ElectroCloud Labs

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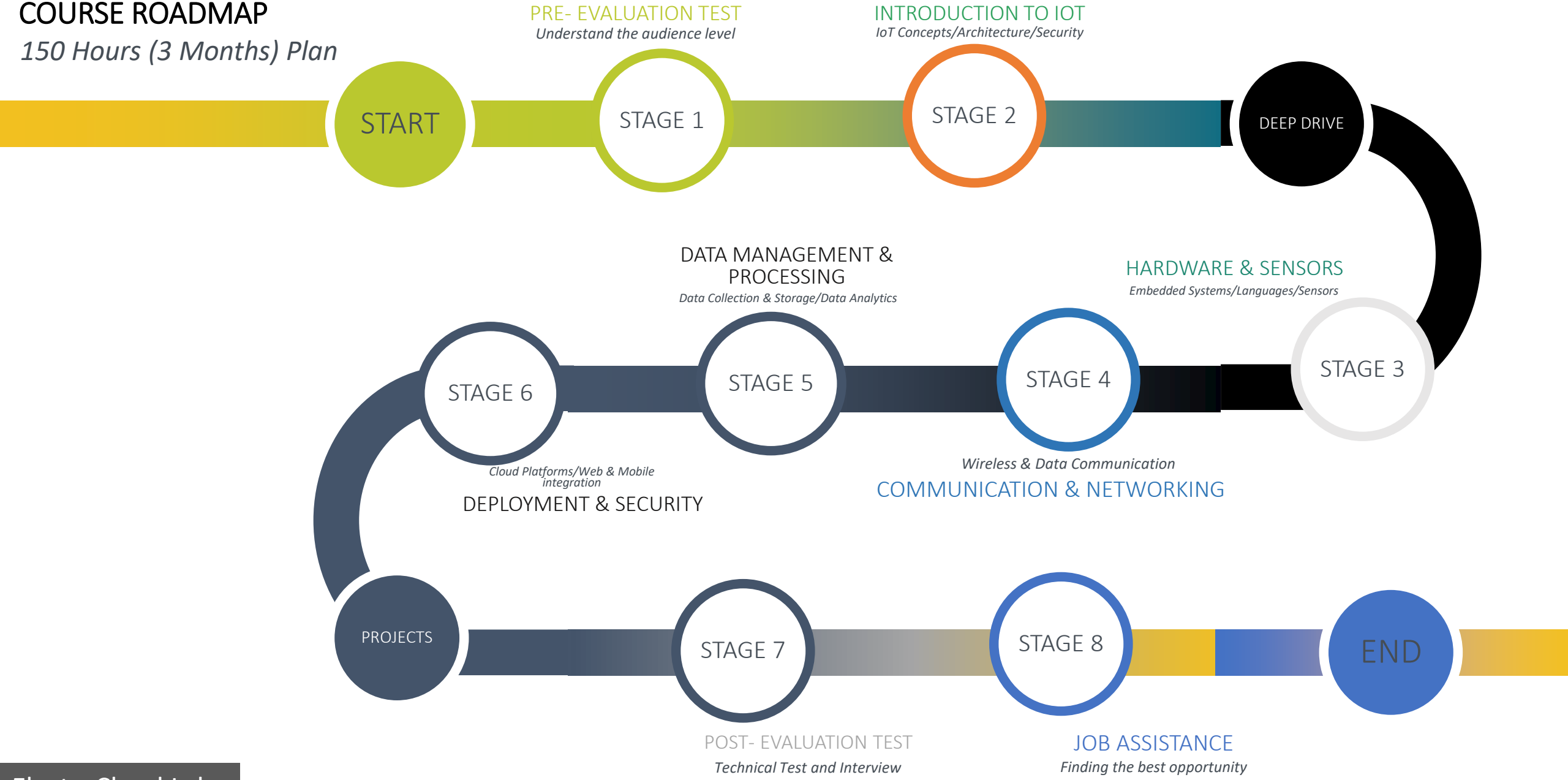
IoT and Embedded Systems

Best Course for graduating candidate to start their career | curriculum designed by Industry Experts | 150 Hours (3 Months) of Program | **Hybrid Classes** | World Class Curriculum | Certification

INTERNET OF THINGS (IoT) COURSE ROADMAP

150 Hours (3 Months) Plan



ElectroCloud Labs

Program's Key Features

- Course Especially designed for Engineering Students (3rd, 4th Year Candidate)
- 150 hours of Program
- 5+ Case Studies and Assignments
- Masterclass from Industry Expert
- Practical Hands-on Capstone Projects
- Life Time Access to eLearning Materials
- Learn Industrial/Job Oriented Skills
- **Hybrid Classes**
- Career Mentorship Sessions(1:1)
- Career Bootcamp
- 100% Job assistance
- Specialization Certification

Syllabus

Module 1: Introduction to IoT	Module 2: Hardware and Sensors	Module 3: Communication and Networking
• Understanding IoT Concepts • What is IoT and its significance? • IoT ecosystem: devices, sensors, connectivity, data, and applications. • IoT Architecture • Components: sensors, actuators, gateways, cloud platforms. • Communication protocols: MQTT, CoAP, HTTP, etc. • Edge computing vs. Cloud computing in IoT. • IoT Security and Privacy • Threats and challenges in IoT security. • Encryption, authentication, and authorization.	• Basics of microcontrollers and microprocessors. • Programming languages: C, C++, Python for IoT. • **Lab: 1** • Sensors and Actuators • Types of sensors: temperature, humidity, motion, etc. • Actuators: motors, servos, relays. • Interfacing sensors with microcontrollers. • Prototyping Platforms • Introduction to Arduino/Node MCU and Raspberry Pi. • Hands-on projects to create basic IoT setups. • **Lab: 2**	• Wireless Communication • Wi-Fi, Bluetooth, • **Lab: 3** • Comparing communication protocols for IoT. • Data Communication • Publishing and subscribing to MQTT topics. • HTTP vs. CoAP for IoT applications. • **Lab: 4**

Syllabus

Module 4: Data Management and Processing	Module 5: IoT Application Development	Module 6: Advanced IoT Concepts
• Storing data in databases: SQL vs. NoSQL. • Time-series databases for sensor data. • **Lab: 5** • Data Analytics • Basics of data analysis and visualization. • Using tools like Python libraries (Pandas, Matplotlib). • **Lab: 6**	• Cloud Platforms • Introduction to cloud platforms: AWS IoT, Azure IoT, Google Cloud IoT. • Setting up IoT devices and managing data on the cloud. • **Lab: 7** • Web and Mobile App Development • Building a web-based dashboard for IoT data visualization. • Developing mobile apps to control IoT devices remotely. • **Labs: 8**	• Edge Computing • Processing data at the edge vs. sending to the cloud. • Edge analytics and decision-making. • Security and Privacy in IoT • Deep dive into IoT security best practices. • Implementing secure device management. • **Lab: 9 & 10**

Syllabus

Module 13: Real-world Applications and Case Studies	Module 14: Certification Preparation	Module 15: Career Counselling
• Case study and Project Work	• Overview of Certifications • Tips and Strategies for Exam Preparation • Practice Questions and Mock Exams	END OF PROGRAM

Career Support

Career & Resume Consolation

- Resume Review and Enhancement
- Customization for Job Applications
- Formatting and Design
- Showcasing Achievements
- LinkedIn Profile Optimization
- Networking and Application

Interview Preparation and Mock Interview

- Understand Your Resume
- Research the Company
- Technical Skills Review
- Practice Answering Common Questions
- Dress and Grooming
- Set Up the Mock Interview

Job Assistance

- Career Assessment
- Job Search Strategies
- Online Presence
- Application Process
- Interview Preparation
- Professional Guidance
- Flexibility and Open-Mindedness

IoT Industry-

And Many More..

How can you conduct this program at your Campus (i.e. University/College)

1. Call us 8341957746 to book an meeting with our manager
2. Get the all required details
3. Sign the NDA/MoU with us.

Frequently Asked Questions (FAQ'S)

- Who is eligible for this program?- Any students from B. Tech/ B.E / M. Tech (3rd,& 4th Year)
- What is the fee for Program- **INR 17,500/-** each attendee we expect minimum 40 registration from College/University Site, if registration of candidate increased than we are open to discuss.
- Duration: **150 Hours** (Approximate 3 Months)
- How many online and offline session: 60% online and 40% offline
- Will students get any certification- Each candidate will get the Certificate of Course
- Shall I get the access to the recoding – Yes candidates will get the access to digital classroom