Mastering JavaScript & JQuery Essentials (TT4115)

Category: Software Development & Programming | **Vendor:** Trivera Tech

Duration: 40.00 hours (5 days) **32.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

This hands-on course is geared for web developers who need to learn basic JavaScript and JQuery to use with today's systems and architectures to build sophisticated web interfaces. JavaScript is simple and elegant but is often difficult to work with because it's so different from the programming languages most developers are used to utilizing. You will experience a balanced mixture of theory and practical labs to gain core JavaScript skills to ease the development of advanced web applications. If you are building for the web, learning jQuery will change the way you write JavaScript, working across multiple browsers and platforms. After this course, you will be able to hit the ground running applying essential JavaScript to projects at both an architectural as well as a line by line coding level.

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Who Should Attend

This is an introductory level course for experienced software developers seeking to enhance and extend their core web development skillset leveraging JavaScript and JQuery. Attendees should have practical experience developing basic software applications. This course provides an excellent foundation for continued learning to gain in-demand skills in in-demand skills and technologies such as NodeJS, Angular, React, Redux and more. This course can also be tailored for less experienced or non-developers as needed

Prerequisites & Entry Requirements

General Prerequisites:

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Learning Outcomes

Upon successful completion of this course, participants will be able to:

Throughout the course, students will explore practical use of the umbrella of technologies that work in conjunction with JavaScript as well as some of the tools, toolkits, and frameworks that can be used in conjunction with web development and deployment. The course begins with an initial look at JavaScript and how it is used within the context of web applications, walking students through the different technologies that are used with JavaScript and exploring core aspects of JavaScript and JQuery in terms of web applications, security, tools and frameworks.

Working within in a dynamic, hands-on learning environment, guided by our expert team, attendees will:

Become both familiar with the language and confident enough to work with it in any context

Learn enough of the DOM API to bend it to your will

Make communication between the browser and your server possible

Understand and effectively leverage closures

Understand how JavaScript's object model differs from the model classical object-oriented programming languages

Learn what jQuery is and how to add it to your applications

Use jQuery to select complex sets of elements from the DOM

Develop rich web pages that respond to user interaction

Interact with your server-side code using Ajax

Explore a wide variety of plugins and learn how to write your own

Test your applications to make sure your JavaScript is as solid as the rest of your code

Students will explore:

What is JavaScript, how does it relate to other programming languages, and how do you script your web pages with it

How do you traverse and manipulate the DOM and how do you handle events in ways that work in all browsers'

What is Ajax and how does JavaScript make it possible

What are closures and prototypes and other exotic features of JavaScript

What is jQuery and why should you use it

How does jQuery reduce the amount of code that you have to write to add rich functionality to both existing and new web pages'

How does jQuery make Ajax programming easier

What best practices are there for using jQuery so that it works unobtrusively and performs well

What plugins and extensions are available to enhance your applications even more than the core jQuery library can provide

Detailed Course Outline

Core JavaScript Essentials

- JavaScript Basics
- Debugging Tools
- JavaScript Functions
- JavaScript Arrays, Math and Date
- JavaScript Event Handling and the DOM
- Object-Oriented JavaScript

jQuery

- Why jQuery
- Basic jQuery
- Manipulating the DOM
- More on Element Selection

Working with jQuery

- Attributes, Forms, and DOM
- More jQuery!
- Event Handling
- More On Elements!
- Ajax

jQuery Plugins and Enhancements

- jQuery Plugins
- jQuery UI
- Templates

JavaScript Object Notation (JSON)

- JSON Objects
- JSON Syntax and Processing
- jQuery, JSON, and AJAX

Advanced JavaScript Topics

- ES6: The Next Step
- HTML5 JavaScript API
- TypeScript
- JavaScript Best Practices
- JavaScript Scheduling, Execution, and Security
- Performance and Optimization
- Download Options
- Security

Web Design

- Responsive Web Design
- User Interface Principles
- Layout Techniques
- Navigation Techniques
- Selection Techniques

, Session: Core JavaScript Essentials

Lesson: JavaScript Basics

JavaScript Defined

Variables and Operators

Flow Control and Conditionals

Lesson: Debugging Tools

Using the strict mode and setting breakpoints

Browser debugging tools

Monitoring resource usage and performance

Emulating devices Exceptions in JavaScript

Lesson: JavaScript Functions

Functions in JavaScript

Invoking Functions

Function Constructor

Function Scope and Closures

Lesson: JavaScript Arrays, Math and Date

JavaScript Literals

JavaScript Arrays

Working with Numbers and Dates

Lesson: JavaScript Event Handling and the DOM

Events and Event Handling

HTML Document Object Model

Accessing the DOM

Dynamically Working with the DOM

DOM Challenges

Lesson: Object-Oriented JavaScript

JavaScript Å“Objects and Å“Classes

Constructors and Prototypes

Prototypes

Extending Classes with Prototype

Reusable, Flexible Classes

Session: jQuery

Lesson: Why jQuery

JavaScript Evolution

Why jQuery

jQuery Usage

Downloading jQuery

Lesson: Basic jQuery

jQuery: Operational Overview

jQuery Capability Overview

Basic Selectors

Multiple Selector

Selecting by Order

Lesson: Manipulating the DOM

Attributes vs. Properties

CSS Box Model Properties

Element Content

Manipulating Children

Wrapping and Unwrapping

Effects (Basic Animation)

Effects Queues

Lesson: More on Element Selection

Hierarchical Selectors (Combinators)

Attribute Selectors

Basic vs. Child Filters

Filtering Methods

Traversing Methods

Session: Working with jQuery

Lesson: Attributes, and DOM

Selecting from Forms

Selecting Parent and Children

Automatic DOM Traversal

Manipulating DOM Elements

Getting and Setting Attribute Values

Removing Attributes

Lesson: More jQuery!

The jQuery Function

The jQuery Object

Some jQuery Å“Static Methods

Utility Methods

Lesson: Event Handling

Binding Multiple Events to Same Handler

Multiple Events to Different Handlers

Event Targets

Triggering Events

Custom Events

Live Events

Lesson: More On Elements!

Changing HTML Content

Changing Text Content

Managing Elements

Introduction to Animations

Lesson: Ajax

Posting Data

Global Ajax Handlers

JSONP

Serialization

Deferred Objects

Promises and Piping

Chaining Tasks

Session: jQuery Plugins and Enhancements

Lesson: jQuery Plugins

jQuery Validation Plugin

jQuery Form plugin

jQuery BBQ (Back Button &

Query) Plugin

jQuery Hotkeys Plugin

jQuery Color Plugin

Lesson: jQuery UI

jQuery UI Effects

Advanced Easing

Interactions

Position Utility

Widgets

Icons

Lesson: Templates

Micro Templates

jQuery Template Plugin

Compiling Templates Template Items

Session: JavaScript Object Notation (JSON)

Lesson: JSON Objects

Understand JavaScript's literal syntax for creating arrays and objects

Understand object literals

Understand arrays

Understand arrays in objects

Understand objects in arrays

Lesson: JSON Syntax and Processing

Understand JSON Syntax

Understand JSON Parsers

Read and write object and array literals in JavaScript

How to use JSON in an Ajax application

Understand the advantages of using JSON

Understand the disadvantages of using JSON

How to use JSON in an Ajax application

How to transfer data to and from the server

Lesson: jQuery, and AJAX

jQuery AJAX Utility Method

jQuery and JSON

jQuery and Other Data Types

Serialization

Deferred Objects

Promises and Piping

Chaining Tasks

Session: Advanced JavaScript Topics

Lesson: ES6: The Next Step

ES6 Defined

ES6 Default and Rest Parameters

IIFE and Closures

ES6 Importing/Exporting Modules

Arrays, ES6 Maps, and ES6 Sets

Working Arrays with ES6

Working Strings with ES6 Strings

ES6 Constructs and Inheritance

ES6: Getters and Setters

Lesson: HTML5 JavaScript API

Cross-Domain Messaging

Working with Web Storage

Offline with Application Cache

Geolocation: What, Why, and How

Lesson: TypeScript

Strong Data Typing

Compiling TypeScript to JavaScript

TypeScript Datatypes

TypeScript Classes and Interfaces

Lesson: JavaScript Best Practices

Code Conventions for the Lifecycle

Resolving Shared Resources

Constructs to Use

Constructs to Avoid

Memory Considerations

Lesson: JavaScript Scheduling, and Security

Timers and Scheduling

Execution Contexts

Same Origin Policy and JavaScript

Security Considerations

Lesson: Performance and Optimization

Code Optimization

JavaScript Verbosity Tradeoffs

Memory Considerations

Cyclic References

Lesson: Download Options

Explain the basic principles underlying web application performance optimization

Understand the role of downloading options in smoothing bandwidth usage

Understand how caching can reduce bandwidth usage

Lesson: Security

Security: The Complete Picture

Unvalidated Input

Injection Flaws

XSS

Spoofing

How Attackers See JavaScript Applications

OWASP Top Ten for 2017

Session: Web Design

Lesson: Responsive Web Design

Adapting to Varying Screen Sizes

Scaling Page and Text Content

Scaling and Adapting for Media

Options for Adjusting Media

Lesson: User Interface Principles

Design Principles

Improving Interactions with Users

Matching Web Flow to User Expectations

Lesson: Layout Techniques

Page Layout Consideration

Stacking Content

Handling Excessive Content

Providing Consistency Across Web Presence

Lesson: Navigation Techniques

Handling Excessive Content

Providing Context and State Feedback

Navigation Placement and Techniques

Lesson: Selection Techniques

Improving Text Input

Improving Enumerated Input

Accessibility Considerations

Additional Course Details

Nexus Humans Mastering JavaScript & JQuery Essentials (TT4115) training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Mastering JavaScript & JQuery Essentials (TT4115) course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Mastering JavaScript & JQuery Essentials (TT4115)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 5-day Mastering JavaScript & JQuery Essentials (TT4115) course provides up to 32.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Mastering JavaScript & JQuery Essentials (TT4115) training?

The training takes place over 5 day(s), with each day lasting approximately 40.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Mastering JavaScript & JQuery Essentials (TT4115)?

Yes, we provide corporate training, dedicated training, and closed classes for Mastering JavaScript & JQuery Essentials (TT4115). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: JavaScript; Jquery

Q: Why choose Nexus Human for Mastering JavaScript & JQuery Essentials (TT4115)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Mastering JavaScript & JQuery Essentials (TT4115) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

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