

## Working with jQuery

The Web Development, Programming & Design Series

**Course:** TT4667 Working with jQuery

**Duration:** 3 days

**Focus:** jQuery development

**Targeted Audience:** Experienced Web Developers

**Skill-level:** Introductory to Intermediate

**Hands-On Format:** This hands-on class is approximately 50/50 lab to lecture ratio, combining engaging lecture, demos, group activities and discussions with comprehensive machine-based practical programming labs and project work.

**Delivery Format:** We're flexible! This course is available for onsite private classroom presentation, or live online virtual presentation, or can be presented in a combined delivery learning solution. Please visit our Public Schedule for open-enrollment course dates.

**Customizable:** This course may be easily tailored to target your training skills objectives, tools of choice and learning goals.

*Working with jQuery* covers jQuery and provides practical and hands-on experience with the preferred JavaScript library for building rich web applications. If you are building for the web, learning jQuery will change the way you write JavaScript, working across multiple browsers and platforms.

### ► Course Objectives: What You'll Learn

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

- 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

Students will understand:

- 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?

**Need different skills or topics?** If your team requires different topics or tools, additional skills or custom approach, this course may be easily adjusted to accommodate. We offer additional web programming, design and security courses which may be blended with this course for a track that best suits your development objectives.

**Course Structure:** Throughout the course students will be led through a series of progressively advanced topics, where each topic consists of lecture, group discussion, comprehensive hands-on lab

exercises, lab review and quizzes. This course is “skills-centric”, designed to train attendees in leading-edge web development skills, coupling the most current, effective techniques with the soundest practices.

**Hands- on Learning:** This course is about **50% hands-on lab and 50% lecture**, with extensive programming exercises designed to reinforce fundamental skills and concepts learned in the lessons. Our courses include ample materials and labs to ensure all students are either appropriately challenged, or assisted, at all times – no matter their skill level.

### ► Audience & Pre-requisites: Who Should Attend

This is an **introductory and beyond-level** web development course, designed for experienced JavaScript / web developers who need to extend their knowledge of web design and development. This is a hands-on programming class. Attendees should have previous experience or working knowledge of developing software applications. Real world programming experience is a must.

### ► Related Courses – Suggested Learning Path

**Take Before:** Students should have working knowledge of basic HTML and CSS, or should attended this course as a prerequisite

- **TT4610 Web Essentials: HTML**
- **TT4110 Web Essentials: JavaScript**

**Alternative Courses:** We offer other courses that provide different levels of knowledge or focus:

- **TT4665 Mastering JQuery (4 days)**
- **TT4600 Mastering Web Development using HTML5, CSS3, JQuery & More | Covering UI Patterns, Best Practices &**

**Performance (with Advanced Topics) (4 days)**

- **TT4675 Mastering JavaScript & JQuery (5 days)**

**Take After:** We offer a variety of introductory through advanced web programming, development and design courses. We will collaborate with you to design the best solution to ensure your needs are met, whether we customize the material, or devise a different educational path to help your team best prepare for this training.

Some of the more popular follow-on courses include:

- **TTC4679 HTML RIA Development | Covering HTML5, CSS3 / LESS, Angular JS, TDD, REST, SOA, CI, MDE & More**
- **TTC4678 Advanced JQuery with Backbone, Thorax & Lumbar**
- **TTC4679 Advanced JQuery / RIA | Creating Modular and Maintainable HTML5 Rich Applications with JQuery, UI, Backbone and REST**

- **TTC4689 AngularJS | Rich Internet Applications (RIA) in JavaScript**

Please contact us for recommended next steps tailored to your longer term education, project or development objectives.

► **Student Materials: What You'll Receive**

Our robust course materials include much more than a simple slideshow presentation handout. Student materials include a comprehensive hard-copy course manual, complete with detailed course notes, detailed lab manuals and workbooks, code samples, software tutorials, diagrams and current reference materials, all directly related to the course at hand, indexed for ease of use. Step-by-step lab instructions, software tutorials and project descriptions are clearly illustrated and commented for maximum learning.

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**Workshop Topics Covered**

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**Session: Exploring jQuery**

**Lesson: Introduction to jQuery**

- What is jQuery?
- jQuery Usage
- Downloading jQuery
- Reading the Documentation
- The jQuery Function
- The jQuery Function "Overloads"
- Selecting Elements
- Example: Selecting Elements by Tag Name
- Example: Selecting Elements by ID
- Example: Selecting Elements by Class
- The jQuery Object
- Some jQuery "Instance" Methods
- Example: Appending Elements
- Example: Handling Events
- Example: Hiding Elements
- Some jQuery "Static" Methods

**Lesson: Selecting Elements**

- Selectors
- Basic Selectors
- Hierarchical Selectors (Combinators)
- Descendant vs. Child Combinators
- Adjacent vs. General Sibling Combinators
- Attribute Selectors
- More Attribute Selectors
- Even More Attribute Selectors
- Child Filters (from CSS)
- Basic Filters
- Basic vs. Child Filters
- More Basic Filters
- Content Filters

- Form Filters
- More Form Filters
- jQuery Objects
- Filtering Methods
- .filter(selector)
- .filter(function)
- .not(selector)
- .not(function)
- .has(selector)
- Traversing Methods
- More Traversing Methods
- Restoring jQuery objects
- Example: .andSelf()
- Example: .end()
- Other jQuery Object Properties and Methods
- Using jQuery Objects Like an Array
- .each(callback)

**Lesson: Manipulating the DOM**

- \$(html, [ownerDocument])
- \$(html, props)
- .attr(name, [value])
- .attr(object)
- .prop()
- Attributes vs. Properties
- Removing Attributes and Properties
- The Class Attribute
- Working with CSS
- .css(name, [value])
- CSS Box Model Properties
- Element Content
- Checkboxes and Radio Buttons
- Select and Option Elements
- Manipulating the DOM

- Manipulating Children
- Removing Elements
- Inserting Content
- Replacing Content
- Wrapping and Unwrapping
- Effects (Animations)
- Built-in Effects
- Durations and Easing
- Animating Arbitrary Properties
- Relative Property Animations
- .animate() options
- Effects Queues
- jQuery UI Effects

**Lesson: Event Handling**

- .bind(eventType, [eventData], handler)
- Binding Multiple Events to Same Handler
- Multiple Events to Different Handlers
- Shortcut Methods
- Event Handlers
- Returning false
- The Event Object
- Event Targets
- Key Event Properties
- Mouse Event Properties
- Event Object Methods
- mouseenter/mouseleave
- Other Methods for Binding Events
- Triggering Events
- Custom Events
- Removing Event Handlers
- Namespaced Event Handlers
- Live Events
- Live Events Example

- .live() Limitations
- .delegate() as a Better .live()
- New Methods in jQuery

#### Lesson: Ajax

- \$.ajax()
- \$.ajax() Settings
- Posting Data
- Default Settings
- Global Ajax Handlers
- Ajax Handlers
- Shortcut Methods
- .load()
- JSONP
- JSONP Example
- Serialization
- Deferred Objects
- Deferred Consumer Methods
- Deferred Consumer Example
- Deferred Provider Methods
- Deferred Provider Example
- Promises
- Piping
- Chaining Tasks
- Waiting for Multiple Tasks

#### Lesson: jQuery Plugins

- jQuery Plugins
- jQuery Validation Plugin
- jQuery Validation Plugin (Example Form)
- jQuery Validation Plugin (Example

- Rules)
  - jQuery Validation Plugin (CSS Classes)
  - jQuery Validation Plugin (Messages)
  - jQuery Form plugin
  - jQuery Form Plugin (Methods)
  - jQuery Form Plugin (Options)
  - jQuery BBQ (Back Button & Query) Plugin
  - jQuery Hotkeys Plugin
  - jQuery Color Plugin
  - The jQuery UI Project
  - Grid Plugins
  - Tree Plugins
  - Commercial Packages
  - Writing Custom Plugins
  - Template for New Plugins

#### Lesson: jQuery UI

- jQuery UI
- jQuery UI Effects
- Visibility Transitions
- Color Transitions
- Class Transitions
- Advanced Easing
- Easing Curves
- Interactions
- Conventions Used by Interactions/Widgets
- Draggable Interaction
- Droppable Interaction
- Draggable/Droppable and CSS
- Constraining Dropping of Draggables

- Resizable Interaction
- Selectable Interaction
- Sortable Interaction
- Position Utility
- Position Utility Example
- Widgets
- jQuery UI CSS Framework
- Example Classes
- Icons
- All Icons

#### Lesson: Templates

- Micro Templates
- Micro Template Example
- Micro Template With Embedded JavaScript
- jQuery Template Plugin
- Template Plugin Example
- \${expression} and {{= expression}}
- {{html expression}}
- {{if expression}}
- {{else}}
- {{else expression}}
- {{each expression}}
- {{each(index, value) expression}}
- {{tmpl([data], [options]) template}}
- {{wrap([data], [options]) template}}
- Compiling Templates
- Compiling Templates Example
- Template Items

### ► Delivery Environment: Tools to Use

This course can be delivered using a variety of software combinations and tooling. Our detailed lab workbooks are complete with software-specific instructions and tutorials, screen shots and step-by-step illustrations for using the software you select. In most cases we can port our classes to run in the environment of your choosing. Please inquire for details.

### ► Setup Made Simple!

Our mission is to ensure a smooth start to your course with minimum set up burden for your team or firm. We offer several course set up options to help meet that goal. Please inquire for details on requirements and costs.

- **Manual Course Setup.** Our team provides a detailed setup guide with specific instructions, packaged software and links for all course tools and labs, as well as much live assistance as required to prepare your attendees or classroom for the course.
- **Remote Lab Environment.** Your team can access our hosted environment to access and use the software, labs and tools

required for the hands-on portion of the training.

- **Provide Pre-Loaded Equipment.** If needed, we can ship in pre-loaded equipment to your site.

### ► Focused, Skills-Driven Training | Maximizing Your Training Time and Value, while Reducing Risk

Our training programs are designed to be skills-driven, focused events, targeted to deliver the true skills you need to succeed in your projects and role. We'll work with you to ensure that your valuable training time and dollar is truly maximized. If your team requires more or less advanced materials or additional or custom topics, this course may be easily adjusted to accommodate. We offer and can blend on a wide variety of surrounding and supporting tools and elements to build out a truly robust educational experience, for you, your team, or your entire organization.

Please contact us for details about our **Extended Education Programs** that support, surround, supplement or extend your learning initiatives such as

- **Collaborative mentoring** for your team
  - **Pre-and post-training assessments** help place learners on the right path
  - Mentored, comprehensive **case-studies** can be woven into your training programs, complete with guided work and instructor interaction
  - **Guided or self-paced projects**, homework and exams
  - **Interactive, self-paced programs** students
  - **Virtual lab hours** and/or constant Mentor access
  - Role-basic, Topic-based or Goal-based corporate **Training**
- **Roadmap and Learning Paths development**, rollout and support
  - Skills-focused custom **New Hire Training Programs** and team **Reskilling initiatives**
  - **Learning Management or Vendor Management Services** for your organization

Plus many additional, flexible learning modules, initiatives and programs that can be delivered across a variety of subjects and modalities, completely tailored for your organization

## ► Why Choose Trivera Technologies?

Whether you're a manager choosing a training provider or course to bring to your team, an instructor looking for reliable, solid course materials, or a student looking for an exciting, targeted training class to attend or to recommend to your colleagues - ***Our single focus is to make YOUR training event or experience a success.*** Here's why choosing our team as your web development, programming and design training and courseware resource takes the risk right out of your decision making process...

- **Our prices and services are guaranteed.** We stand behind our courses, courseware and instructors 100%. We'll match or beat any pricing for similar services, any time. Whether you're a stakeholder organizing your firm's educational services, a student in our live or virtual classroom or a trainer using our materials to educate your own client or team.
- **Our Instructors and Mentors bring years of leading-edge, hands-on Web Development, Design & Programming experience into the classroom and content.** Our engaging, dynamic instructors and course authors are also skilled web developers and designers, who work on exciting web projects in between training engagements. Many of our web team members are game designers and developers, mobile app developers, and mobile app and web development security experts - all of whom are immersed in the latest skills, tools and technologies available in this fast-changing industry. They bring experience and expertise well-beyond the course materials.
- **Our 'skills-driven' courses are efficient, focused, current and comprehensive.** Our experts target exactly the skills your team needs to succeed in their jobs, projects or roles, rather than taking a 'laundry-list' approach to training, which can often result in overtraining, course overload or overwhelmed students. We'll work with you to define what it is you need to accomplish, and create the right program, training to those goals. Students of all skill levels will be able to hit the ground running with their new skills right after class ends, since the program was correctly designed from the start.
- **Our 360° Turn-Key Training Services ensure your Important Event is Truly Targeted, Exceeds Your Expectations and is delivered 100% Worry-Free!** The Trivera team treats every delivery engagement like a first-run, important event, not simply a staffing assignment. For every class we deliver, our team works closely with yours to ensure that your course runs smoothly from start to finish, and that there are **no surprises** in the classroom for you, your students or the instructors. Our experts work with you to choose the right topics and courses that align with your true skills goals, tuning as needed. We align the best all-around trainer to fit your exact needs – not just whoever happens to be 'on the bench'. We offer pre-reading, quizzes and support resources to help assess and prepare your team for the training, so we can best tune the training and maximize their time in the classroom. We'll ensure that your classroom is set up and ready to go prior to course start. Throughout the course delivery, our instructors constantly evaluate the class delivery and students, tuning topics, activities, discussions and labs as needed to ensure all student skill levels and needs are targeted. All activities, data and results are documented and shared with your firm so you have a complete picture of the course and its results, throughout the course delivery, and afterwards. Post training support is also included for your students to address any future related questions.
- **We wholly-own our course content, giving Trivera flexibility & quality above the rest.** Our course materials are **owned** by our company and **fully customizable at little or no cost.** Dozens of training firms and independent instructors purchase and use our course materials, and hire us for training support as well. As a result, our courseware is subject to very stringent quality requirements. Not only will your organization benefit from our own technical team's technical expertise, but also from the feedback of hundreds of students and trainers using these materials, worldwide, on a regular basis. This unique fact guarantees that our materials are not only robust and interesting, but also technically correct, current and of the highest quality and usability.
- **Our content is always updated and ready to go.** Our dedicated course development team keeps our training content, courses and student resources completely updated with the latest skills, industry trends and software editions to ensure your team is always getting the most current information, techniques and skills available.
- **We take the pain out of classroom set up.** Our mission is to ensure a smooth start to your course with minimum set up burden for your team or firm. We offer several course set up options to help meet that goal. We'll work closely with you to ensure your classroom is 100% ready to go, well in advanced of the class start so your class can hit the ground running.
- **We're here for Extended Support Service** for students, instructors, facilities or anyone using our content or working with our instructors, in any way. There is someone here to assist you with questions, technical calls, set up, content – or whatever you need - at all times. Your

success is our singular goal. We also support all of our students long after the class ends by offering pertinent free technical resources, live mentoring and technical support to help you apply your newly learned skills, and steeply discounted additional training offerings.

- **We're published authors and industry speakers.** Our team was selected to write the online *JEE, EJB, EJB CMP-CMR and Web Services Tutorial Series for IBM developerWorks®*. These are the same instructors who train our classes and author the courseware. Most of our trainers/consultants have also authored additional articles on web services, EJB, Struts, JEE and advanced Java topics, and are recognized speakers and presenters on the industry technical seminar circuit. Our team is comprised on several successful published authors. Members of our team have written or contributed to: *Python Programming, Eclipse Kick Start, Mastering Eclipse; Professional Struts; Using Java Tools for Extreme Programming; Mastering Resin; Mastering TomCat and others.*
- **Our prices and services are guaranteed.** We stand behind our courses and instructors 100%. We'll match or beat any pricing for similar services, any time. Whether you're a stakeholder organizing your firm's educational services, a student in our live or virtual classroom or a trainer using our materials to educate your own client or team – **Our core mission is to make YOU a success in the classroom.**

► **For More Information**

**Need dedicated training?** All courses can be brought **onsite** or produced **online** / virtually for a private presentation, customized to suit your unique requirements or goals. Please contact us for course details and Special Discount Offers. Our pricing is always cost effective, and our services are guaranteed. Please also visit our **Public Training Schedule** for available open enrollment dates that may apply. Please contact [Training@triveratech.com](mailto:Training@triveratech.com) for more information, pricing and special offers.

**Need courseware or courseware development services?** Let us take the risk out of your next courseware purchase, curriculum development project or classroom delivery! All Trivera Technologies course materials are available for corporate license and customization, with complete instructor support and free corporate branding. Samples are available upon request. Please contact us at [Courseware@triveratech.com](mailto:Courseware@triveratech.com) for details, options and excellent pricing.

**For more information** about our training services, collaborative mentoring services, courseware licensing options, courseware development services, public course schedule, training management services, partner and reseller programs, or to see our complete list of course offerings please visit us at [www.triveratech.com](http://www.triveratech.com), email [Info@triveratech.com](mailto:Info@triveratech.com) or call **609.953.1515**.

**TRIVERA TECHNOLOGIES | Collaborative IT Training, Mentoring & Courseware Solutions**  
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**Some of TRIVERA TECHNOLOGIES COURSE OFFERINGS include:**

Java | JEE | .Net | C# | ASP.Net | VB.Net | ADO.Net | WCF | C++ | SQL | C | COBOL  
SOA | SOA Analysis & Design | SOA Security | Web Services | Spring 3.0 | MVC | Hibernate | EJB | JSF | Struts | Ajax  
Cloud | Software Architecture | Design Patterns | Groovy | Grails | Ruby | Ruby on Rails  
Mobile Development | Android | iPhone/iPad | HTML5 Mobile | Mobile Security  
Secure Coding | Application Security | Database Security | Security Architecture & Design | Security + | CISSP | CEH | Ethical Hacking  
OOAD | UML | Use Cases | Requirements | Estimation | Software Engineering | Software Design | Secure Software Design  
Databases | JDBC | Oracle | DB2 | Derby | SQLServer | MySQL | Database Security  
O/S | Systems Administration | Performance Tuning | Windows | Linux | Unix | Administration | COBOL | Mainframe | Assembler | SQL  
Web Development & Design | HTML/CSS | HTML5 | CSS3 | JavaScript | XML | XPath | XSLT | DOM  
PHP | Perl | Python | ExtJS | Sencha | YUI | GlassFish | AWS Adobe | Flash | Flex  
Test Driven Development | Agile | Scrum | Scrum Master | Testing | Agile Testing | JUnit | NUnit | Test Estimation | QA  
SAP | Business Objects | WebIntelligence | ABAP | Selenium | CAST | Crystal Reports  
IBM WebSphere | Rational/RAD | RSA | Cognos | FileNet | MQ Series | Informatica | Teradata  
Oracle | WebLogic | Discoverer | OBIEE | Fusion | JDeveloper | ADF | Oracle SOA | SQLPlus | PLSQL  
Eclipse | MyEclipse | JBoss | TomCat | NetBeans | Networking | TCPIP | Wireless | Android | VOIP  
Microsoft | SQLServer | SSRS | TFS | VSTS | Visual Studio | BizTalk | Office | Excel VBA | SharePoint  
Business Analysis | Technology for BAs | Project Management | PMP | Leadership | Coaching  
BootCamps | Workshops | New Hire Training | Reskilling | Skills Assessments | Corporate Roadmaps & Learning Plans

For a Complete List of our Course Offerings please visit: <http://www.triveratech.com/Courses/Courselist.htm>

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