

PODII ACADEMY



COURSE OUTLINE OVERVIEW

Mobile: 057 20 41122

Email: academy@podiihq.com

Website: academy.podiihq.com

Address: Nairobi Highway - Ondiek Road
Kisumu

WEEK ONE

Static Website Development

We cover current frontend workflow patterns using technologies like task runners, preprocessors. This week aims on getting the student comfortable working with CSS, JS and html for simple websites. CSS and JS frameworks are also introduced (Zurb Foundation, JQuery and Twitter Bootstrap)

WEEK THREE

Introduction to Javascript

This week we will be looking at JavaScript which happens to be the most used language. We strengthen our knowledge in test driven and behaviour driven development practices

WEEK FIVE

JavaScript frontend Framework

Frontend has a couple of frameworks based on JavaScript, we use reactjs to build dynamic and reactive web applications

WEEK SEVEN AND EIGHT

Introduction to software as a service

We learn how to design and implement centrally hosted software. Ruby on Rails will be used as a classic example of this. Software documentation and agile development is also covered.

WEEK TEN

Mobile Application development

Mobile applications are in use everywhere right now, we learn how to make the applications using React Native as we consume the API that we had designed earlier

WEEK THIRTEEN

Five languages in five days

This is the week that we explore other programming languages and frameworks like python, elixir, nodejs, ionic, angular etc

WEEK TWO

Object oriented programming using TDD

This module assumes little or no knowledge on programming in any language, you are introduced to the world of programming using the object oriented paradigm. To be covered is the basics of OOP

WEEK FOUR

Introduction to the web

An in depth coverage of how the web works, we use Sinatra to process requests from users. We also cover data persistence on the database

WEEK SIX

Project One

It's now time to consolidate all the concepts we have learnt so far. A project is presented to you so you use pure ruby, Sinatra, JavaScript and reactjs to build the project

WEEK NINE

Advanced SaaS and API design

We dig deeper into software as a service using advanced rails concepts and learn how to do API design using REST and GraphQL

WEEK ELEVEN AND TWELVE

Final project

We create a SaaS application together with a mobile application in pairs or mobs to strengthen collaboration skills

We wake up everyday to make this better, it is hence subject to change for depending on the feedback and industry requirements

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DETAILED COURSE OUTLINE

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WEEK ONE

Frontend workflow

- Explains current frontend workflow patterns using technologies like task runners (such as grunt and gulpjs), preprocessors.
- This week aims at getting the student comfortable working with CSS, JS and HTML for simple websites
 - Will take a look at appearance or presentation of content on a webpage using vanilla CSS and CSS frameworks such as Zurb Foundation, TWB among others
 - Students will be introduced to vanilla JS and it used to enhance interactivity in a webpage.
 - We will go through the mobile-first design approach and SEO skills when designing websites.
 - Students will be required to build a simple portfolio using the knowledge they have acquired.

WEEK TWO

Introduction to ruby using Test Driven Development (TDD)

- covered principles of TDD and they will come to appreciate why it is considered one of the best practices.
- We will dwell much on RSpec but this just ignition, frameworks come and go the principles (of TDD) is here stays
- This week we take a look at OOP principles such as Polymorphism, Abstraction, Encapsulation and Inheritance.
- We will dive into data types, data structures, methods, class, module, objects, control flow among others.
- We will be taken through debugging ruby and understanding the errors from the error messages
- We will also introduce students to ruby gems and illustrate their importance and understand when to incorporate gems (libraries) and when not to.
- By the end of the week, the student will not only have a firm understanding of ruby but also basics universal language of programming.
- Students will build a ruby command line application by the end of it all

WEEK THREE

Javascript TDD

- This week our main is to dive deeper into javascript by understanding advance topic such as an object, async/ await function, DOM manipulation using JS
- Student will equip with skills on unit testing in JS with intimate looking into Jasmine and mocha testing frameworks.
- Student will understand from ruby TDD they learnt the takeaway skills principles surrounding testing
 - We will dwell mainly on vanilla JS but also taking appreciation of JS libraries.
 - Student will be required to build a simple web-based application using JS to appreciate how JS brings logic in the front end bit of the web

WEEK FOUR

Understanding the web using Sinatra

- The web is complex technology and knowing the right way into it is the key to mastering what it entails and that is what will be doing this week.
- Sinatra helps us quickly create web applications in Ruby with minimal effort.
- Knowledge of Sinatra will help learners with quick know-how of bootstrapping web apps and understand how the web works.
 - We will dive into understanding client-server communication strategies by understanding communication protocols and content negotiation.
- Student will be taken through the request-response cycle to better understand what happens between clicking a button and getting feedback on the browser.
- By the end of it all, students will come to appreciate web not only as consumers but as also developers.
- At the end of the week, students will write an application majorly dwelling on the backend side of the web.

WEEK FIVE

Introduction to front end technologies

- We learn how to make reactive, feature-rich web applications
 - This week we will mostly spend time building on what we learnt on JS understanding framework associated with JS.
 - We will implement the structure, design, behaviour, and animation of websites, web apps and mobile apps.
 - We take a different look to render dom content e.g using virtual dom
 - Student will acquire knowledge and appreciate the usage of a framework such as reactjs of building single-page apps.
 - By the end of the week, students will create a single page app develop using a reactive JS library or framework.

WEEK SIX

Project Time

It's now time to consolidate all the concepts we have learnt so far. A project is presented to you so you use pure ruby, Sinatra, JavaScript and reactjs to build the project

Its time to take a break and practice on what has been learnt



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WEEK SEVEN

Introduction to rails with TDD and BDD(Behavior Driven Development)

- Ruby on Rails is a framework that allows you to build web applications fast.
- A sophisticated website requires a simple yet powerful tool to build and that where rails come in it is industry tested and widely accepted as one of most unrivalled web build tools.
- We dwell mainly on basic of rails and use to understand MVC pattern(Active Record, View and Controller) which now the norm of web development. Understanding the flow of data(request and response) in rails applications.
- Student will be taken through rails as dwelling mainly in widely accepted practices and norms of the industries.
- Student will go through rails as we focus mainly in of BDD using cucumber and TDD using RSpec.
- By the end of week the student will find a sense of pride in finding safety in a number of rails developers and fit freely within this awesome society.
- Student will be able to build a simple blog or any other simple application using rails while observing TDD and BDD

WEEK EIGHT

Rails inside out and project collaboration

- There is a lot of magic abstracted by a framework, during this week we will take a deep dive into the structures
- We will destructure rails framework get deep into not only its core MVC pattern but also security, active storage, active job among others.
- Project collaboration is important and key, this is the week to learn this
- Student will be paired with remote developers to be given insight on how to work with not only work with an unfamiliar face but also understand the essence of collaboration
- Student will acquire soft skills and made known that it requires more than coding skills to be a good developer.
- Student will require pick issues(something to do) work on it a submit a pull request on an open-source select project.

WEEK NINE

API design

- systems need to communicate with each other, during this week, we will teach you how to design systems that can communicate with each other.
- Student will be taken through complexity and simplicity in API design and how to balance the two.
- We go through challenges faced when developing an API such as Cross-Origin Resource Sharing(cors) and how to overcome them.
- Students will importance of separating API implementation from its design to allow easy integration with different platforms.
- We will go through how to document an API and make it relevant to the second or even third party with interest of using it
- Student will come up with stand-alone API project that will be able to accept requests and give desire feedback according to laid out documentation.

WEEK TEN

Building a mobile application

- Mobile phones are becoming more and more easily available. We will spend this week introducing a mobile application building.
- Student will be introduced to some widely used, cross-platform and latest mobile development frameworks such as flutter and react native.
- Student will be taught how to work with Android SDK Build-Tools, Android SDK tools, and google play service.
- We will go through how to integrate analytics in your app to help you track downloads, user engagement and retention for your mobile app.

REACH OUT ANYTIME

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You will have enough knowledge to get into the job market.
One last project and an internship to glue everything
together past this point