NodeJS Syllabus

Introduction to Node.js

- RAM vs. I/O latency
- Blocking vs. Non-Blocking
- Event-driven Programming
- Event Loop
- Blocking The Event Loop
- Node.js Philosophy

Node.js Platform Setup

- Download and Install
- Node REPL
- First Hello World

Modules and npm

- Anatomy of a module
- Private code
- Accessing and using modules
- npm commands
- package.json

The Callback Pattern

- What are callbacks
- Callback-last
- Error-first

Events

- When to use Event Emitters
- Binding Functions to Events
- Event Requests and Listening

Error Handling

- Callbacks: Error-first
- Errors in Event Emitters
- Uncaught Exceptions
- Using Domains

Buffers

- Why Buffers exist
- Creating Buffers
- Reading and Writing Buffers
- Manipulating Buffers

Streams

- What are streams
- Read and Write Stream API
- Flow Control
- Piping
- Duplex Stream
- Transform Stream

Express.js

- Intro and Installing Express.js
- Building a Hello Express application
- Creating routes
- Rendering Layouts
- Using templates
- Adding partials
- Using locals and conditional templates
- Modularizing routes

Socket.io

- Listening for
- Broadcasting
- Answering questions

Connecting to Databases

- No SQL and Document Stores
- Relational DBs
- Configuration and platform setup
- CRUD Operations