This course provides a deep, hands-on investigation into the real-world application of functional programming and concurrency techniques.

1. See the "**Sections & Lectures**" tab for the table of contents.
2. View the "**Printable transcripts**" tab and press `Ctrl`-`P` (`Cmd`-`P` on Mac) and select a PDF printer to make a PDF containing the course notes.
3. The "**Course Details**" tab shows a link for downloading the course project as a Zip file and the git command to checkout the course project as a git repository.

This is a hands-on course. Please don't just read the notes, try every code example yourself. Type along with the REPL or a Scala Worksheet. If you encounter a problem or have a question, and you are taking a live class, please talk with the instructor right away. Otherwise, please log an issue for this course.

Sample Code

Registered users will see a tab on the course overview page entitled **Course Details** that provides the URL for the sample code repository. As with the previous course, I show code throughout this course that can be pasted into the REPL, and that code is also provided in the the `courseNotes` directory. You can choose to run the sample code as standalone programs, or you can paste it into the REPL to play with, or you can paste it into a Scala worksheet.

Prerequisites

Introduction to Scala course, or equivalent.

Before Coming to Class

Please install the following before starting the course, or if attending an in-person course, before coming to class:

- Your laptop or desktop should have 4GB RAM or more, 6+ GB is recommended. A laptop with only 2GB will probably not be usable for this course.
- JDK 6 or later should be installed. JDK 7 is recommended. Mac instructions. Windows instructions. Linux instructions.
- Linux and Mac laptops should work well; Windows poses a few challenges that take extra time and effort to overcome.
- Shell:
  - Windows users should have a virtual machine installed, such as VMware Workstation, and a Linux client OS should be installed; XUbuntu 13.10 64 bit is recommended. Note this increases memory requirements; 8GB+ is recommended for VMware. Be sure to test network connectivity from the VM over wireless before coming to class. If Windows users opt for Cygwin instead (be sure to install all packages) then they will encounter limitations, but Cygwin is better than nothing. Note that Cygwin may take up to 8 hours to install.
  - Mac users should install a shell such as iTerm 2.
  - Linux users will already have a shell.
- Mac laptops should have Brew installed. Enter the following incantation, taken from the Brew home page, at a shell prompt:

```
ruby -e "$(curl -fsSL https://raw.github.com/mxcl/homebrew/go)"
```

- Adobe Acrobat Reader or other PDF display software such as Foxit or Nitro should be installed.
- A text editor should be installed. Many choices exist. Sublime Text is a particularly good choice, however any text editor will do.

Students are encouraged to download the following software in advance, and to follow the installation instructions if they are able. The course lectures will discuss each of these software packages and will help students install them.

- One of the following two IDEs: IntelliJ IDEA (recommended) or Scala IDE. It is fine to install both.
- SBT v0.12.1 or later (all versions up to and including v0.13.1 have been tested and work well).
- Scala 2.10.3.

Problems?

The instructor will attempt to deal with issues on the spot if you are taking this course in a live class. If you are taking this course online, and for unresolved problems and for suggestions, please use the Issue Tracker.

Course Evaluations

We would appreciate you taking the time to fill it out the evaluation at the end of the course.