

Cyber Square®

PROFESSIONAL

where your IT work experience starts

6 MONTH CS DIPLOMA IN FULL STACK DEVELOPMENT USING MERN

COURSE BROCHURE

Duration: 6 Months

Lecture sessions: 72 Hands on
Assignments/projects Soft Skill Sessions



200
Institutes



12
Countries



1M
Students

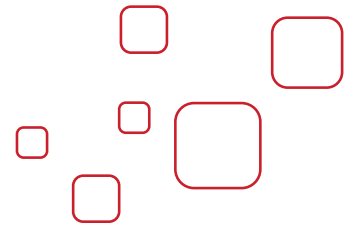
Empowering Tomorrow's High-Paying workforce
with Internship-Driven Industry Experience



ORAY
EDUCATION

<https://cybersquare.pro/>

About Cyber Square Professional



Immerse yourself in a unique learning experience where the virtual meets the real-world. Our courses go beyond conventional training, simulating a dynamic working environment that mirrors a global software company. Interns, dispersed worldwide, collaborate seamlessly on real projects, bringing the virtual workspace to life.

This international exposure not only sharpens the technical skills but also instills the collaborative spirit needed in today's interconnected software development landscape. Soft skills sessions are also seamlessly integrated, ensuring a holistic learning experience. Get ready to thrive in a virtual company setting, acquiring invaluable experience that transcends geographical boundaries.



An overhead view of a diverse group of people sitting around a round wooden table, engaged in a collaborative meeting. They are looking at documents and a tablet. A red banner with the text 'CEO's take' is overlaid on the top left.

CEO's take



NP HARIS

Conceptualizer & CEO

OUR CEO'S MESSAGE

Dear Future Software Engineers,

For over 12 years, CyberSquare Professional has been a leader in technology training, dedicated to producing quality software engineers. Our experience has enabled us to create a unique learning experience that bridges the gap between academic learning and real-world industry demands.

Introducing CS Pro, our state-of-the-art virtual company environment hosted in the cloud. Here, interns from around the globe collaborate on real-world products, gaining invaluable hands-on experience.

In CyberSquare Pro, you join a project team, receive daily lectures, and work under a Product Owner (PO) and Scrum Master in a real Agile environment. You will actively contribute to product development, enhancing features based on backlogs and roadmaps.

We believe that working on actual projects in a real Agile environment is the best way to truly understand the role of a software engineer. This hands-on experience is unmatched and ensures you are well-prepared for your future job.

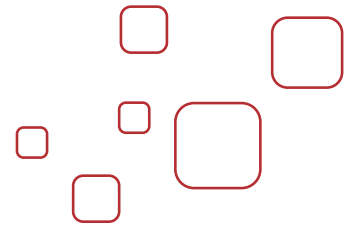
In addition to technical training, we focus on developing soft skills, human skills, and adhering to ethical standards in software development. This holistic approach ensures you are a well-rounded professional.

Join us at CyberSquare Pro and experience the most effective way to become a skilled software engineer. Let us help you build a successful career.

NP Haris

“Mastery in software development comes from hands-on experience. On-the-job training turns knowledge into skill and potential into excellence.”

About the Course

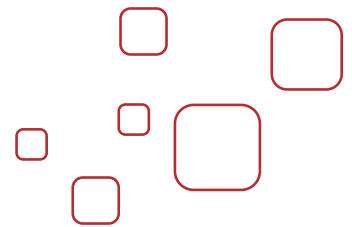


The Cyber Square Professional's MERN Stack Course offers an in-depth, hands-on approach to mastering the full-stack web development process using the popular MERN (MongoDB, Express.js, React.js, and Node.js) technology stack. This course is designed to provide students with both foundational and advanced skills necessary to build dynamic, scalable, and secure web applications. By understanding the core concepts of front-end, back-end, and database technologies, students will be fully equipped to build full-stack applications from scratch.

As students progress, the course dives into the intricacies of full-stack development, emphasizing the importance of building scalable and secure web applications. It covers the entire development lifecycle, from creating efficient back-end systems to designing responsive and interactive front-end interfaces. The course also focuses on real-world applications of the MERN stack, enabling students to apply their knowledge to actual projects. Essential development tools, such as MongoDB, React.js, and Express.js, are combined with Node.js to help students build, test, and deploy robust full-stack applications.



In the later stages of the Cyber Square Professional's MERN Stack course, the focus shifts to advanced web application deployment, security best practices, and integrating DevOps principles. Students gain hands-on experience in deploying applications to cloud platforms like AWS, Heroku, and Netlify, ensuring they are prepared to handle the complexities of modern web infrastructure. The security modules cover essential practices such as data encryption, protecting APIs, and securing user authentication systems.



Reasons to Learn Mern Stack

High Salary Potential

Full-stack developers, particularly those proficient in the MERN Stack, are in high demand across the tech industry. The versatility of working with both front-end and back-end technologies makes MERN developers highly sought after. According to recent industry reports, the average salary for a full-stack developer ranges from \$80,000 to \$150,000 annually in the US, with experienced developers in major tech hubs earning even higher. This makes learning the MERN stack a lucrative choice for anyone looking to advance their career in web development.



Growing Demand

The demand for full-stack developers skilled in the MERN Stack is rapidly increasing across various industries, including technology, e-commerce, healthcare, and finance. As businesses continue to shift towards web-based solutions and digital platforms, the need for versatile developers who can build robust applications from end to end has never been greater.

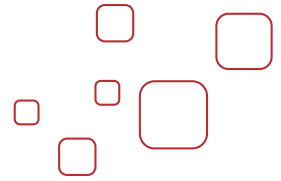
Diverse Roles:

Mastering the MERN Stack opens up a wide range of career opportunities. Full-stack developers can pursue roles such as front-end developer, back-end developer, software engineer, and web application developer.

Driving Innovation

MERN Stack developers are at the forefront of creating innovative web applications that transform how businesses operate. By leveraging technologies like MongoDB, Express.js, React, and Node.js, developers can build scalable, high-performance applications that enhance user engagement and streamline processes. Their contributions can lead to advancements in web technology, interactive user interfaces, and seamless client-server communication. Informed.

Decision-Making: Full-stack developers proficient in the MERN Stack enable organizations to make data-driven decisions by creating applications that provide real-time insights and analytics.



Career Advancement

- **Leadership Roles:** As MERN Stack developers gain experience, they often advance to leadership positions such as Technical Lead, Software Architect, or Head of Development. These roles involve guiding teams, making strategic decisions about technology stacks, and shaping the development processes within organizations.
- **Continuous Learning:** The web development landscape is ever-changing, with new frameworks, tools, and best practices emerging regularly.



Job Security

Critical Skill Set: As organizations increasingly shift towards digital platforms and web applications, the expertise of MERN Stack developers is becoming essential. This demand for skilled developers ensures job security for those proficient in this technology stack.

Adaptability to Various Industries: MERN Stack skills are highly transferable across industries, from e-commerce to healthcare and beyond. Even during economic fluctuations, developers can pivot to different sectors that are experiencing growth, providing a solid safety net in their careers.

Interdisciplinary Collaboration

- **Cross-Functional Teams:** MERN Stack developers often work in interdisciplinary teams, collaborating with professionals from marketing, finance, operations, and IT. This interaction enhances their knowledge and skills across various domains.
- **Problem-Solving Skills:** Working on diverse projects helps data scientists develop strong analytical and problem-solving skills, which are highly valued in any business context.

Intellectual Challenge

Working with the MERN Stack involves tackling complex web development problems, from creating user-friendly interfaces to optimizing server-side performance. This dynamic environment provides intellectual stimulation and a sense of achievement as developers bring innovative applications to life.

Contributing to Society

Many projects developed using the MERN Stack can have a significant societal impact, such as creating platforms for education, promoting local businesses, or enhancing community engagement. For professionals passionate about making a difference, working on meaningful applications can be deeply rewarding.

Who should take this course?

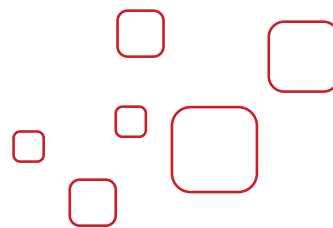


MERN Stack for whom?

The MERN Stack is perfect for individuals who enjoy web development and are eager to enhance their skills in JavaScript, front-end frameworks, and server-side programming. Those passionate about creating dynamic web applications and user interfaces will find this stack particularly fulfilling.

- ☐ Beginners with no prior knowledge of MERN Stack
- ☐ Those with a basic understanding of JavaScript who wish to enhance their skills by learning how to create full-stack applications.
- ☐ Students
- ☐ Freelancers
- ☐ Individuals interested in roles such as full-stack developer, web developer, or software engineer will benefit from mastering the MERN Stack.
- ☐ Entrepreneurs

Student Intern Status – International Point System



Embark on a structured learning journey with our **International Point System**, an essential aspect of our internship placement process.

By integrating activities such as LinkedIn profile creation, StackOverflow participation, and project development, this system encourages a comprehensive development approach, preparing students for successful careers.

This system not only establishes a standardized evaluation process but also motivates students to excel in their internship, enhancing their preparedness for future professional endeavors. Embrace the International Point System and set yourself on the path to a rewarding placement experience.

Point Accumulation

Students earn points by successfully fulfilling the required tasks and objectives.

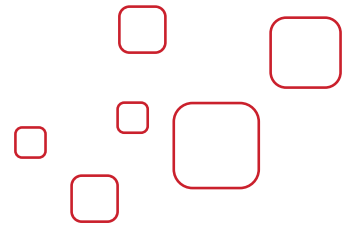


Mandatory Requirements

To be eligible for the placement process, students must complete a set of mandatory items outlined in our International Point System.

Minimum Required Points

Meeting the minimum required points is essential for students to qualify for the placement process. This ensures a fair and competitive environment.



Course content

Sprint 1

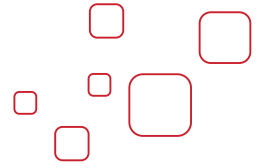
- Lms account creation, basic session
- computer basics, computer architecture, input/output units. software, OS, cmd commands, shell commands, network, basic network commands
- programming concepts, machine language, highlevel language, translators, programming language, framework, variables
- Operators, types of operators, introduction to git and github
- github collobaration
- html into, basic tag, formatting tags, comments, image, block level and inline tags

Sprint 2

- semantic tags, lists, hyper link, tables, forms, webhosting
- Introduction to css, selectors, pseudo class and pseudo elements
- css box model, flex and grid
- css box model, flex and grid
- bootstrap and its component familiarization
- Introdction to js, data types, operators, message boxes

Sprint 3

- conditional statements, loops and switch
- Introduction to functions, key aspects of functions, scope
- string and array method, DOM
- Introduction to jQuery, jQuery effects and animations



Sprint 4

- Introduction to jQuery, jQuery effects and animations
- jQuery ajax, json parsing, handling array
- objects, OOPS, Advanced js- Asynchronous programming
- Status code, different types of browser storage, type script
- Introduction to React, Parent child communications, state and virtual DOM, React story book

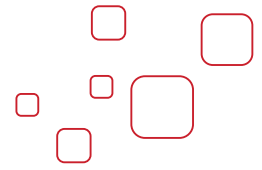
Sprint 5

- React routing, todo application, firebase and hosting
- Todo application using Typescript
- Fileupload, functional and class components, lifecycle
- components styling
- Redux, redux toolkit

Sprint 6

- Counter App, Shopping Cart
- Creating a simple application using routing config
- Creating a simple application using API





Sprint 7

- Creating a simple application using error boundary, logging and context Api
- Directory Structure,Basic Server Rendering, Webpack for the server, HMR for server,Server Router
- Hydrate, Data from API, Generated Routes
- Nested Components,Redirects
- LinkedIn Project

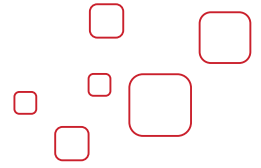
Sprint 8

- Introduction to MongoDB, basic CRUD operations
- Aggregation framework
- Introduction to Node Js, Node Architecture, Installation and Environment Setup,
- Node JS Modules Common Modules

Sprint 9

- Making decision, loops,functions and modules, Asynchnorous Programming
- Introduction to Socket.io, Settingup Socket Server,Real Time Communication
- Building Microservices Using Node
- Testing With Mocha
- Logngng





Sprint 10

- Installing Express and Environment Configuration
- Routing and Middlewares
- Routing and Middlewares
- Template Engines and Templating with EJS
- Familiarization of APIs , Authentication with JWT and Creating REST API and WebHooks

Sprint 11

- DB Connectors and Usage of Mongoose for MongoDB
- CRUD Operation and E-commerce Project
- Overview of REST vs GraphQL History and Evolution of GraphQL Schema and Types

Sprint 12

- Creating and Executing GraphQL Queries Resolvers and Data Sources Query Depth and Nesting
- Fragments and Aliases, Mutations, Pagination & Filtering



Learning Path

Basics of computer science

Computer architecture and organization of Programming, Computer networking

Programing Concepts

Programming concepts, language translators etc

Git & Github

Using Git & Github for version control and collobaration.

Node.js

Introduction to Node Js, Node Architecture, Installation and Environment Setup,

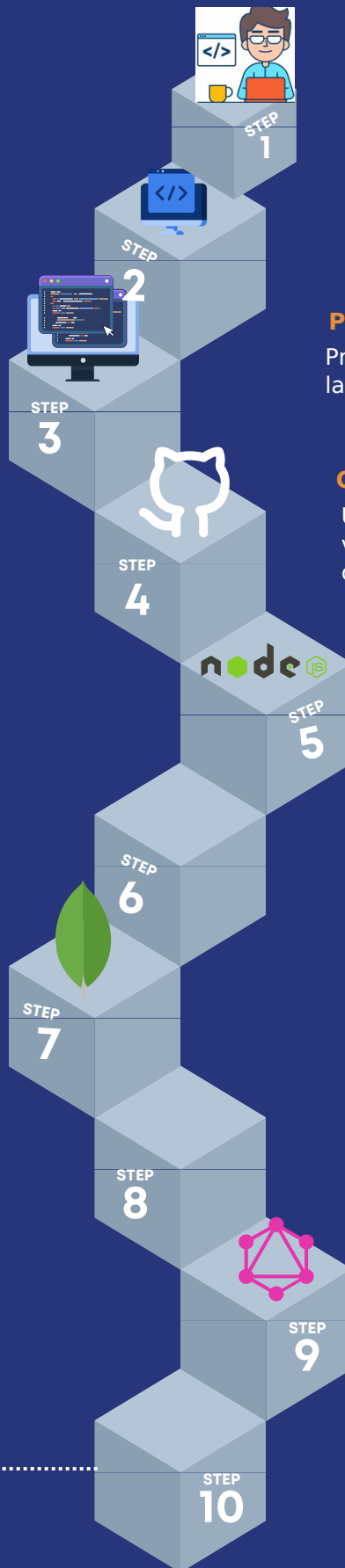
Mongo DB

DB Connectors and Usage of Mongoose for MongoDB

GraphQL

Overview of REST vs GraphQL
History and Evolution of GraphQL
Schema and Types


Completion Certificate



CERTIFICATE



Classroom-Level Immersion: Delivered Digitally

-  Any Where, Anytime access
-  Online Self learning
-  Courses designed by alumni of IIT, NIT & IIM.
-  CS Certificate Internship Certificate & UK Certificate
-  CS Talent Show



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PROFESSIONAL
ARTIFICIAL INTELLIGENCE | PYTHON | DATA SCIENCE | FULL STACK

Our Branch All Around World



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EDUCATION

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PROFESSIONAL 
where your IT work experience starts

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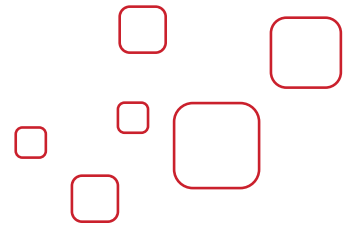
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More Information About us?



Contact Us!

Cyber Square Pro is a learning platform and resource hub for professionals looking to learn cutting-edge digital skills, whether they're coding novices or programming pros.

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Thank You!

