teckybot™

Where future meets innovation

PRINTED CIRCUIT BOARD DESIGNING

WORKSHOP PROPOSAL

About Us

Teckybot (Teck Team Solutions) brings a wealth of experience spanning a decade in Training and Development within the dynamic domain of **Industry 4.0.** Having successfully trained over **25,000+ students** from various educational institutions, the company offers a comprehensive suite of services, including internships, academic projects, technical workshops, and more. With a primary focus on **Emerging Technologies,** Teckybot aims to instill practical thinking and logical understanding in every student, particularly emphasizing the realms of **Robotics** and **Electronics.**

In the expansive landscape of **Industry 4.0**, our focus extends across pivotal domains, encompassing **Embedded Systems, Renewable Energy, IoT, Robotics, Drones, 3D Printing, EV Technology, and Artificial Intelligence. Teckybot (Teck Team Solutions)** stands out with an exclusive dedication to research and development. By fostering hands-on engagement, we empower the next generation with practical insights into cutting-edge technologies, ensuring they are well prepared for the dynamic challenges of the technological landscape. Additionally, our commitment to **STEM education** underscores our mission to cultivate a holistic learning environment, bridging the gap between theoretical knowledge and real-world application.

Founder Insights

In my entrepreneurial journey, I formed a team for comprehensive engineering training, expanding to seven experts and establishing **Atal Tinkering Labs (ATL)** for innovation. Simultaneously, workshops and internships bridged theoretical and practical knowledge. Evolving into an innovative product development firm, aligned with **"MAKE IN BHARAT,"** we earned **ISO 9001:2015 certification** in robotics. Seamlessly transitioning to Teckybot, our new platform emphasizes future connections, showcasing our dedication to continuous innovation at the forefront of technology, addressing diverse societal needs, and establishing meaningful connections for the future

- N.VENKATA REDDY
(Founder)

Our Vision

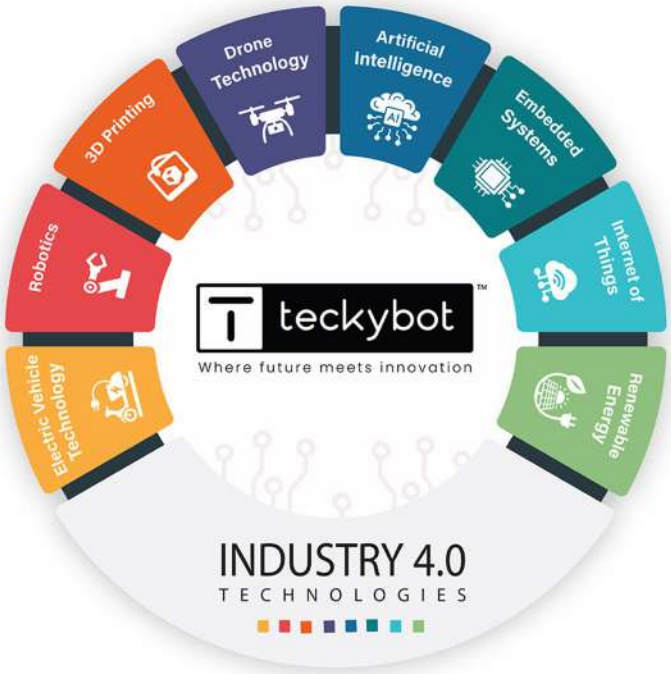
Empowering Tecky's with **INDUSTRY 4.0** Technologies where future meets Innovators

Our Mission

To integrate our platform in Education Institutes to make Industry Innovators for **Bharat**

Our Goal

To Create **ONE** million skilled Tecky's in Industry 4.0 by **2030**

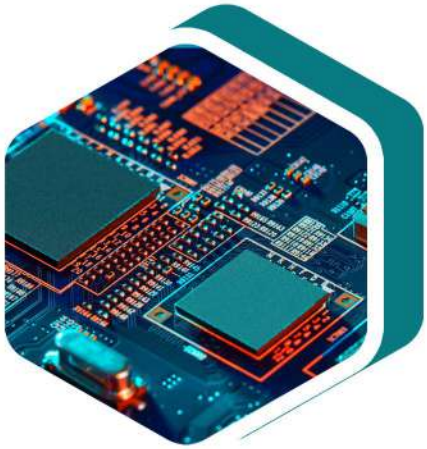


1. Artificial Intelligence Workshop

Artificial Intelligence (AI) and Machine Learning (ML) is one of the fastest emerging technologies. AI enables machines to simulate human intelligence and perform tasks that traditionally required human intelligence, while ML focuses on training machines to learn from data and improve their performance over time. In "AI and ML" workshop you can learn the fundamentals of AI and ML algorithms, explore real-world applications, and gain hands-on experience in building intelligent systems. Understand the ethical considerations and challenges in AI development

2. Embedded Systems Workshop

Embedded systems are computer systems designed to perform specific tasks within larger devices or machinery. They are called "Embedded" because they are integrated into a larger system and are dedicated to a specific function. Embedded systems are found in a wide range of everyday devices, such as smartphones, cars, appliances, industrial equipment, medical devices, and more.



3. Internet of Things Workshop

IoT is one of the world's fastest emerging technologies and has many possibilities as well as opportunities. A workshop on "IoT" gives the ideology of smart devices like Android Server based applications and will cover all basics of controllers used in IoT. With this Workshop, participants shall get to experience the control of different devices using web-based programming and Embedded Systems involved in it.

4. Robotics Workshop

Robotics is a multidisciplinary field involving the design, construction, programming, and operation of robots. A workshop on "Robotics" gives hands-on experience building and operating robots, and explore various applications of robotics in fields such as automation, Artificial Intelligence, and more. Unlock your creativity and ignite your passion for robotics in our immersive workshop

5. Drone Workshop

Drones are considered as one of the fastest emerging technologies, revolutionizing industries with their versatile applications, improving operational efficiency, and paving the way for advancements in fields such as aerial photography, surveillance, agriculture, delivery, and more. In "Drone" workshop you can learn the fundamentals of drone technology and operation. Gain hands-on experience in drone assembly, flight controls, and safety protocols.

6. 3D Printing Workshop

3D Printing is one of the world's fastest emerging technologies and has many possibilities as well as opportunities. A workshop on "3D Printing" gives the ideology about the production of functional or aesthetic prototypes, and will cover all Techniques and Applications of 3DPrinter. With this Workshop, participants will get experience in making their own Prototype and Working models.

7. Electric Vehicle Workshop

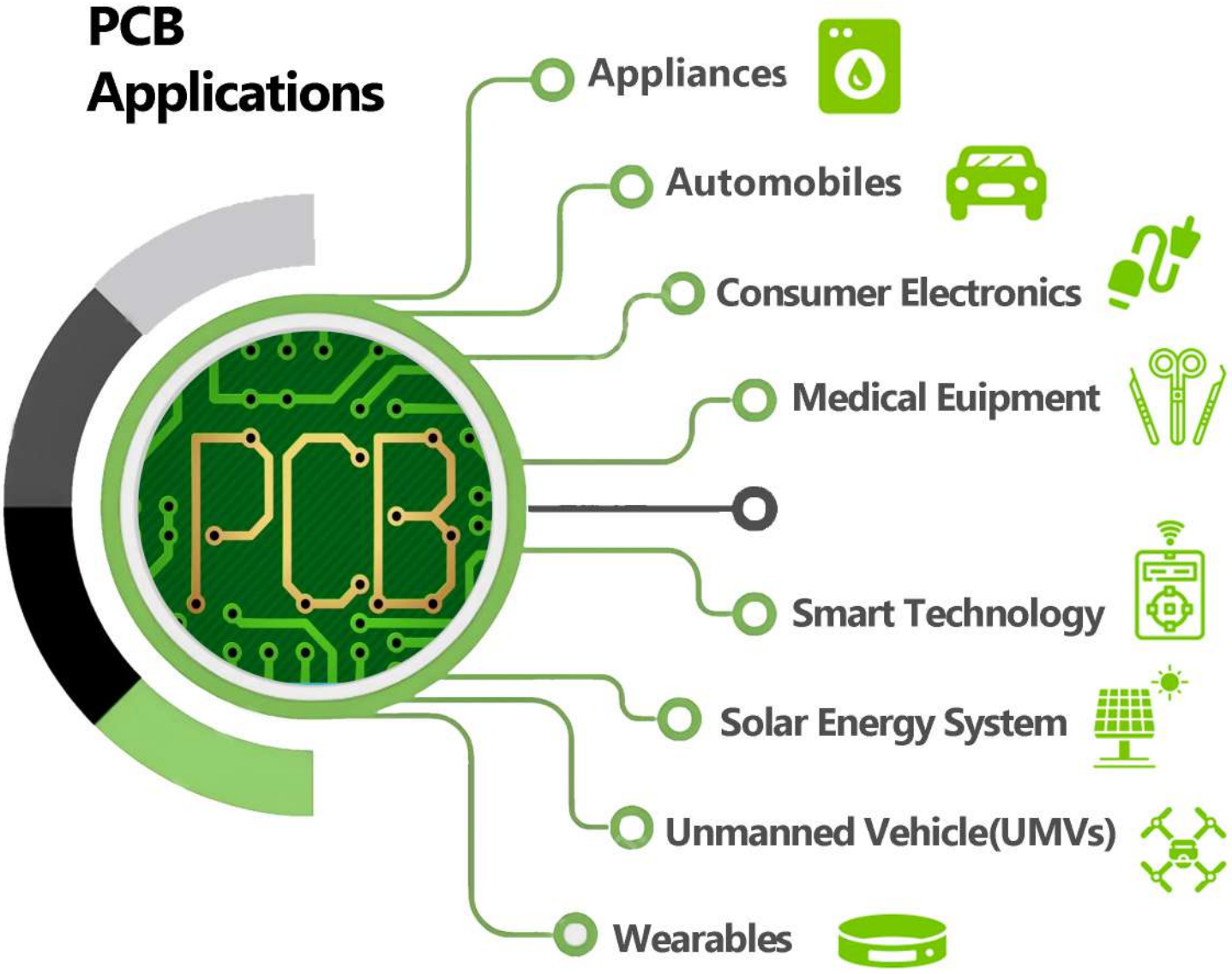
EV is one of the most promising and transformative technologies in the transportation sector. It offers a sustainable and eco-friendly alternative to traditional combustion engine vehicles, reducing emissions and dependence on fossil fuels. In "EV" workshop you can learn about the principles of electric vehicle technology, battery systems, charging infrastructure, and the environmental benefits of EV adoption. Get hands-on experience with EV components, understand the integration of renewable energy sources, and discover the future of clean mobility in our interactive workshop led by experts in the field.

8. PCB Workshop

PCB technology, which stands for Printed Circuit Board technology, plays a vital role in the field of electronics. It is the backbone of modern electronic devices and provides a platform for interconnecting and mounting electronic components. A PCB is a flat board made of non-conductive material, such as fiberglass or epoxy, with thin layers of conductive material, typically copper, laminated onto it.

Printed Circuit Boards (PCBs)

Printed Circuit Boards (PCBs) are crucial components in electronic devices, providing a foundation for connecting and assembling electronic parts. They comprise **layers of conductive pathways** and insulating materials arranged in a specific configuration. PCBs serve as the backbone of electronic systems, facilitating the connection of various components like **microprocessors, memory chips, sensors**, and **actuators.** The **design** and **layout** of a PCB significantly impact the performance, reliability, and manufacturability of electronic products.



Advanced PCB technologies, including **flexible** and **rigid-flex PCBs**, allow designers to create intricate and compact designs suitable for space-constrained or unconventional applications. As electronic devices advance, PCBs play a vital role in driving innovation and technological progress across **diverse industries.**

2 DAYS WORKSHOP ON PCB DESIGNING

S.NO.	Topic	Duration
	DAY – 1	
1.	Overview of this course	30 min
2.	Introduction to Basic electronics	45 mins
3.	Introduction to PCB Designing	45 mins
4.	Introduction to Proteus circuit simulation software	60 mins
	Lunch Break	
5.	Schematic design using ISIS	60 mins
6.	Simulation and Troubleshooting	15 mins
7.	PCB Layout Design	60 mins
8.	Design Rule Check (DRC) and Design Verification	15 mins
	DAY – 2	
1.	Generating Gerber files	30 mins
2.	Preparing the Substrate	45 mins
3.	Applying the photomask	45 mins
4.	Exposing and Developing the Photoresist	60 mins
	Lunch Break	
5.	Etching process	45 mins
6.	Cleaning and Stripping	30 mins
7.	Drilling process	30 mins
8.	PCB Assembly	45 mins
9.	PCB Testing	15 mins
10	Resources	15 mins

2 Days Workshop	60 Students	80 Students	100 Students
	Per Head- Rs.400	**Per Head- Rs.400**	**Per Head- Rs.350**

Benefits:

- Benefit from expert guidance under skilled technical instructors.
- Experience hands-on learning through interactive demonstrations.
- Obtain industry-recognized certification upon successful completion.
- Explore domain-oriented applications examples to understand real-world implementations of PCB technology.

3 DAYS WORKSHOP ON PCB DESIGNING

S.NO.	Topic	Duration
	DAY – 1	
1.	Overview of this course	30 min
2.	Introduction to Basic electronics	45 mins
3.	Introduction to PCB Designing	45 mins
4.	Introduction to Proteus circuit simulation software	60 mins
	Lunch Break	
5.	Schematic Design using ISIS	60 mins
6.	Basic circuit Designing and Testing in proteus	90 mins
7.	Simulation of circuit in proteus	30 mins
	DAY – 2	
1.	PCB Layout Design	90 mins
2.	Design Rule Check (DRC) and Design Verification	45 mins
3.	PCB Manufacturing and Documentation	45 mins
	Lunch Break	
4.	Designing any circuit using Proteus Software	30 mins
5.	Generation of Gerber files	30 mins
6.	Preparation of the Substrate	30 mins
7.	Applying the photomask	30 mins
8.	Exposing and Developing the Photoresist	60 mins
	DAY – 3	
1.	Etching process	90 mins
2.	Cleaning and Stripping	45 mins
3.	Drilling process	45 mins
	Lunch Break	
4.	PCB Assembly	30 mins
5.	Soldering the components	90 mins
6.	PCB Testing	30 mins
7.	Resources	30 mins

3 Days Workshop	60 Students	80 Students	100 Students
	Per Head- Rs.450	**Per Head- Rs.450**	**Per Head- Rs.400**

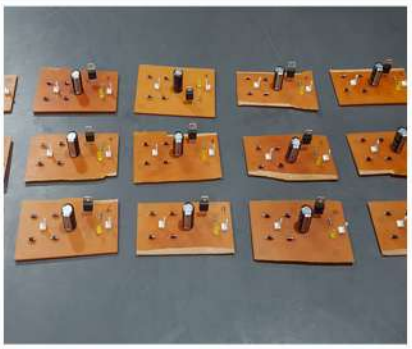
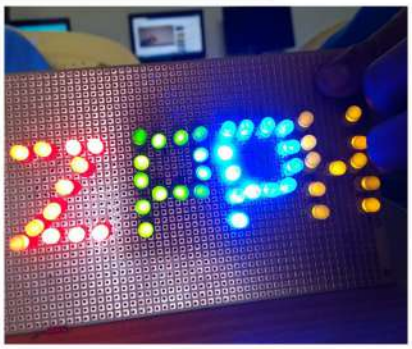
Pre-Requisites from Institution

- ✓ Depending on the workshop content, participants may need to bring their laptops or specified devices.
- ✓ Ensure participants have the necessary software installed or follow instructions for installation.
- ✓ Spacious hall with tailored seating and well-equipped laboratory provided.
- ✓ Availability of projector, screen, and microphone ensured.
- ✓ Access to high-speed internet facilitated throughout the workshop.
- ✓ Provision of at least three extension boards for device accommodation during hands-on practices.
- ✓ Two designated representatives for seamless coordination and assistance during the workshop.







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