CompuScholar, Inc.

Alignment to Microsoft Technology Associates (MTA)
"*HTML5 Application Development Fundamentals* "
Certification Exam Requirements

Microsoft Exam Details:

Exam Title:	MTA HTML5 Application Development Fundamentals
Exam Code(s):	98-375
Exam Link:	Exam 98-375: HTML5 Application Development Fundamentals

CompuScholar Course Details:

Course Title:	Web Design
Course ISBN:	978-0-9887070-3-0
Course Year:	2019

Note 1: Citation(s) listed may represent a subset of the instances where objectives are met throughout the course.

Note 2: Citation(s) for a "Lesson" refer to the "Lesson Text" elements and associated "Activities" within the course, unless otherwise noted. The "Instructional Video" components are supplements designed to introduce or re-enforce the main lesson concepts, and the Lesson Text contains full details.

Course Description

The Microsoft Technology Associates (MTA) "HTML5 Application Development Fundamentals" exam is designed to test a broad range of knowledge spanning web application infrastructure, interactions between browser and a web server, general HTML and CSS skills, and JavaScript. Due to the diversity and depth of the topics, more than one year of study and more than one course is generally needed for preparation.

The CompuScholar "Web Design" course teaches fundamental HTML, CSS, and JavaScript skills. It can be used as preparation for corresponding parts of this MTA exam. Other exam topics are marked as "n/a" below and would need to be covered by supplemental resources, with additional time.

Exam Requirements

Manage the application life cycle (20–25%)	CITATION(S)
Understand the platform fundamentals	
Packaging and the runtime environment: app package, app container, credentials/permission sets, host process, leverage existing HTML5 skills and content for slate/tablet applications	n/a

Manage the state of an application	
Manage session state, app state, and persist state information; understand states of an application; understand the differences between local and session storage	n/a
Debug and test an HTML5-based, touch-enabled application	
Touch gestures; understand which gestures you test on a device	n/a

Build the user interface (UI) by using HTML5 (25–30%)	CITATION(S)
Choose and configure HTML5 tags to display text content	Chapter 3, Lesson 2 Chapter 3, Lesson 3 Chapter 4, Lesson 1 Chapter 7, Lesson 1, etc.
Choose and configure HTML5 tags to display graphics	Chapter 11, Lesson 2 Chapter 11, Lesson 3
When, why, and how to use Canvas; when, why, and how to use scalable vector graphics (SVG)	n/a
Choose and configure HTML5 tags to play media	
Video and audio tags	Chapter 19, Lesson 2 Chapter 19, Lesson 3
Choose and configure HTML5 tags to organize content and forms	
Tables, lists, sections; semantic HTML	Chapter 4, Lesson 3 Chapter 12 (all Lessons)
Choose and configure HTML5 tags for input and validation	Chapter 25, Lesson 2 Supplemental Lesson 11

Format the user interface by using Cascading Style Sheets (CSS) (20–25%)	CITATION(S)
Understand the core CSS concepts	
Separate presentation from content (create content with HTML and style content with CSS)	Chapter 6 (all Lessons) Chapter 25, Lesson 4
manage content flow (inline versus block flow)	Chapter 4, Lesson 1

manage positioning of individual elements(float versus absolute positioning)	Chapter 9 (all Lessons)
manage content overflow (scrolling, visible, and hidden)	Chapter 9, Lesson 4
basic CSS styling	Chapter 6 (all Lessons)
Arrange UI content by using CSS	
Use flexible box and grid layouts to establish content alignment, direction, and orientation	n/a
proportional scaling and use of "free scale" for elements within a flexible box or grid	n/a
order and arrange content	Chapter 9 (all Lessons)
concepts for using flex box for simple layouts and grid for complex layouts	n/a
grid content properties for rows and columns	n/a
use application templates	Chapter 11, Lesson 2 Chapter 14, Lesson 2
Manage the flow of text content by using CSS	
Regions and using regions to flow text content between multiple sections (content source, content container, dynamic flow, flow-into, flow-from,	n/a
columns and hyphenation and using these CSS settings to optimize the readability of text	n/a
use "positioned floats" to create text flow around a floating object	Chapter 9, Lesson 1
Manage the graphical interface by using CSS	
Graphics effects (rounded corners, shadows, transparency, background gradients, typography, and Web Open Font Format)	Chapter 20, Lesson 2 Chapter 20, Lesson 3 Chapter 20, Lesson 4 Chapter 21, Lesson 1 Chapter 21, Lesson 2
two-dimensional (2-D) and three-dimensional (3-D) transformations (translate, scale, rotate, skew, and 3-D perspective transitions and	Chapter 21, Lesson 3 (2-D only)
SVG filter effects	n/a
Canvas	n/a

Code by using JavaScript (30–35%)	CITATION(S)
Manage and maintain JavaScript	Chapters 25, 26, 27
Create and use functions; jQuery and other third-party libraries	Chapters 26, 27
Update the UI by using JavaScript	**CITATION(S)**
Locate/access elements	Chapter 25, Lesson 3 Chapter 26, Lesson 2
listen and respond to events	Chapter 25, Lesson 2 Chapter 26, Lesson 3
show and hide elements	Chapter 26, Lesson 4
update the content of elements	Chapter 25, Lesson 3 Chapter 26, Lesson 3
add elements	n/a
Code animations by using JavaScript	
Use animation	Chapter 27, Lesson 3
manipulate the canvas	n/a
work with images, shapes, and other graphics	Chapter 27 (all Lessons)
Access data access by using JavaScript	
Send and receive data; transmit complex objects and parsing; load and save files; App Cache; datatypes; forms; cookies; localStorage	n/a
Respond to the touch interface	
Gestures, how to capture and respond to gestures	n/a
Code additional HTML5 APIs	
GeoLocation, Web Workers, WebSocket; File API	n/a
Access device and operating system resources	
In- memory resources, such as contact lists and calendar; hardware capabilities, such as GPS, accelerometer, and camera	n/a