

Appcelerator University (AppU)

Lesson Syllabus - Level 300



Advanced UI with HTML 5, CSS 3, and Emerging Web Standards

Duration: 2 hours

In this lesson, you will learn about the advanced Webkit browser environment, and how you can leverage the best of emerging open web standards to turbocharge your desktop (and mobile) apps. Desktop CSS 3 demos/walkthrough

In this lesson, you will:

- Learn about advanced techniques and features available in HTML 5
- Leverage native drag and drop
- Use transitions and animations enabled by CSS 3
- Use advanced CSS styling options like border radius and font embedding

Advanced Native UI Techniques

Duration: 2 hours

In this lesson, you will learn how to unlock the full power of the native UI components exposed by the Titanium Mobile SDK. Titanium allows you to use JavaScript to write apps that perform and look native - this lesson goes deep to show you how. Demos and code walkthroughs from Kitchen Sink and Ralph Lauren?

In this lesson, you will:

- Learn to use 2D and 3D animations
- Skin native components
- Customize table views and other foundational UI elements
- Explore each native component in detail, with available options
- Create seamless apps that are indistinguishable from native in a fraction of the code

Capturing Complex User Interactions and Gestures

Duration: 1 hour

In this lesson, you will learn how to take advantage of mobile device features like multitouch, accelerometer, and gestures. We will explore how you can leverage these capabilities to build intuitive user interaction. Gesture-specific demo and code walkthrough.

In this lesson, you will:

- Learn how to use the accelerometer to capture device movement
- Learn how to recognize and leverage multitouch gestures
- Learn about built in gestures like shake and orientation change
- Update the UI appropriately based on orientation

Performance and Graphics Optimization

Duration: 1 hour

In this lesson, you will learn how to optimize your code and visual assets for best performance on a mobile device. Mobile devices are growing more popular every day, but they are still comparatively limited in hardware capabilities. There are, however, things you should do to make sure your app behaves. Code snippets interspersed throughout.

In this lesson, you will:

- Avoid expensive operations and clean up afterward
- Tune your app's graphics for best performance on a device
- Learn about limitations on file and database storage
- Learn how to avoid clogging up memory

Extending Titanium

Duration: 1 hour

Titanium's modular design and open source license allows developers to extend the platform with new functionality - learn how to get started. Live code a simple Titanium extension.

In this lesson, you will:

- Create Titanium modules for desktop and mobile
- Explore resources to help in your effort
- Learn how to contribute back to Titanium

Building CLI and Utility Applications

Duration: 1 hour

Sometimes a GUI isn't necessary - turns out Titanium is a great platform for those types of desktop applications as well! Learn how to create a headless Titanium application. Demo - a CLI app which reads from stdin and writes to stdout.

In this lesson, you will:

- Create a command line application
- Read from standard input and write to standard output
- Learn how to modify a Titanium project to run without a GUI
- Explore techniques for creating headless CLI applications

Workers, Processes, and Sockets

Duration: 1 hour

Desktop apps have the ability to escape the UI thread and spin up worker threads, invoke processes, and listen on sockets. Learn these advanced techniques to create Desktop apps which take full advantage of powerful platform features. Demo and walkthrough of HTTP server code, processes and workers.

In this lesson, you will:

- Learn how to offload computationally expensive operations to workers
- Spin up and monitor processes on the local machine
- Use sockets to create a simple HTTP server

Push Notifications

Duration: 1 hour

On the Apple iPhone and iPad platforms, Appcelerator supports client side push notifications to send alerts to your users even when your app is inactive. Learn how to set up push notifications in this lesson. Demo: a simple push notifications enabled app.

In this lesson, you will:

- Learn how to handle and use Push Notifications on the client side
- Navigate the Apple Developer Program to enable notifications for your app
- Leverage services from Urban Airship to simplify Push Notifications on the back end

PHP on the Desktop

Duration: 1 hour

PHP is one of the world's most popular programming languages, and it is supported now on Titanium desktop applications. You can preprocess PHP files to render dynamic HTML, or invoke PHP classes or functions with full access to the DOM. Demo: GrowlBox (uses jQuery and PHP)

In this lesson, you will:

- Learn the basics of using PHP in Titanium Desktop
- Learn how to communicate with JavaScript and the DOM
- Explore the PHP features included with Titanium

Python on the Desktop

Duration: 1 hour

In this lesson, you will learn how to use Python scripts within your Titanium Desktop applications. Leverage Python libraries to create powerful scripts with access to the DOM and window-scoped JavaScript objects. Demo: Python scripting and DOM access.

In this lesson, you will:

- Learn the basics of using Python in Titanium Desktop
- Learn how to communicate with JavaScript and the DOM
- Explore the Python features included with Titanium
- Integrate third party Python modules with Titanium

Ruby on the Desktop

Duration: 1 hour

In this lesson, you will learn how to use Ruby scripts within your Titanium Desktop applications. Leverage the elegant Ruby scripting language and gem library to create powerful scripts with access to the DOM and window-scoped JavaScript objects. Demo: Ruby scripting, DOM access, and third party gems.

In this lesson, you will:

- Learn the basics of using Ruby in Titanium Desktop
- Learn how to communicate with JavaScript and the DOM
- Explore the Ruby features included with Titanium
- Integrate third party Ruby modules with Titanium