

# **Mastering Chrome Developer Tools**

## **Course Syllabus**

***Your Instructor:*** Rocco Balsamo

### ***Course Outline:***

#### **A Tour of the Developer Tools**

- Three ways to open Chrome Developer Tools
- Console Commands and Multiline Statements
- Sources, Network, and Other Panels
- Inspect and Style a Page Live
- How to View Your Changes

#### **Setting up a Local Server**

- Static Python SimpleServer
- Windows Server Setup

#### **Snippets and Alternate Ways to Understand your Changes**

- Introducing Snippets
- Applying Changes
- CSS History
- Experimental Chrome Features & Workspaces

#### **GUI Style Editors**

- The Various Style Editors
- Animations Editor

#### **Basic Javascript Debugging**

- Using the Debugger in the Sources Panel
- Keyboard Shortcuts for Debugging
- The Call Stack

#### **Navigating & Applications Tab**

- Finding Stuff
- Cookies and Local Storage with the Application Tab
- Console Multiline and Asserts
- Miscellaneous Console Functions
- Console Profile & Dollar Shortcuts
- Console Styling

#### **Breakpoints**

- Types of Breakpoints
- Line of Code Breakpoints
- Conditional Breakpoints
- DOM and Network Breakpoints
- Event and Exception Breakpoints

#### **Network, Page Speed & Security**

- Downloading From Codepen.io
- The Network Panel

Hacking Reservations on Yelp  
Improve page load speed with Audits & Lighthouse  
Security and HTTPS with NGrok

### **Client Side Performance Monitoring**

Introducing a Client Performance Example  
Task Manager, FPS meter, and Rendering Tab  
Performance / Timeline Tab  
Detecting Memory Leaks

### **Other Browsers and FAQ's**

Other Browsers, VM's and BrowserStack  
A Thank You and Common Questions

### **Detailed Lecture Descriptions:**

- Three ways to open Chrome Developer Tools
  - Learn the three ways to open Chrome Developer Tools, and get an introduction to your instructor.
- Console Commands and Multiline Statements
  - Understand how to type Javascript commands into the console and how to enter multiline statements like for loops or functions.
- Sources, Network, and Other Panels
  - A brief overview of: NetworkingSecuritySources Pretty PrintApplication Tab and CookiesAudits
- Inspect and Style a Page Live
  - Use the inspector to preview live styling changes on a webapp called TodoMVC.
- How to View Your Changes
  - Get before and after snapshots of your page edits. Understand where your changes were made on the page with the Meld diff tool.
- Static Python SimpleServer
  - Download a webapp, and run it on a simple server using python, with specific instructions for Mac.
- Windows Server Setup
  - Get the tools to run a BASH terminal with Python support on windows and start a simple static server.
- Introducing Snippets
  - Understand that styling changes are only temporary, and get introduced to Javascript snippets to run code on any webpage.
- Applying Changes
  - Copy changes from the inspector to your hosted webpage.
- CSS History
  - Use CSS History to understand changes
- Experimental Chrome Features & Workspaces

- Learn how to find and enable experimental Devtools features, and use Workspaces with persistence 2.0 to automatically save code to your hard drive from Devtools.
- The Various Style Editors
  - Use the color picker, shadow editors and transition editor.
- Animations Editor
  - Use the animations editor to modify animation timing, and use the `cssanimate` tool to develop keyframe CSS animations.
- Using the Debugger in the Sources Panel
  - Stop code with breakpoints in the debugger, and step through that code to understand how it works.
- Keyboard Shortcuts for Debugging
  - Learn the important keyboard shortcuts for debugging and fix some problems with Mac shortcuts.
- The Call Stack
  - Understand the call stack and use the `async` button to debug event driven code.
- Finding Stuff
  - Use keyboard shortcuts to jump around in your code and in the devtools panels.
- Cookies and Local Storage with the Application Tab
- Console Multiline and Asserts
  - Use multiline console statements, and understand where to find info about the Console API.
- Miscellaneous Console Functions
  - Learn various console functions like `dir`, `dirxml`, `group`, `warn` and `time`.
- Console Profile & Dollar Shortcuts
  - Run profiles from the console, understand different chrome versions, and use "dollar shortcuts" to quickly tweak DOM elements with Javascript.
- Console Styling
  - Add styling and images to your console messages!
- Types of Breakpoints
  - The various types of breakpoints available
- Line of Code Breakpoints
  - Review of how to stop your code with line-of-code breakpoints and the debugger statement.
- Conditional Breakpoints
  - Stop your code only when a certain condition is met.
- DOM and Network Breakpoints
  - Stop your code when the DOM changes or when an AJAX / XHR request is made.
- Event and Exception Breakpoints
  - Stop code when an event occurs or an error is thrown.
- Downloading From Codepen.io

- Download content from Codepen to run it locally.
- The Network Panel
- Hacking Reservations on Yelp
  - Use the network panel to understand real-world network requests, and hack the calls made to a live API.
- Improve page load speed with Audits & Lighthouse
  - Understand where to find problems with page load and an intro to Lighthouse for advanced performance checking.
- Security and HTTPS with NGrok
  - Learn how to look at HTTPS issues with devtools, and a solution for delivering your own development HTTPS server.
- Introducing a Client Performance Example
  - Introduce an example which shows CPU, memory and rendering slowness.
- Task Manager, FPS meter, and Rendering Tab
  - Use the Task Manager, frames per second meter, and rendering tab to detect memory and performance problems on your site.
- Performance / Timeline Tab
  - Look at your page performance over time, view memory and CPU usage, and Javascript code profiling.
- Detecting Memory Leaks
  - A real world memory leak and how to diagnose similar problems with the memory tab.
- Other Browsers, VM's and BrowserStack
  - Look at devtools in other browsers including Safari, Firefox, Edge, and Internet Explorer. Simulate other operating systems with VM's and Browserstack.
- A Thank You and Common Questions
  - A thank you from your instructor, plus node.js debugging and inspecting devtools with devtools!