

HTTP 5221 [A]

Critical Path

Web Development: Security & Usability

Summer 2025

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The Critical Path is the course schedule. It is an important document that lays out weekly and/or module objectives that you are responsible for to ensure academic success. Download and/or print out a copy of the Critical Path and refer to it regularly.

Week #	Date	Module	Topics	Activities	Type	Description	Weight	Due Date	Last Date to Submit
1	May 6	Level Up Your Code!	<ul style="list-style-type: none">• object, class, constructor• querySelector, querySelectorAll, onclick, unload, keyup• variables scopes• window.location object (search, href, host, hostname, path, hash)	Lab Exercise 1	Individual	<ul style="list-style-type: none">• Create a list of friends using JS.• Complete Quiz on knowledge of JS variables, objects.• Create a page using routing.	3%	May 8	May 12
2	May 13	Coding Standards	<ul style="list-style-type: none">• B.E.M. naming convention• JS Lint• "use strict"	Lab Exercise 2	Individual	<ul style="list-style-type: none">• Create a form with Name, Salary and Postal code inputs JS validation.• Complete Quiz on knowledge	6%	May 15	May 19

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						of JS regex.			
3	May 20	Test Design	<ul style="list-style-type: none"> • Testing strategies, spec, requirements, bug prevention. • Dynamic, static testing, boundary conditions, tests to pass, to fail. • Unit testing, TDD 	Lab Exercise 3	Individual	<ul style="list-style-type: none"> • Create a JS function to validate Humber ID. • Create unit tests for this function. 	6%	May 22	May 26
4	May 27	Testing Frameworks & Encryption	<ul style="list-style-type: none"> • Encryption libraries with JS (md5, hash, salt) • Jasmine Testing Framework 	Lab Exercise 4	Individual	<ul style="list-style-type: none"> • Create a JS function to guess a month. • Create Jasmine unit tests for this function. 	4%	May 29	Jun 2
				Assignment 1: Jasmine Testing	Individual	<ul style="list-style-type: none"> • Create a form with JS validation and error/success messages. • Create Jasmine unit tests for JS code. 	15%	Jun 9	Jun 16
5	Jun 3	Hacker Prevention	<ul style="list-style-type: none"> • Hacking, black hat, white hat, grey hat • Intent & permission. • Penetration testing, exploits. 	Assignment 2	Group	<ul style="list-style-type: none"> • Research a vulnerability of your choice. • Create html page with vulnerability description. 	10%	Jun 5	Jun 9

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6	Jun 10	End to End (E2E) Testing	<ul style="list-style-type: none"> • Test coverage, testing pyramid. • Integration testing, e2e, user testing, automated testing. • Cypress. 	Lab Exercise 5	Individual	<ul style="list-style-type: none"> • Create a subscription form • Create Cypress tests for the form. 	4%	Jun 12	Jun 16
7	Jun 17	Ad Hoc Testing	<ul style="list-style-type: none"> • Ad hoc testing, web testing checklist • functionality testing (valid html, css, js, links, forms, cookies). • Compatibility testing, performance testing, security testing, usability testing. 	Lab Exercise 6	Individual	<ul style="list-style-type: none"> • Fix accessibility, CSS, HTML & performance issues • Use browser extensions for Ad Hoc testing. 	2%	Jun 19	Jun 23
Reading Week (no classes) Jun 23 - 29									
Midterm Marks due July 11									
8	Jul 8	Accessibility: The DOM and assistive devices	<ul style="list-style-type: none"> • Accessibility definition • Headings • Semantics 	Quiz 1	Individual	<ul style="list-style-type: none"> • Quiz on accessibility • Correct headings, semantics 	2.5%	Jul 10	Jul 14
9	Jul 15	Content, Inputs & Navigation	<ul style="list-style-type: none"> • ARIA attributes • Accessible Links • Tabs and tab order • Accessible form controls & error 	Quiz 2	Individual	<ul style="list-style-type: none"> • Quiz on aria attributes • Tabs, links, images 	2.5%	Jul 17	Jul 21

Week #	Date	Module	Topics	Activities	Type	Description	Weight	Due Date	Last Date to Submit
			handling						
10	Jul 22	Usability definitions, heuristic evaluations	<ul style="list-style-type: none">Usability definition10 Heuristics of Usability	Assignment 3: 10 Heuristics of Usability	Group	<ul style="list-style-type: none">Evaluate a website based on Heuristics	10%	Jul 28	Aug 1
11	Jul 29	Planning and preparing usability Testing	<ul style="list-style-type: none">The BriefPlanning usability tests	Lab Exercise 7	Individual	<ul style="list-style-type: none">Creating testing scenarios	5%	Jul 31	Aug 1
				Assignment 4: Usability report	Individual	<ul style="list-style-type: none">Creating plan and test	15%	Aug 11	Aug 14
12	Aug 5	Collecting data - conducting Usability	<ul style="list-style-type: none">Collecting data for Usability testingConducting Usability testing	Lab Exercise 8	Individual	<ul style="list-style-type: none">Observing a User Test (Krug Method)	5%	Aug 7	Aug 8
13	Aug 12	Usability Test Analysis and Reporting	<ul style="list-style-type: none">Usability Test AnalysisCreating Usability report	Lab Exercise 9	Individual	<ul style="list-style-type: none">Testing methods and evaluation	5%	Aug 14	Aug 15
				Presentation	Individual	<ul style="list-style-type: none">Record video presentation	5%	Aug 14	Aug 15
Final Marks due August 19									

Summary of Graded Components

Component	Module	Weight
Group Assignment	Security	10%
Individual Assignment	Security	15%
Lab Exercise (6)	Security	25%
Group Assignment	Usability	10%
Lab Exercise (3)	Usability, Accessibility	15%
Usability Report	Usability	15%
Quiz (2)	Accessibility	5%
Presentation	Usability	5%
Total		100%