New York City College of Technology
The City University of New York
Department of Communication Design

COMD 3663 - Dynamic Web I: Web 2.0

Course Description
Dynamic features for websites that enable personalization and adaptable content. This course covers the implementation of rich user-design interfaces via client-side scripting. Emphasis is on Javascript techniques such as manipulating the DOM and CSS with Javascript, and using data services via AJAX.

2cl, 2 lab, 3 cr.

Prerequisites
COMD 2451

Course Objectives

INSTRUCTIONAL OBJECTIVES	ASSESSMENT
For the successful completion of this course, students should be able to:	**Evaluation methods and criteria**
Read and write Javascript at a basic to intermediate level. Students should be able to create reusable objects, respond to user actions and events, and dynamically modify styles.	Students will demonstrate competency through exercises, tests, and practical implementation.
Understand the Document Object Model (DOM) and be able to control elements on a web page.	Students will demonstrate competency through exercises, tests, and practical implementation.
Understand and implement basic AJAX services. They should know their appropriate uses, and be able to borrow from libraries.	Students will demonstrate competency through exercises, tests, and practical implementation.

Use Javascript and AJAX to enhance the design and usability of their websites.	Students will demonstrate competency through exercises, tests, and practical implementation.
Begin to understand how to communicate with the server to distinguish between client-side and server-side technologies, and their appropriate uses.	Students will demonstrate competency through discussion, research, tests, and reports.

General Education Outcome covered:	How the outcome is assessed:
Information Literacy Research and evaluate information sources.	Assess through class critique to determine how well students synthesized and applied research to their project concepts and subsequent development.
Oral Communication Prepare and deliver oral communication that promotes knowledge and understanding.	Evaluate how well students absorbed and consequently applied the learning though oral critiques of projects.
Lifelong Learning The student will demonstrate an awareness of resources for continued lifelong learning.	Evaluate through class discussion and written tests if students become aware of resources they can use as references throughout their careers.

Teaching/Learning Method

- Lectures and readings
- Demonstration
- Project based labs
- Research assignments
- Blackboard

Required Text
None

Suggested Text:
Sam's Teach Yourself AJAX, Javascript, and PHP
Phil Ballard and Michael Moncur
Sams
ISBN:9780672329654

Attendance (College) and Lateness (Department) Policies:
The COMD BFA and AAS degrees are design studio programs. In-class laboratory activities and engagement with other students is a significant portion of the courses. Absences more than 10% of the

total class hours may result in a 10% drop from your grade due to an inability to meet the deliverables of participation. This may be in addition to other penalties that will be imposed for failure to complete in-class academic requirements. Missing more than 25% of total class meetings will not be permitted. Any two ‘lates' (15 minutes or more) will be equal to 1 absence.

Academic Integrity Standards
Students and all others who work with information, ideas, texts, images, music, inventions and other intellectual property owe their audience and sources accuracy and honesty in using, crediting and citation of sources. As a community of intellectual and professional workers, the college recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension and expulsion. More information about the College’s policy on Academic Integrity may be found in the College Catalog.

Grading
90% = Course projects/assignments
Final Project 50%
Exercises 30%
Quiz 10%

10% = Class preparation/participation/attendance
CP/P/A 10%

Topics

WEEK	Lecture Topic	Laboratory Exercise	Homework Assignment
1 ● ●	Introduction to dynamic web sites ● Review syllabus and outline expectations. ● Confirm student prerequisites. Guide students to the tools they can use to build a dynamic website within time constraints of course (e.g., Amazon web services)	● Review course syllabus.	Register domain and sign up for hosting service
2 ● ●	Creating simple scripts in Javascript ● Review of various ways Javascript can be called	● Executing simple scripts ●	Completing simple scripts. Develop concept for main project

3 ● ●	Introduction to the ● Document Object Model (DOM) ● Using variables, strings and ● arrays	Familiarizing with the ● DOM Executing scripts ● Conceiving/designing uses.	Completing scripts using strings and arrays. Research/content development for final project.
4 ●	Using functions and objects ●	Executing scripts ● Conceiving/designing uses. ●	Completing scripts using functions and objects. Begin design process of final project
5 ●	Controlling flow with ● conditions and loops	Creating scripts using ● conditions and loops ●	Complete script samples Continue design process for final project
6 ● ●	Using built-in functions ● Using libraries such script.aculo.us ●	Creating scripts using ● built-in functions, ● libraries. ●	Complete script samples Prepare for quiz Prepare to present final project with flowcharts, storyboards, wireframes, and design possibilities.
7 ● ●	Introduction to AJAX ● The XMLHTTPRequest ● Object ● ●	Quiz ● Present designs for final project ● Understanding Ajax Using the XMLHTTPRequest Object	Completing the object exercise. Begin to build static pages for final project
8 ● ●	Talking with the server ● Using the returned data	Exercises ●	Continue building out the final project site.
9 ●	Create first AJAX ● applications	Building the AJAX application	Building the AJAX application
10 ● ●	Web services, the REST ● and SOAP protocols Using a Javascript library for AJAX	Exercises in protocols ● and using a Javascript ● library for AJAX	Complete exercises Working on final project
11 ●	Q&A for Javascript, AJAX ● and final project	Lab for final project ●	Focus on final project

12 ●	Complex AJAX technologies ● Returning data as text ● Asynchronous HTML and HTTP	Exercises in returning data as text and asynchronous HTML and HTTP ● ●	Complete exercises Working on final project
13 ●	Returning data as XML ●	Implementing data as XML exercise ● ●	Completing data as XML exercise Continue work on final project
14 ●	Working session to complete final project ●	Working session to complete final project ● ●	Complete final project Prepare for presentation and critique
15 ●	Final presentations. ●	Final project: presentations and critique.	

Bibliography

Sam's Teach Yourself AJAX, Javascript, and PHP
Phil Ballard and Michael Moncur
Sams
ISBN:9780672329654

Build Your Own AJAX Web Applications
Matthew Eernisse
Sitepoint
ISBN: 0-9758419-4-7

The JavaScript Bible.
Danny Goodman
IDG Books
ISBN: 0764531883

Beginning JavaScript with DOM Scripting and Ajax
Christian Heilmann
ISBN: 1590596803

DOM Scripting

Jeremy Keith
Friends of ED
ISBN: 1590595335