COURSE SYLLABUS
COM222: Client-Side Web Programming

Course Description
This course provides an introduction to JavaScript and the related technologies, AJAX and DHTML. This course of study provides the student with in depth client-side scripting capabilities. The students will be guided through the fundamentals of JavaScript syntax as well as the jQuery basics such as selecting and manipulating DOM elements, assigning attributes, traversing tools, and CSS/Styling. Subsequent modules will delve deeper into advanced concepts such as jQuery core, events and effects, plugins, embedding API's, performance best practices, and managing dependencies. Industry standard software testing and debugging techniques are also introduced.

General Course Information

Number of Units/Weeks	4/10
#Hours Lecture/#Hours Laboratory/#Hours Homework	40/00/80
Prerequisite(s)	COM122
Co-requisites (s)	None
Course Developer(s)	Leticia Rabor, M.S.
Date Approved / Last Review	July 2017 / July 2017

Learning Outcomes
- Use the standard programming structures and objects to author industry standard web based software
- Create interactive web forms with client-side scripts providing validation of user input
- Create dynamic web pages using DHTML, a synergy created by combining the capabilities of HTML, CSS, JavaScript, and jQuery
- Combine JavaScript with server-side scripts and XML, termed AJAX or Asynchronous JavaScript , to provide real-time updates to web pages
- Utilize industry standard techniques for program debugging and testing
- Use jQuery's plugins, themes, and other advanced concepts, including best-practices Use JSON to serialize data for storage in the browser or on the server

Instructional Methods Employed in this Course
- Lecture and reading assignments
- Hands-on exercises and labs
- Research
- Practical application of theory and skills in authentic Internet

- Build on prior knowledge and experience of students to enhance richness of class activities

Information Resources for this Course

📖 Textbook

Ruvalcaba, Z., & Delamater, M. (2017). Murach's JavaScript and jQuery 3rd Edition. Fresno, CA: Mike Murach & Associates.

🖰 Web Site Readings

ECMA International. Home Page

http://www.ecma-international.org/publications/files/ECMA-ST/ECMA-262.pdf
Retrieved April 27, 2010

World Wide Web Consortium. Home Page.
http://www.w3c.org
Retrieved September 11, 2009

W3 Schools. Home Page.
http://w3schools.com
Retrieved September 11, 2009

Table/Topics & Assignments

Types of Assignments:

Lecture -
Considered Lecture Hours

Classroom Discussion -
Considered Lecture Hours

In Class Critique -
Considered Lecture Hours

In Class (IC) Exercise -
Considered Lecture Hours

Reading -
Considered Homework (HW), work done outside of class

WebClass lesson (non-online courses) -
Considered HW, work done outside of class

Projects –
Considered ELP, work done outside of class

Quiz, Midterm or Final -
Considered Lecture Hours

Week 1

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 1A	Introduction to Course / Introduction to Web Development	1.375				
LEC 1B	Getting Started with JavaScript	1.375				
IC EX 1A	Modify the Test Scores Application	1.25			5	
HW 1A	Read Chapters 1, 2 (81 pages) Evaluated by HW 1B			8.1		
HW 1B	Review Questions: Chapters 1, 2 10 Questions			1.3	10	Week 2
Total Week 1		4	0	9.4	15	

Week 2

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 2A	The essential JavaScript statements	1				
LEC 2B	Working with JavaScript objects, functions, and events	1				
IC EX 2A	Enhance a Future Value Application	0.5			5	
IC EX 2B	Enhance the MPG Application	0.5			5	
HW 2A	Project 1			2	50	Week 4
HW 2B	Read Chapters 3, 4, 16 (48 pages) Evaluated by HW 2C			4.8		
HW 2C	Review Questions: Chapter 3, 4 10 Questions			1.3	10	Week 3
Total Week 2		3	0	7.1	70	

Week 3

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 3A	Testing and Debugging	1.125				
LEC 3B	Working with DOM	1.125				
IC EX 3A	Debug the MPG application	1.5			5	

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
IC EX 3B	JavaScript validation	0.25			5	
HW 3A	Project 2			2	50	Week 5
HW 3B	Read Chapters 5, 6 (51 pages) Evaluated by HW 3C			5.1		
HW 3C	Review Questions: Chapters 5, 6 10 Questions			1.3	10	Week 4
Total Week 3		4	0	8.4	70	

Week 4

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 4A	Working with links, images and timers	1				
LEC 4B	Introduction to JQuery	1				
IC EX 4A	Use the event object to prevent form submission	0.25			5	
IC EX 4B	Redo the Reservation Form with jQuery	0.25			5	
HW 4A	Project 3			6	50	Week 6
HW 4B	Read Chapters 7, 8 (63 pages) Evaluated by HW 4C			6.3		
HW 4C	Review Questions: Chapters 7, 8 10 Questions			1.3	10	Week 5
Total Week 4		3	0	13.6	70	

Week 5

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 5A	Working with Arrays	1				
IC EX 5A	Midterm Case Study	2			50	Week 5
EXAM 5A	Midterm Exam (Chapters 1-8)	1			150	Week 5
HW 4B	Read Chapter 16 (63 pages)			6.3		
Total Week 5		4	0	6.3	200	

Week 6

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 6A	Effects and Animation	1.375				

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 6B	Forms and Data Validation	1.375				
IC EX 6A	Add Effects to the Image Gallery Application	1.25			5	
HW 6A	Project 4			3	50	Week 7
HW 6B	Read Chapters 9, 10 (53 pages) Evaluated by HW 6C			5.3		
HW 6C	Review Questions: Chapters 9, 10 10 Questions			1.3	10	Week 7
Total Week 6		4	3	9.6	65	

Week 7

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 7A	jQuery plugins and UI widgets	1.075				
LEC 7B	AJAX and JSON	1.075				
IC EX 7A	Modify the Reservation Application to use the UI widget and validation plugin	1.40			5	
IC EX 7B	Convert a $.getJSON() method to $.ajax()	0.45			5	
HW 7A	Project 5			2	50	Week 8
HW 7B	Read Chapters 11, 12 (59 pages) Evaluated by HW 7C			5.9		
HW 7C	Review Questions: Chapters 11, 12 10 Questions			1.3	10	Week 8
Total Week 7		4	0	9.2	70	

Week 8

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 8A	Working with numbers, strings, and dates	1.175				
LEC 8B	Working with control structures, exceptions, and regular expressions	1.175				
IC EX 8A	Add Default Subtotal Value for the Invoice Application	0.75			5	
IC EX 8B	Modify the Reservation Application to use	0.90			5	

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
	regular expression for form validation					
HW 8A	Project 6			2	50	Week 9
HW 8B	Read Chapters 13, 14 (62 pages) Evaluated by HW 8C			6.2		
HW 8C	Review Questions: Chapters 13, 14 10 Questions			1.3	10	Week 9
Total Week 8		4	0	9.5	70	

Week 9

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 9A	Cross-Site Scripting	3				
IC EX 9A	Exploit Tests	1			5	
HW 9A	Project 7			2	50	Week 10
HW 9B	Read Securing the Tangled Web			1		
HW 9C	Read Cross-Site Scripting Prevention Cheat Sheet (8 pages) Evaluated by HW 9D			0.8		
HW 9D	Review Questions: Cross-Site Scripting 10 Questions			1.3	10	Week 10
Total Week 9		4	0	5.1	65	

Week 10

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 8B	Using browser objects, cookies, and web storage	1.175				
IC EX 10A	View the Query of a URL	0.50			5	
EXAM 10A	Final Exam (Chapters 9-17)	1			150	Week 10
HW 10A	Final Project			20	150	Week 10
Total Week 10		4	0	20	305	

Course Hours Summary

Week	Topic	LEC Hours	LAB Hours	HW Hours
1	Introduction to Course / Introduction to Web	4	0	9.4

	Development Getting Started with JavaScript			
2	The Essential JavaScript Statements Working with JavaScript Objects, functions, and events	4	0	7.1
3	Testing and Debugging Working with DOM	4	0	8.4
4	Working with links, images, and timers Introduction to JQuery	4	0	13.6
5	Using Arrays Midterm	4	0	6.3
6	Effects and Animations Forms and Data Validation	4	0	9.6
7	jQuery plugins and UI Widgets Ajax and JSON	4	0	9.2
8	Working with numbers, strings, and dates Working with control structures, exceptions, and regular expressions	4	0	9.5
9	Cross-Site Scripting (XSS)	4	0	5.1
10	Using browser objects, cookies, and web storage	4	0	20
Total		40	0	98,2

Table/Point Breakdown

Week	Assignment	Possible Points	Percent of Grade
1	IC EX 1A, Modify the Test Scores Application	5	0.5%
1	HW 1B, Review Questions (Chapters 1, 2)	10	1%
2	IC EX 2A, Enhance a Future Value Application	5	0.5%
2	IC EX 2B, Enhance the MPG Application	5	0.5%
2	HW 2A , Project 1	50	5%
2	HW 2C, Review Questions (Chapters 3, 4)	10	1%
3	IC EX 3A, Debug the MPG Application	5	0.5%
3	IC EX 3B, JavaScript Validation	5	0.5%
3	HW 3A, Project 2	50	5%
3	HW 3C, Review Questions (Chapters 5, 6)	10	1%
4	IC EX 4A, Use the Event Object to Prevent Form Submission	5	0.5%
4	IC EX 4B, Redo the Reservation Form with JQuery	5	0.5%
4	HW 4A, Project 3	50	5%
4	HW 4D, Review Questions (Chapters 7, 8)	10	1%
5	IC EX 5A, Midterm Case Study	50	5%
5	EXAM 5A, Midterm Exam	150	15%
6	IC EX 6A, Add Effects to the Image Gallery Application	5	0.5%
6	HW 6A, Project 4	50	5%
6	HW 6C, Review Questions (Chapters 9, 10)	10	1%
7	IC EX 7A, Modify the Reservation Application to use Validation Plugin and UI Widgets	5	0.5%

7	IC EX 7B, Convert a $.getJSON Method to a $.ajax	5	0.5%
7	HW 7A, Project 5	50	5%
7	HW 7C, Review Questions (Chapters 11, 12)	10	1%
8	IC EX 8A, Add Default Subtotal Value to the Invoice Application	5	0.5%
8	IC EX 8B, Modify the Reservation Application to use Regular Expression for form validation	5	0.5%
8	HW 8A, Project 6	50	5%
8	HW 8C, Review Questions (Chapters 13, 14)	10	1%
9	IC EX 9A, Exploit Tests	5	0.5%
9	HW 9A, Project 7	50	5%
9	HW 9D, Review Questions (Cross-Site Scripting)	10	1%
10	IC EX 10A, View the Query of a URL	5	0.5%
10	HW 10A, Final Project	150	15%
10	EXAM 10A, Final Exam	150	15%
Total		1000	100%

Your Grades for this Course

Your final grade for this course will be based on an assessment by the Instructor of your performance on a number of course activities, which may include objective tests, classroom exercises, laboratory demonstrations, project papers, or other types of activities. The chart below indicates in what activities you will engage, how many possible points can be earned for each activity, and the percentage of your final grade that will be accounted for by each activity.

Students in this course should be graded following Coleman University assessment practices and policies. A point system is used in the University to indicate student performance on various required activities or projects. For this course, it is recommended that points be distributed as follows:

Coleman University Grade Assignment Policy:

Percent	Letter Grade	Grade Points
94-100	A	4
90-93	A-	3.67
87-89	B+	3.33
84-86	B	3
80-83	B-	2.67
77-79	C+	2.33
74-76	C	2
70-73	C-	1.67
67-69	D+	1.33

64-66	D	1
60-63	D-	0.67
N/A	INC	0
N/A	W	0
60 or above	CR	0
59 or below	NC	0
N/A	I	0
N/A	W	0
N/A	AU	0
N/A	TR	0
N/A	WV	0

Legend	
CR = Credit	NC = No Credit
I = Incomplete	W = Course Withdrawal
AU = Audit	TR = Transfer Credit
WV = Waiver	

Academic Accommodation / Adjustment Policy:

In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA), Coleman University offers accommodations to students with documented physical, psychological, and/or cognitive disabilities. Coleman University will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to offer equal educational opportunities to qualified disabled individuals.

To qualify for an academic accommodation under ADA, the student must provide adequate documentation of a disability. Students seeking academic accommodations should contact the campus ADA Coordinator at 858-966-3953 or via email at ada@coleman.edu. The ADA Coordinator will review the documentation provided and verify ADA coverage. Students covered under ADA must meet with the ADA Coordinator at the beginning of every term to determine the appropriate academic accommodations. Failing to meet with the ADA Coordinator at the beginning of every term may impact the availability of accommodations.

After the academic accommodations have been determined, the students' instructors will be notified by the ADA Coordinator. If any problems or concerns regarding the provision of accommodations occur, the student must inform the ADA Coordinator. If the student feels accommodation is not being made appropriately, the student may follow the published Student Grievance Procedures.