and online/remote lectures which will be comprised of the theory part as well as practical coding and debugging sessions. Check the course calendar below.

I will be available via mail if anyone has any queries or doubts regarding the lecture or lab. Students can also book an online meeting if they need any help with lecture/lab. Check the communication guidelines for the same.

Submissions

All the submissions will take place on Blackboard. You will have till Monday after the completion of lecture to submit the Labs and Quizzes. Assignments will be released early in case anyone wants to start working on them. Due date for assignments would be the midnight of Monday. Check the course calendar for particular due dates for each assignment.

Course Evaluation

Students will be evaluated on the basis of:

A. *Labs (2% x 5 = 10% of final course grade)*
B. *Assignments (12.5% x 4 = 50% of final course grade)*
C. *Quizzes (2% x 5 = 10% of final course grade)*
D. *Test 1 (15% of final course grade)*
E. *Test 2 (15% of final course grade)*

Expectations for Success

In order to be successful you need to attend class regularly. Ask for help when you need it. Strive to complete all work to the best of your ability within the required time frames.

Attendance

Although student attendance is not tracked, it is important that you make every effort to attend class at the time it is scheduled. Please keep in mind that your personal safety comes first, and that inclement weather may make travel difficult at times – please make your best judgement.

Communication

Email - I will monitor and respond to student email as soon as possible. My policy is to respond to your email within 48 hrs. during the week. If you send an email, please monitor your own inbox for a response. If you want to book a meeting, you need to first make an appointment via email.

Blackboard - I will use Blackboard to post announcements related to the course during the semester, please ensure you are regularly checking Blackboard.

Late Policy

Submission of work past the posted due date will be subjected to a 20% per day late penalty. After 2 days of delay, no submission will be accepted. Only documented medical or family emergencies will quality for extensions to posted due dates for work.

Tentative Course Calendar

The following is a tentative course calendar for the delivery of content. Due to unforeseen circumstances, the actual delivery of the material in a specific section may vary from this outline. Any changes to due dates for written assignments or tests will be posted on Blackboard and an email will be sent to your Georgian College email account.

Week	Content	Labs & Quizzes (Due: Monday 11:59 PM)	Assignments (Due: Monday 11:59 pm)
1 *Jan 8*	• JavaScript Introduction		
2 *Jan 15*	• Variables, Operators, Strings, and Scope		
3 *Jan 22*	• Arrays	Lab 1 (2%) Quiz 1 (2%)	
4 *Jan 29*	• Conditionals and Loops		Assignment 1 (12.5%) (Due: 5th Feb)
5 *Feb 5*	• Functions	Lab 2 (2%) Quiz 2 (2%)	
6 *Feb 12*	• Events, Listeners, and Handlers		Assignment 2 (12.5%) (Due: 19th Feb)
7 *Feb 19*	• **Test 1 (15%)** (In-person)		
READING WEEK Feb 26 – Mar 3			
8 *Mar 4*	• Introduction to Objects	Lab 3 (2%) Quiz 3 (2%)	
9 *Mar 11*	• Object Prototypes		
10 *Mar 18*	• Objects, Data, and JSON	Lab 4 (2%) Quiz 4 (2%)	Assignment 3 (12.5%) (Due: 25th Mar)
11 *Mar 25*	• DOM APIs		
12 *Apr 1*	• Server-based APIs (third-party)	Lab 5 (2%) Quiz 5 (2%)	
13 *Apr 8*	• Multimedia APIs		Assignment 4 (12.5%) (Due: 15th Apr)
14 *Apr 15*	• **Test 2 (15%)** (In-person)		