Program Curriculum : The Hacking School

The Hacking School is not a typical training program. It's intensive, immersive and completely hands-on. It requires commitment and sheer dedication from the candidates. Our aim is to help candidates learn programming with a focus on how to build products at our coding bootcamp.

The Hacking School provides candidates with all the resources i.e. learning material, infrastructure, flexible access to campus, world-class instructors & mentors to help them become great product developers.

While the focus is on coding, what we really work on is picking the
"art of learning new things."

Full Stack (Online)

Web Development Curriculum - 18 Weeks

The Hacking School - 18 Week Program Schedule (Full Stack Web)
Phase 1 Week 0 - Week 7
Week 0 - Number systems **Week 1 -** What is Linux, Linux Installations, What is OS, Kernel and Different Distros of Linux and Basic commands, Soft Links, Hard Links, Working with Directories, Directory commands, Files, File commands, History commands, Foreground vs Background Process, Simple Python Server, Process Management, Htop, Filter Commands, What is Bash, how to write bash scripts, cron and cron jobs.

Week 2 - Types of Version Controls, Intro to Git and Github, Git commands, Connecting with Remote and Collaborating with Teams, Github Branches, Github

Collab Work and Making your First PR, Github PRs Revision, Intro to JS, Basics of JS, Variables, Comments in JS, Operators revisions and new Concepts(Arithmetic, Relational, Bitwise, Logical, Assignment) and Math methods and how to take inputs

Week 3 - Working with Strings and string helper methods, Ternary Operators, Conditional Statements, Switch statements, While loop, Do While and For Loops, Functional programming, Arrays and Objects Data Types

Week 4 - Array helper methods and Arrow functions, Functional programming continuation, Hoisting, Import Functions from Different Files, NPM, ES6, Nested Loops and Arrays, Matrices Basics and chalk JS

JS LEVEL 1 SYNTAX

Interview

Week 5 - Level 1 Syntax & Recursions, Matrices and more operations, more functional problems, Sort and array problems, working with File systems, Object Oriented Programming, Stacks & Queues

Week 6 - Time and space Complexity and Algorithms, Callbacks and SetTimeout, Promises and Fetching Data from API, Axios, Try Catch, Async Await, Custom Promises

Week 7 - Weather API, GitHub API, Weather CLI and Date Concepts, TODO CLI, TODO CLI completion, Async Await, Custom Promises Weather API, GitHub API,

JS LEVEL 2 SYNTAX

Interview

Phase 2
Week 8 - Week 11

Week 8 - Weather CLI and Date Concepts, Encoding, Decoding, Encryption, Decryption, Hashing and BASE64 Encoding, HTML5 web design,

Week 9 - CSS3 responsive web design , Template 1&2 Design using HTML & CSS

Week 10 - JS Document Object Model, "JS Document Object Model Page Applications. Setting up the React Development Environment", Introduction to ReactJS and Single Page Applications

Week 11 - React Project Building - JSx, Rendering Elements, Components and Props, State, Lifecycle, React Project Building - Handling Events, Conditional Rendering, Hooks and React Forms, React Project Building -Private Routes, Context API, React Project Building - Production Build and Deployment

Phase 3
Week 12 - Week 17

Week 12 - Intro - Server Side Programming - Express JS - Routing and Making HTTP requests, Express framework, Introduction to MongoDB & Mongoose, and Querying with MongoDB - Atlas Intro, RESTful APIs with Express MongoDB and Connecting to React App, MongoDB/Mongoose JS, Data Modelling/Relationships/Map Reducing Techniques with MongoDb, Replication, Sharding, REST APIs.

Week 13-14 - (FullStack Application 1) Authentication with Node, Passport bcrypt, hashing, salting, ReactJS, Redux.

Week 15 - NextJS, Server Side Rendering(SSR), Typescript, WebSockets, Socket.io, Replit.

Week 16 - Working with OpenAI API's, Building Gen-AI prompt engineering applications, Building RAG app with groq (Llama-3) and Llama-index using Hugging Face. Working with open-source LLM's.

Week 17 - Working on Capstone Project (Full Stack Application 2)
Phase 4 Week 18
Week 18 - Nginx, AWS, Reverse Proxy, Load Balancer, Docker, Cloud Computing session + Demo Day

Key Highlights:

- Building your own web products & personal portfolio
- Building a tech-oriented problem solving approach to real-world problems.
- Deploying applications on AWS, Google Cloud etc
- Learning through internal hackathons & Tech-Talks
- Algorithm Challenges for Cracking Interviews