**Outline: Chef Intermediate Course**

1. **Intro/Objectives/Lab setup: Steve Del Fante**

* Intro
* Course objectives
* Agenda/Topics
* Legend
* Training Environment

1. **Chef Fundamentals Refresher:** 
   * Create a new Organization
   * Manually configure your certificates (.pem files) & knife.rb on your workstation so it can communicate with Chef Server
   * Bulk upload all cookbook, role, environment and data bag files to the Chef Server
   * Setting up environment
   * Bootstrap etc.
2. **Building Custom Resources:**
   * Describe the components of a Custom Resource
   * Explain the Resource DSL
   * Explain the Provider DSL
   * Build a resource and provider from scratch
3. **Writing Ohai Plugins:**
   * Explain the function Ohai and Ohai Plugins
   * Write your own Ohai Plugins
   * Force Ohai Plugins to run
   * Disable Ohai Plugins
4. **Chef Client Run Internals:**
   * Explain what happens under the hood when Chef Client runs
   * Describe the purpose of the run\_context and run\_status objects
   * Use node.run\_state to pass information around the recipe at execution time
   * Describe the event subsystem and how it can be used.
5. **Implementing Chef Handlers:**
   * Describe Chef handlers
   * Write custom report handlers
   * Distribute handlers to nodes
   * Configure Chef to use custom handlers
6. **Cookbook Style & Correctness:**
   * Explain the benefits of correctness checking your cookbooks
   * Explain how and why you should test your cookbooks
   * Use Foodcritic to check the validity of your cookbooks
   * Verify your code adheres to the community Ruby style guide by using Rubocop
7. **Foodcritic:**
   * No objectives but topics are:
   * Install Foodcritic
   * Check cookbook correctness with Foodcritic
   * Narrow the tests
   * Fix the cookbook to clear the errors
   * Running certain tests
8. **Rubocop:**
   * No objectives but topics are:
   * Install RuboCop
   * Run Rubocop on Parent Directory
   * Run Rubocop on Apache
   * Understanding the Output
   * Create a boilerplate .rubocop.yml
   * Run Rubocop
   * Make corrections in offending file
9. **An Introduction to ChefSpec:**
   * Explain what unit testing means for Chef cookbooks and recipes
   * Explain why to write unit tests for Chef recipes
   * Use ChefSpec to create and manage a test suite for your cookbooks
10. **Further Resources:**
    * No objectives

Intermediate Course Issues

<https://github.com/chef-training/chef-intermediate/issues>