



IDM TECHPARK

GUIDE'S FOR PERFECT CAREER PATHWAY



MERN Full Stack Course Syllabus



N.S.D.C.
National
Skill Development
Corporation



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About Us

IDMTECHPARK global retail & corporate training solutions provider in Coimbatore, Erode, Trichy & Salem that offers a comprehensive range of training and placement services for both fresher's and professionals seeking new opportunities. The company commenced its IT training business in 2016. A pioneer in IT education, over the years, we have trained over 50k students. Idmtechpark has a wide range of courses, maintains education standards & provides placement assistance.

www.idmtechparkcoimbatore.com
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+91 9585305700

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About IDMTECHpark Education Quality

IDMTECHPARK is managed and developed by industry specialists with more than 8 years of expertise in the field. IDMTECHPARK offers a staff of highly skilled professional trainers who deliver effective IT training in a friendly setting, concentrating on the needs of each individual to help them succeed in a demanding work world. In the book of career and success, our staff never leaves a page unturned.

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IDMTECHPARK's versatile instructor-led training class rooms and lower-class sizes enable people to engage more easily and absorb knowledge, resulting in remarkable results for both themselves and the organizations for which they work. Our training programmes are adaptable and customizable to ensure that each participant gets the most out of their time with us. IDMTECHPARK focuses in providing hands-on IT training in over 30 different courses.

- We teach in-demand courses
- We provide impactful learning material
- Our teachers are well-selected & trained
- We follow world-class teaching methods
- Our courses include E-Projects
- We conduct technical workshops
- Exams are held and based on Exams providing Certification
- Certificates are recognized the world over
- Our course timings are flexible



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Our Recent Placement

Idmtechpark assists students in getting job placements on successful completion of their courses. Idmtechpark also provides recruitment assistance to organizations. Idmtechpark students are shortlisted based on the organization's requirement. To make students job-ready, Idmtechpark conducts workshops e.g. How to do Group Discussions, how to behave in a Personal Interview. From time to time, job fairs & campus recruitments are conducted. Workplace skills such as time management, making effective presentations and communication skills are also provided. All this helps students find appropriate jobs in the IT industry while also helping save companies recruitment costs.

Krishnaveni M

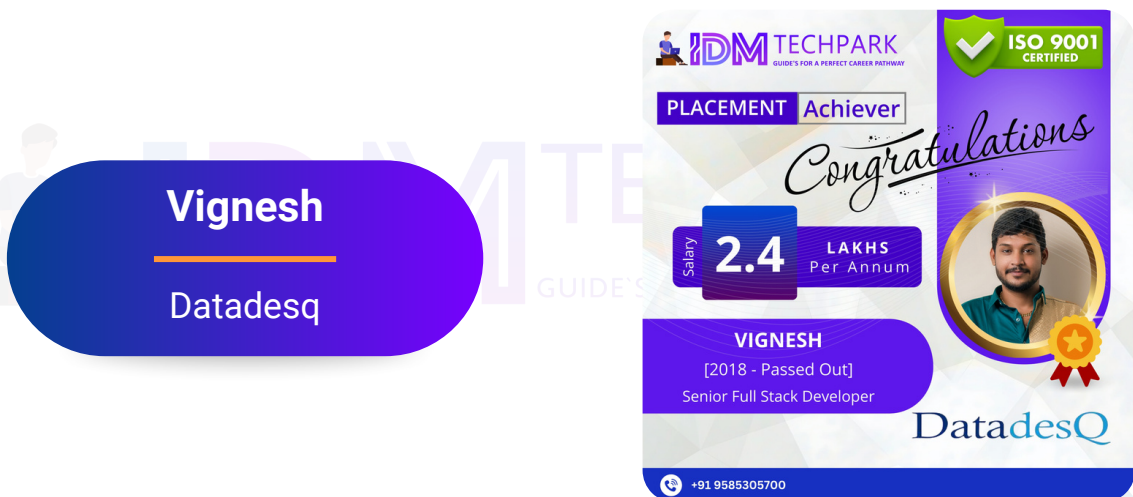
Frutterlabs





Joshwa

Xccessor



Vignesh

Datadesq



Madhumitha

Accenture

Keerthana

AJS



Brindha Boopathi

AJS



Kavın Kumar

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Ajithkumar

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Gowthami

Genpact



Surya

ZUCI

Pavithra

Vel Info Tech



Poovitha

Gray Matter



Ramesh

TDT

Siva Sankar
ST Cloudspark tech



Nabeel Hisham
VTail

Kalayarasan
Violet Infotech



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Our Alumni Working At



MODULE 1

Introduction to Full Stack Web Development

- What is Full Stack?
- Overview of the MERN Stack
- Setting up your development environment

MODULE 2

HTML5 Foundations

- Elements, Forms, Semantic Tags
- Tables, Lists, Media Tags
- Accessibility & SEO basics



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MODULE 3

CSS3 & Layouts

- Box Model, Flexbox, Grid
- Transitions & Animations
- Media Queries & Responsive Design

MODULE 4

JavaScript Fundamentals

- Variables, Loops, Functions
- Objects & Arrays
- Event Handling & DOM Manipulation

MODULE 5

Advanced JavaScript (ES6+)

- Arrow Functions, Destructuring
- Spread & Rest Operators
- Promises, Async/Await

MODULE 6

Version Control with Git & GitHub

- Git Commands: Init, Commit, Push, Pull
- GitHub Repository & Branching
- Merging & Resolving Conflicts

MODULE 7

Node.js Fundamentals

- What is Node.js?
- npm & Package Management
- Creating a simple Node server

MODULE 8

Express.js Framework

- Routing
- Middleware
- Building RESTful APIs

MODULE 9

MongoDB Essentials

- MongoDB Basics
- CRUD Operations
- MongoDB Compass / Atlas Setup



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MODULE 10

Mongoose ODM

- Defining Schemas & Models
- Relationships & Population
- Validation & Indexing



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MODULE 11

Building a RESTful API

- API Routes (GET, POST, PUT, DELETE)
- Controllers & Services
- Testing APIs with Postman

MODULE 12

Error Handling & Logging

- Error Middleware
- Custom Error Responses
- Logging with Morgan/Winston

MODULE 13

Authentication & Authorization

- JWT (JSON Web Tokens)
- User Registration & Login
- Role-Based Access Control (RBAC)

MODULE 14

React.js Fundamentals

- JSX, Components
- Props & State
- Event Handling

MODULE 15

React Hooks & Lifecycle

- useState, useEffect, useRef
- Custom Hooks
- Component Lifecycle

MODULE 16

React Router

- Client-Side Routing
- Route Params
- Protected Routes



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MODULE 17

Forms in React

- Controlled vs Uncontrolled Components
- Form Validation
- Form Libraries (Formik + Yup)



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MODULE 18

Axios & API Integration

- Making GET/POST Requests
- Token Handling (JWT)
- Global Error Handling

MODULE 19

State Management

- Context API
- Redux (Optional)
- Zustand or Recoil (Modern alternatives)



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MODULE 20

File Uploads

- Single & Multiple File Uploads
- Multer (Server-side)
- Cloud Storage (Clouinary/S3)



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MODULE 21

Real-Time Functionality

- Introduction to WebSockets
- Using Socket.io
- Building a real-time chat feature

MODULE 22

Admin Dashboard Features

- Role Management
- Data Tables, Filters, Pagination
- CRUD from Admin Panel

MODULE 23

Project: Full Stack MERN App

- E-commerce, Blog, CRM, or LMS
- Complete Authentication
- Frontend + Backend + Database Integration

MODULE 24

Deployment & Hosting

- Hosting Frontend (Vercel/Netlify)
- Hosting Backend (Render, Railway, Heroku)
- MongoDB Atlas & Environment Variables

MODULE 25

Portfolio, Resume & Interview Prep

- Building a Developer Portfolio
- Showcasing Projects on GitHub
- Interview Questions for MERN Stack
- Freelancing & Job Platforms

Thank You

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