

HTML5 APPLICATION DEVELOPMENT FUNDAMENTALS CERTIFICATION PREPARATION

Part A: Program Overview

(6 Lesson 5/25/2018)

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COURSE DESCRIPTION

The HTML5 Development Fundamentals Certification Preparation program is designed to teach students HTML4 for Web page and application development. HTML is the markup language used to describe Web pages so that the page can be interpreted by a browser to display a Web page based on HTML tags. HTML5 is the new standard and family of new HTML markup tags, CSS, JavaScript, and other related technologies to create and add interactivity to Web pages as well as to develop client applications (apps) that run on touch-enabled devices, such as PCs, tablets, and smartphones. This course prepares students to sit for the Microsoft® HTML5 Application Development Fundamentals, Exam 98-375.

COURSE OBJECTIVES

Upon completing this course, you will be able to:

- Manage the application development life cycle
- Build the user interface using HTML5
- Format the user interface using CSS
- Code the user interface using JavaScript

COURSE MATERIALS

This course is designed as a hybrid course where students access online materials AND participate in instructor-led classroom lecture and activities. Students should complete the activities in the online courses and participate in the instructor-led classroom labs and other activities.

Title: 98-375 MTA HTML5 Application Development Fundamentals by MOAC. ISBN: 9781118543832

EXPECTATIONS FOR THE STUDENT

1. Students are expected to arrive for class on time
2. Absent students must contact their instructor prior to class time
3. Absent students will be expected to make up missed class work/assignments on their own time
4. Students will follow the rules and regulations of the facility
5. No student shall disrupt a class or interfere with the session or the learning or the other students
6. The Instructor will be the student's contact for all academic questions or concerns
7. Cell phones and pagers are to be turned off or to the vibrator mode while in class
8. Any student participating in any act of academic dishonesty, such as cheating, plagiarism, or collusion will be considered for dismissal from the program. Once dismissed, no condition of re-entrance will be considered.

TEACHING METHODS EMPLOYED

Lecture, class discussion, group discussions, critical thinking exercises, lab practice, and application activities related to the content. This course also includes hands on instruction in a variety of modalities.

EVALUATION AND GRADE DETERMINATION

Student performance will be evaluated utilizing the following analysis:

- Attendance and class/labs (75%)
- Exam (25%)

It is vital that each student recognize that this class is a **pass/fail** class with **no** exceptions.

COURSE IN REVIEW

LESSON #1: Managing the Application Life Cycle and Building the User Interface by Using HTML5: Text, Graphics, and Media A8

Textbook Reading:	<i>Student Study Guide Preparing for MTA Certification – Exam 98-375 – HTML5 Development Fundamentals: Chapter 1 (pp. 1-20) and 2 (pp. 21-52)</i>
Handout:	Student Study Guide Preparing for MTA Certification – Exam 98-375 – HTML5 Development Fundamentals
Slides:	Slides Chapter 1 and Chapter 2
Homework:	Chapters 1 and 2 – End of Chapter Activities: Knowledge Assessment (pp. 18-20 and pp. 49-51); Competency Assessment (p. 20 and pp. 51-52); and Proficiency Assessment (p. 20 and p. 52)
Labs:	Chapters 1 and 2 Step-By-Step Tasks

LESSON #2: Building the User Interface by Using HTML5: Organization, Input, and Validation A9

Textbook Reading:	<i>Student Study Guide Preparing for MTA Certification – Exam 98-375 – HTML5 Development Fundamental: Chapter 3 (pp. 53-87)</i>
Slides:	Slides Chapter 3
Homework:	Chapter 3 – End of Chapter Activities: Knowledge Assessment (pp. 84-86); Competency Assessment (p. 86); and Proficiency Assessment (p. 86)

Labs: Chapter 3 Step-By-Step Tasks

LESSON #3: Understanding CSS Essentials: Content Flow, Positioning, and Styling and Layouts A10

Textbook Reading:	<i>Student Study Guide Preparing for MTA Certification – Exam 98-375 – HTML5 Development Fundamentals: and Chapter 4 (pp. 87-109) and Chapter 5 (pp. 110-136)</i>
Slides:	Slides Chapter 4 and Chapter 5
Homework:	Chapters 4 and 5 – End of Chapter Activities: Knowledge Assessment (pp. 106-108 and pp. 133-135); Competency Assessment (p. 108 and pp. 135-136); and Proficiency Assessment (p. 109 and p. 136)

Labs: Chapters 4 and 5 Step-By-Step Tasks

LESSON #4: Managing Text Flow by Using CSS and Managing the Graphical Interface by Using CSS A11

Textbook Reading:	<i>Student Study Guide Preparing for MTA Certification – Exam 98-375 – HTML5 Development Fundamentals: Chapter 6 (pp. 137-158) and Chapter 7 (pp. 159-188)</i>
Slides:	Slides Chapter 6 and Chapter 7
Homework:	Chapters 6 and 7 – End of Chapter Activities: Knowledge Assessment (pp. 155-157 and pp. 186-188); Competency Assessment (p. 157 and p. 188); and Proficiency Assessment (p. 158 and p. 188)

Labs: Chapters 6 and 7 Step-By-Step Tasks

LESSON #5: Understanding JavaScript and Coding Essentials and Creating Animations, Working with Graphics, and Accessing Data**A12**

Textbook Reading: *Student Study Guide Preparing for MTA Certification – Exam 98-375 – HTML5 Development Fundamentals: Chapter 8 (pp. 189-214) and 9 (pp. 215-242)*
Slides: Slides Chapter 8 and Chapter 9
Homework: Chapters 8 and 9 – End of Chapter Activities: Knowledge Assessment (pp. 212-213 and pp. 240-242); Competency Assessment (p. 214 and p. 242); and Proficiency Assessment (p. 214 and p. 242)
Labs: Chapters 8 and 9 Step-By-Step Tasks

LESSON #6: JavaScript Coding for the Touch Interface, Device and Operating System Resources, and More..**A13**

Textbook Reading: *Student Study Guide Preparing for MTA Certification – Exam 98-375 – HTML5 Development Fundamentals: Chapter 10 (pp. 243-267)*
Slides: Slides Chapter 10
Homework: Chapter 10 – End of Chapter Activities: Knowledge Assessment (pp. 265-267); Competency Assessment (p. 267); and Proficiency Assessment (p. 267)
Labs: Chapter10 Step-By-Step Tasks
Assessment: **Exam**

HTML5 Application Development Fundamentals Certification Preparation

Lesson Plans (version 05/25/2018)

Lessons #1-6

LESSON #1: MANAGING THE APPLICATION LIFE CYCLE AND BUILDING THE USER INTERFACE USING HTML5: TEXT, GRAPHICS, AND MEDIA

Textbook: *Student Study Guide Preparing for MTA Certification – Exam 98-375 – HTML5 Development Fundamentals*

- Chapter 1 (pp. 1-20)
- Chapter 2 (pp. 21-52)

Objectives: *After completing this lesson, you should be able to:*

- Understand the platform fundamentals
- Understand and manage application states
- Understand touch interfaces and gestures
- Debug and test HTML5 apps
- Publish an application to a store
- Understand the essentials of HTML
- Choose and configure HTML5 tags to display text content
- Choose and configure HTML5 tags to display graphics
- Choose and configure HTML5 tags to play media

Slides: Slides Chapter 1 and Chapter 2

Lesson Topics: *This lesson covers the following topics.*

- Platform Fundamentals
- Managing Application States
- Touch Interfaces and Gestures
- Debugging and Testing HTML5 Apps
- Publishing an Application to a Store
- Essentials of HTML
- HTML5 Tags to display Text Content
- HTML5 Tags to Display Graphics
- HTML5 Tags to Play Media

Lab: *Complete the following hands-on labs and exercises:*

- Chapters 1 and 2 Step-By-Step Tasks

Homework: *Complete the following assignments:*

- Chapters 1 and 2 – End of Chapter Activities: Knowledge Assessment (pp. 18-20 and pp. 49-51)
- Competency Assessment (p. 20 and pp. 51-52)
- Proficiency Assessment (p. 20 and p. 52)

LESSON #2: BUILDING THE USER INTERFACE BY USING HTML5: ORGANIZATION, INPUT, AND VALIDATION

Textbook: *Student Study Guide Preparing for MTA Certification – Exam 98-375 – HTML5 Development Fundamentals*

Chapter 3 (pp. 53-87)

Objectives: *After completing this lesson, you should be able to:*

- Choose and configure HTML5 tags to organize content and forms
- Choose and configure HTML5 tags for input and validation

Slides: Slides Chapter 3

Lesson Topics: *This lesson covers the following topics.*

- HTML5 Tags to Organize Content and Forms
- HTML5 Tags for Input and Validation

Lab: *Complete the following hands-on labs and exercises:*

- Chapter 3 Step-By-Step Tasks

Homework: *Complete the following assignments:*

- Chapter 3 – End of Chapter Activities: Knowledge Assessment (pp. 84-86)
- Competency Assessment (p. 86)
- Proficiency Assessment (p. 86)

LESSON #3: UNDERSTANDING CSS ESSENTIALS: CONTENT FLOW, POSITIONING, AND STYLING AND LAYOUTS

Textbook: *Student Study Guide Preparing for MTA Certification – Exam 98-375 – HTML5 Development Fundamentals*

- Chapter 4 (pp. 87-109)
- Chapter 5 (pp. 110-136)

Objectives: *After completing this lesson, you should be able to:*

- Understand CSS essentials
- Arrange user interface (UI) content by using CSS
- Use a flexible box to establish content alignment, direction, and orientation
- Use grid layouts to establish content alignment, direction, and orientation

Slides: Slides Chapter 4 and Chapter 5

Lesson Topics: *This lesson covers the following topics.*

- CSS Essentials
- Arranging User Interface Content by Using CSS
- Using a Flexible Box to Establish Content Alignment, Direction, and Orientation
- Using Grid Layouts to Establish Content Alignment, Direction, and Orientation

Lab: *Complete the following hands-on labs and exercises:*

- Chapters 4 and 5 Step-By-Step Tasks

Homework: *Complete the following assignments:*

- Chapters 4 and 5 – End of Chapter Activities: Knowledge Assessment (pp. 106-108 and pp. 133-135)
- Competency Assessment (p. 108 and pp. 135-136)
- Proficiency Assessment (p. 109 and p. 136))

LESSON #4: MANAGING TEXT FLOW BY USING CSS AND MANAGING THE GRAPHICAL INTERFACE BY USING CSS

Textbook: *Student Study Guide Preparing for MTA Certification – Exam 98-375 – HTML5 Development Fundamentals*

Chapter 6 (pp. 137-158)
Chapter 7 (pp. 159-188)

Objectives: *After completing this lesson, you should be able to:*

- Manage the flow of text content by using CSS
- Understand and use regions to flow text content between multiple sections
- Manage the graphical interface with CSS

Slides: Slides Chapter 6 and Chapter 7

Lesson Topics: *This lesson covers the following topics.*

- Managing the Flow of Text Content by Using CSS
- Using Regions to Flow Text Content between Multiple Sections
- Managing the Graphical Interface with CSS

Lab: *Complete the following hands-on labs and exercises:*

- Chapters 6 and 7 Step-By-Step Tasks

Homework: *Complete the following assignments:*

- Chapters 6 and 7 – End of Chapter Activities: Knowledge Assessment (pp. 155-157 and pp. 186-188)
- Competency Assessment (p. 157 and p. 188)
- Proficiency Assessment (p. 158 and p. 188)

LESSON #5: UNDERSTANDING JAVASCRIPT AND CODING ESSENTIALS AND CREATING ANIMATIONS, WORKING WITH GRAPHICS, AND ACCESSING DATA

Textbook: *Student Study Guide Preparing for MTA Certification – Exam 98-375 – HTML5 Development Fundamentals*

- Chapter 8 (pp. 189-214)
- Chapter 9 (pp. 215-242)

Objectives: *After completing this lesson, you should be able to:*

- Manage and maintain JavaScript
- Update the UI by using JavaScript
- Code animations by using JavaScript
- Work with images, shapes, and other graphics
- Send and receive data
- Load and save files
- Use JavaScript to validate user form input
- Understand and use cookies
- Understand and use LocalStorage

Slides: Slides Chapter 8 and Chapter 9

Lesson Topics: *This lesson covers the following topics.*

- Managing and Maintaining JavaScript
- Updating the UI by Using JavaScript
- Coding Animations by Using JavaScript
- Working with Images, Shapes, and Other Graphics
- Sending and Receiving Data
- Loading and Saving Files
- Using JavaScript to Validate User Form Input
- Using Cookies
- Using LocalStorage

Lab: *Complete the following hands-on labs and exercises:*

- Chapters 8 and 9 Step-By-Step Tasks

Homework: *Complete the following assignments:*

- Chapters 8 and 9 – End of Chapter Activities: Knowledge Assessment (pp. 212-213 and pp. 240-242)
- Competency Assessment (p. 214 and p. 242)
- Proficiency Assessment (p. 214 and p. 242)

LESSON #6: JAVASCRIPT CODING FOR THE TOUCH INTERFACE, DEVICE AND OPERATING SYSTEM RESOURCES AND MORE

Textbook: *Student Study Guide Preparing for MTA Certification – Exam 98-375 – HTML5 Development Fundamentals*

Chapter 10 (pp. 243-267)

Objectives: *After completing this lesson, you should be able to:*

- Respond to the touch interface
- Code additional HTML5 APIs
- Access device and operating system resources

Slides: Slides Chapter 10

Lesson Topics: *This lesson covers the following topics.*

- Responding to the Touch Interface
- Coding Additional HTML5 APIs
- Accessing Device and Operating System Resources

Lab: *Complete the following hands-on labs and exercises:*

- Chapter10 Step-By-Step Tasks

Homework: *Complete the following assignments:*

- Chapter 10 – End of Chapter Activities: Knowledge Assessment (pp. 265-267)
- Competency Assessment (p. 267)
- Proficiency Assessment (p. 267)

Assessment: Exam