Trivera Technologies LLC

Collaborative IT Training, Mentoring & Courseware Solutions
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Mastering Web Development using HTML5, CSS3 and jQuery (with Advanced Topics) | Covering UI Patterns, Best Practices, Performance & More

The Web Development & Design Series

Course: TT4600: **Mastering Web Development using HTML5, CSS3 and jQuery (with Advanced Topics) | Covering UI Patterns, Best Practices, Performance & More**
Duration: 4 days
Focus: HTML5, CSS3, and related technologies.
Targeted Audience: Experienced Web Developers
Skill-level: Intermediate
Hands-On Format: This hands-on class is approximately 60/40 lab to lecture ratio, combining engaging lecture, demos, group activities and discussions with comprehensive machine-based practical programming labs and project work.
Language / Tools: HTML5, CSS3, jQuery and appropriate browsers
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 also 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.

Mastering Web Development using HTML5, CSS3 & jQuery (with Advanced Topics) is an in-depth web development / design training course geared for software developers who need to understand what the latest in web technologies, performance, optimization, and user interface design patterns and best practices. This comprehensive course provides a balanced mixture of theory and practical labs designed to take students through HTML5, CSS3 and related technologies. Students who attend this course will leave this course armed with the new skills to design, implement, and deploy robust, flexible, and safe web applications.

▶ Course Objectives: What You'll Learn

This course provides indoctrination in the practical use of the umbrella of technologies that are on the leading edge of web development.

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

- Understand what HTML5 is, what is new, and how it is used within the context of web applications
- Understand what CSS3 is, what is new, and how it is used within the context of web applications
- Understand the wide variety of options, tools, and approaches that can be used in conjunction with the web design and implementation
- What jQuery is and why you should use it
- How jQuery reduces the amount of code and adds rich functionality to both existing and new web pages
- Best practices for using jQuery so that it works unobtrusively and performs well
- jQuery plugins and extensions are available to enhance your applications
- Concepts, terminology and implementation options for web-based user interface patterns
- How to apply user interface patterns implementing a complex web development case study

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 **intermediate and beyond** level web development course, designed for experienced developers who need to extend their knowledge of web design and development or need to reinforce sound HTML and CSS coding practices, immediately.

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This is a hands-on programming class. Attendees should have previous experience or working knowledge of developing software applications, as well as basic HTML and CSS. 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
- **TT4105 Web Essentials: HTML and CSS**
- **TT4110 Web Essentials: JavaScript**

Alternative Courses: We offer other courses that provide different levels of knowledge or focus:
- **TT4650 Mastering HTML5, CSS3 & JavaScript (3 days)**
- **TT4601 Mastering Web Development using HTML5, CSS3, JQuery & More | Covering UI Patterns, Backbone, Best Practices & Performance (with Advanced Topics) (5 days)**
- **TT4610 Mastering HTML5 (4 days)**
- **TT4655 Mastering HTML5 (with Advanced Topics) (5 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:
- **TT4365 Developing HTML5 Mobile Applications**
- **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.

▶ 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.
- **LoadNGo Instant Classroom Kit (DVD Image).** Depending on the course, we can supply a custom, course-specific DVD that houses the course set up software, labs, and other pertinent useful student resources such as whitepapers, tutorials and additional examples. This image is simple to install and remove, without impacting your student environments.
- **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

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- **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.

Workshop Topics Covered

Session: HTML5

Lesson: HTML5
- HTML5 Design Principles
- HTML5 – New Features
- HTML5 Semantic Tags
- HTML5 Forms – New Features
- HTML5 Media
- Media API Methods and Events

Lesson: HTML5 JavaScript API
- Drag and Drop API
- Messaging API
- Web Storage API

Session: CSS3

Lesson: CSS3 Overview
- CSS3 New Features
- CSS3 Browser Support
- CSS3 Selectors Support
- CSS3 Properties Support

Lesson: CSS3 Advanced Selectors
- Attribute Selectors
- Combinators
- Pseudo-Class Selectors
- UI Selectors

Lesson: CSS3 Visual Effects
- 2D Transformations
- Transitions
- Font and Color in CSS3
- Border and Other Effects

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: JavaScript Object Notation (JSON)

Lesson: JSON Objects
- Arrays
- Objects
- Arrays in Objects
- Objects in Arrays

Lesson: JSON Syntax and Processing
- JSON Parsers
- Sending Data
- JSON vs XML

Session: Web Application Performance

Lesson: Download Options
- User Experience on Page Load
- Multi-Stage Downloading
- Predictive Fetching
- On-Demand Downloading
- JavaScript and CSS Minification

Lesson: JavaScript Best Practices (Optional)
- JavaScript Code Conventions
- Formatting and Structure
- Variable and Function Declarations

- Statement Conventions
- Best Practices and Principles

Lesson: Debugging, Optimization & Profiling
- Internet Explorer Developer Tools
- FireBug & FireBug Lite
- Fiddler
- Code Optimization
- CSS and Reflow Minimization

Lesson: Memory Management
- JavaScript Memory
- Removal of DOM Nodes
- Cyclic References
- Reusing DOM Nodes

Session: Web App Design Patterns

Lesson: UI Patterns Overview
- User Interface/Interaction Design Patterns
- Categories from Yahoo! Design Pattern Library
- Web Application Design Principles

Lesson: Layout Patterns
- Page Grids
- Page Grids Solution

Lesson: Navigation Patterns
- Accordion
- Alphanumeric Filter Links
- Breadcrumbs
- Item Pagination
- Search Pagination
- Module Tabs
- Navigation Tabs
- Progress Bar

Lesson: Selection Patterns
- AutoComplete
- Calendar Picker
- Carousel

Lesson: Rich Interaction Patterns
- Invitations

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- Transitions
- Drag and Drop
- Rich Interaction

Session: jQuery Plugins (Optional)

Lesson: jQuery UI
- jQuery UI Effects
- Advanced Easing
- Interactions
- Position Utility
- Widgets
- Icons

Lesson: jQuery Plugins
- jQuery Validation Plugin
- jQuery Form plugin

- jQuery BBQ (Back Button & Query) Plugin
- jQuery Hotkeys Plugin
- jQuery Color Plugin

Lesson: Templates
- Micro Templates
- jQuery Template Plugin
- Compiling Templates
- Template Items

Session: Mobile Development (Optional)

Lesson: Challenges for Mobile Development
- What is the Difference?
- Mobile Web Applications
- Native Code Generators

- Native Web Runtime (NWR)
- Design Tools
- Data and Language Options
- Security
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Need courseware? *This course is fully customizable, and also available for license with complete support for qualified organizations. To learn more about our Courseware Services and Licensing options, please contact us at Courseware@triveratech.com for details.*

▶ **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 <u>every</u> 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 <u>little or no cost</u>*. 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.

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- **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'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 a*nd *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.*

- **Need a small-business status with whom to team?** Trivera Technologies is a 100% Woman-*Owned Small Business Concern. Please contact us to t*eam with us for your small-business or woman-owned set aside opportunities.

- ***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** 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** 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**, email **Info@triveratech.com** or call **609.953.1515**.

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

Trivera Technologies is a Woman-Owned Small-Business Firm

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