12 days training plan for Front-end

Objective:

1. Start working on real project immediately after training
2. Minimize instructor time

Requirement:

1. 10h per day
2. Basic knowledge of Computer Science
3. Eager to learn

Before Training

(For everyone with or without CS Background)
(cn) Front-End Development Introduction

Day 1 - HTML + CSS + JS Basics

(cn)
Basic HTML+CSS (09:18:00)
http://www.imooc.com/learn/9

Basic Javascript (01:35:00)
http://www.imooc.com/learn/36

(en)
(HTML+CSS)
(03:04:45) https://www.udemy.com/course/master-the-basics-of-html5-css3-beginner-web-development/

(HTML+CSS)
(04:32:59) https://www.udemy.com/course/how-i-landed-a-web-development-job-earned-5k-freelancing/

(HTML+CSS+JS Basic)
(20:45:58) https://www.udemy.com/course/foundations-of-front-end-development/
Before jQuery

More resources:

- HTML5 Style Guide
- HTML Semantic Element
- HTML elements reference
- MDN Introduction to CSS

Day 2 - Self learning

HTML & CSS Questions
Self learning: Finish HTML & CSS Questions
(Need instructor ~2h) Question Review

Day 3 - Practice

Use HTML and CSS to layout Google Homepage (Or other website)
(May need more time)

Day 4 - Advanced JavaScript 1

(Need instructor ~2h) Practice review

Use spare time to fix practice problem

Advanced Javascript
8小时55分 http://www.imooc.com/learn/10

Day 5 - Advanced JavaScript 2

1. Important language features
    a. HTML DOM manipulation
    b. Short-circuit evaluation
    c. Destructuring assignment
    d. Spread Operator
    e. String template
    f. ES6 Overview
    g. Built-in collection type and function. Array, Object, Map, Set
    h. ***Need a practice here***
2. JSON & Object
    a. Object pass by ref (Search Google)
    b. Object mutation (Search Google)
    c. Object comparison (Search Google)
    d. ***Need a practice here***
3. Async programming
    a. Getting to know asynchronous JavaScript: Callbacks, Promises and Async/Await
    b. Promise
    c. Async/Await
    d. ***Practice: https://codesandbox.io/s/autorefetch-problem-jiscy***
4. 3rd party libraries
    a. Lodash: Lots of utility functions
    b. date-fns: Time manipulation
    c. Axios: Promise based HTTP client

(Need instructor ~2h)

Ask questions to check:

1. Language feature
2. JSON mutation

Day 6 - Advanced CSS

1. CSS layout method
    a. Learn CSS Layout
    b. Flex
    c. Grid
    d. ***Practice: https://codepen.io/LandonSchropp/pen/KpzzGo Use Flex and Grid to implement***

2. Animation
    a. @Keyframe
    b. transition
    c. transform/transform3d
    d. ***Example: https://codesandbox.io/s/css-box-loading-znbbt***
3. Organize CSS
    a. SCSS Syntax
    b. Styled-component
    c. CSS Module
4. Stacking Context
5. BEM naming

(Need instructor ~2h)

1. Why do we need to organize css
2. CSS animation or JS animation
3. CSS 坑example
    a. Spacing at the bottom of inline element
    b. Fixed position with transform/perspective
    c. overflow-x: hidden的同时，不能overflow-y: visible

Day 7 - Practice

Use Flex to layout your website. Add interactive functions
(Need instructor 2h) Practice review

Day 8 - (Framework) React 1(11.7h)

https://www.udemy.com/course/react-the-complete-guide-incl-redux/
Getting Started **39:40**
Refreshing Next Generation JavaScript (Optional) **45:16**
Understanding the Base Features & Syntax **02:21:47**
Working with Lists and Conditionals **01:00:56**
Styling React Components & Elements **01:05:07**
Debugging React Apps **20:07**
Diving Deeper into Components & React Internals **05:30:36**

Day 9 - (Framework) React 2 (10h)

(Need instructor 4h) React life-cycle recap question
https://codesandbox.io/s/react-life-cycle-pu564
Life-cycle difference between Components and Functional Components(Hook). Equivalent.

(6h)
https://www.udemy.com/course/react-the-complete-guide-incl-redux/
A Real App: The Burger Builder (Basic Version) **03:59:42**
Reaching out to the Web (Http / Ajax) **56:27**
Burger Builder Project: Accessing a Server **57:05**

Day 10 - (Framework) React 3

(4h)
https://www.udemy.com/course/react-the-complete-guide-incl-redux/
Multi-Page-Feeling in a Single-Page-App: Routing **02:03:00**
Adding Routing to our Burger Project **01:18:50**
Forms and Form Validation **01:11:48**

Practice : Google homepage react version
(Need instructor 4h) Practice review

React Router (2h w/ 1h practice)

React Design Pattern
[cn] https://reactpatterns.com/
[en] https://reactpatterns.cn/

// May need another day for Redux

Day 11 - Building tools

TypeScript (2h)

Git Workflow (4h w/ 1h practice)

ESLint
Prettier
Babel
.....Other 3rd party library

Day 12 - Finish

Start working on project
Submit first PR/MR

****Read:**

Front-end Code Review Common Problem
PinOn Programming Naming convention