



Solutions for
Engineering & Vocational Education



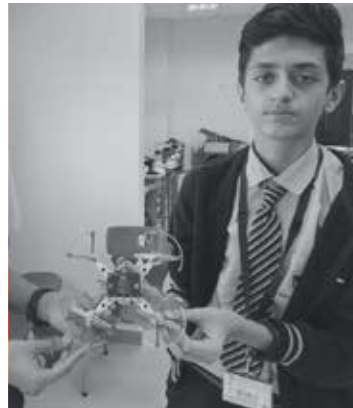
Advanced
Manufacturing Solutions

Interactive
Immersive
Learning Environment



Phygital
Simulation
Solution

Future
SKILLS
Development



STEM CLOUDS
powered by edsolab



Hands-On Learning Resources for
STEAM
Education

Design & Tech
Lab Equipments



Classroom & Campus
Technologies



Pioneering in Engineering and Vocational Education Solutions

Edsolab stands at the forefront of engineering and vocational education solutions, distinguished by its extensive expertise in consulting, designing, and deploying advanced educational environments.

Our company specializes in developing cutting-edge labs and simulators across various engineering disciplines, integrating the latest technologies such as AI, IoT, Robotics, 3D Printing, and Virtual Reality. This advanced approach ensures that educational institutions are equipped with state-of-the-art resources to prepare students for the evolving demands of modern engineering careers.

Key Areas of Expertise

Consulting, Design, and Deployment: High-level consulting experience tailored to the needs of educational institutions.

Specialized Labs and Simulators: Expert design and deployment of labs for diverse engineering fields.

Advanced Technologies: Implementation of pioneering technologies including AI, IoT, Robotics, 3D Printing, and Virtual Reality.

Through our **STEMClouds** brand, Edsolab is instrumental in revolutionizing STEM education by partnering with schools to create and execute customized STEM programs. Our hands-on learning spaces are crafted to offer students hands-on experiences that enhance creativity, problem-solving abilities, and technical skills crucial for their future careers.

STEMClouds Offerings

Collaboration with Schools: Designing and implementing tailored STEM programs.

Innovative Learning Spaces: Establishing Future Skills Labs, MakerSpaces, FabLab, Innovation Hub, XR Lab, Design & Technology Labs, and STEM Labs.

Hands-on Experience: Emphasizing practical learning to boost student engagement and skill development.

Edsolab remains committed to advancing educational outcomes through its comprehensive solutions and innovative approach, ensuring students are well-prepared for the future.

A handwritten signature in blue ink that reads "Saravana Kumar".

Saravana Kumar
Director, Edsolab





Advanced Manufacturing Technologies

Edsolab provides a comprehensive suite of advanced manufacturing technologies tailored for universities and vocational institutions. Our offerings include CNC Turning Machines and CNC Milling Machines with configurations ranging from 2-axis to 5-axis, available in both floor-mounted and desktop versions. Key features include **Automatic Tool Changers (ATC)**, **Digital Twin technology**, **PLC Monitoring Stations**, and **ARM Robots**, ensuring a robust and versatile manufacturing training environment.

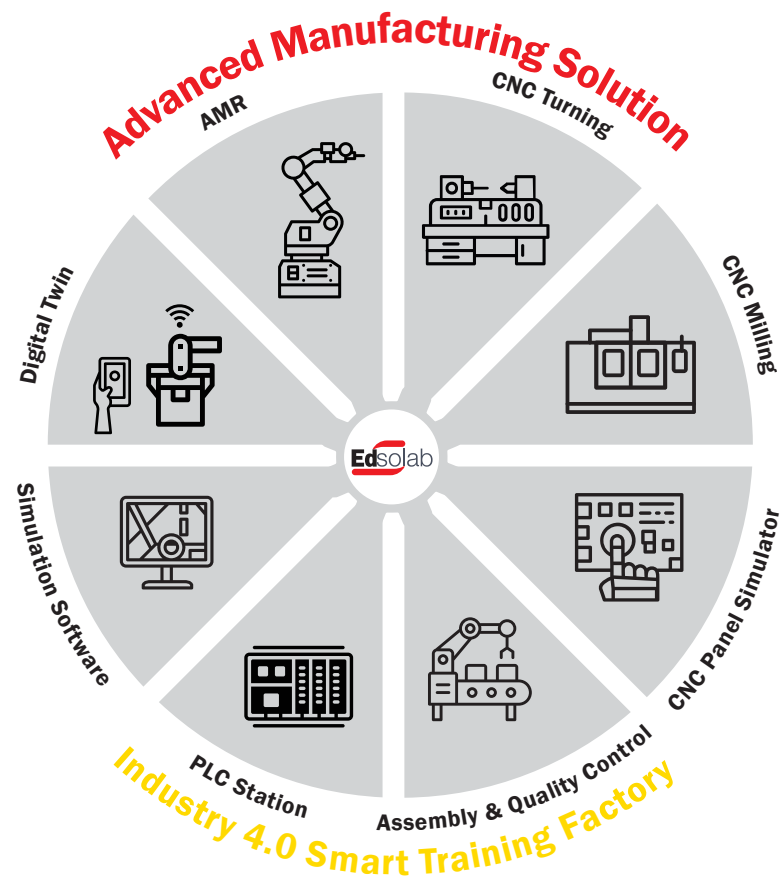
CNC Panel Simulator

Edsolab's CNC Panel Simulator is compatible with both Fanuc and Siemens machines, providing a realistic training platform for students to practice and master CNC programming and operation. This simulator replicates the interface and functionalities of actual CNC panels, enabling learners to gain hands-on experience and develop proficiency in machine control and programming without the need for physical machines.

CNC Machine Maintenance Experiment Platform

The Edsolab CNC Machine Maintenance Experiment Platform offers an interactive and practical training environment for students to learn and perform routine maintenance and troubleshooting on CNC machines. This platform is designed to simulate real-world maintenance scenarios, helping learners understand the intricacies of machine upkeep and repair.

Additionally, our **Multi-Axis CNC Machining Simulation Software** provides a virtual training experience, allowing users to practice and refine their machining skills in a simulated environment, enhancing their understanding of complex multi-axis operations.



Transforming Engineering Education: Comprehensive Training Solutions

Edsolab offers a cutting-edge suite of engineering and vocational training equipment solutions designed to elevate educational standards across multiple disciplines. Our solutions provide state-of-the-art equipment and resources tailored to each engineering field. From advanced simulation tools to practical hands-on setups, our labs are equipped with the latest technology to ensure students gain relevant, real-world experience. We focus on delivering robust educational environments that foster in-depth learning and technical proficiency, preparing students for the diverse challenges of their respective industries.

Our expertise extends beyond equipment provision to include comprehensive installation, training, and support services. We ensure seamless setup of all lab equipment, provide thorough training programs for educators and students, and offer ongoing support to maintain optimal performance and integration. This holistic approach guarantees that institutions can fully leverage our advanced solutions, enhancing both the learning experience and operational efficiency.

Key Offerings

Civil Engineering Labs: Cutting-edge models and simulators for structural analysis and construction techniques.

Electrical Engineering Labs: Advanced circuitry, power systems, and automation equipment.

Electronics Engineering Labs: High-tech tools for circuit design, PCB fabrication, and electronic systems.

Mechanical Engineering Labs: State-of-the-art machinery and simulation tools for dynamics, thermodynamics, and fluid mechanics.

Aviation Labs: Comprehensive flight simulators and aircraft systems training modules.

Food Technology Labs: Innovative equipment for food processing, quality control, and safety testing.

Industrial Engineering Labs: Advanced systems for production, logistics, and process optimization.

Support Services

Installation: Expert setup and configuration of lab equipment.

Training: Detailed training programs for instructors and students.

Ongoing Support: Dedicated support to ensure effective use and maintenance of equipment.

Machining	
Process Automation	
Robotics	
Material Handling	
Quality	
Controllers & Gateways	
Engineering Softwares	



Revolutionizing Education: Immersive and Interactive Room Solutions

Edsolab is redefining classroom learning with our state-of-the-art Immersive and Interactive Room Solutions, designed to transform educational experiences across the curriculum. Our cutting-edge rooms create dynamic, engaging environments that make learning memorable and impactful. By integrating advanced technologies and interactive content, we enhance student engagement and comprehension across a wide range of subjects including biology, physics, chemistry, language, arts, mathematics, and music. These immersive spaces foster a deeper understanding of complex concepts through interactive simulations, virtual experiments, and creative multimedia, ensuring that learning is both effective and enjoyable.

Our extensive range of interactive content is tailored to meet the diverse needs of students and educators. From virtual labs and interactive diagrams to multimedia presentations and educational games, our solutions are designed to support and enrich the curriculum. These tools not only facilitate a more engaging learning experience but also help students retain knowledge and apply it in practical contexts. With Edsolab's immersive rooms, education becomes a vivid and engaging journey, making a lasting impact on students' academic and personal growth.



Value Proposition

Edsolab's Immersive Rooms are designed as multipurpose learning spaces, offering a versatile platform for a variety of educational experiences beyond traditional subjects. Our solutions provide simulation experiences for game development, metaverse exploration, coding, robotics, and more, making the rooms a hub for innovative learning. This versatility ensures that students can explore and develop skills in cutting-edge fields, preparing them for future technological advancements and career opportunities.

Technical Expertise and Support

IT Infrastructure: Proven experience in setting up best-in-class IT infrastructure, including ultra-short throw projectors with high resolution and brightness to deliver clear, vibrant visuals.

Custom PC Systems: Deployment of custom PCs equipped with Nvidia graphics cards to ensure seamless performance and high-quality interactive 3D content.

Ongoing Support: Dedicated team of engineers providing continuous support and maintenance to ensure optimal operation of immersive environments.

Specialized Training: Immersive specialists conduct comprehensive academic and curriculum-focused training for school staff, enhancing their ability to utilize the interactive room effectively.



Prepare your students future-ready Design, Build, Code & Explore

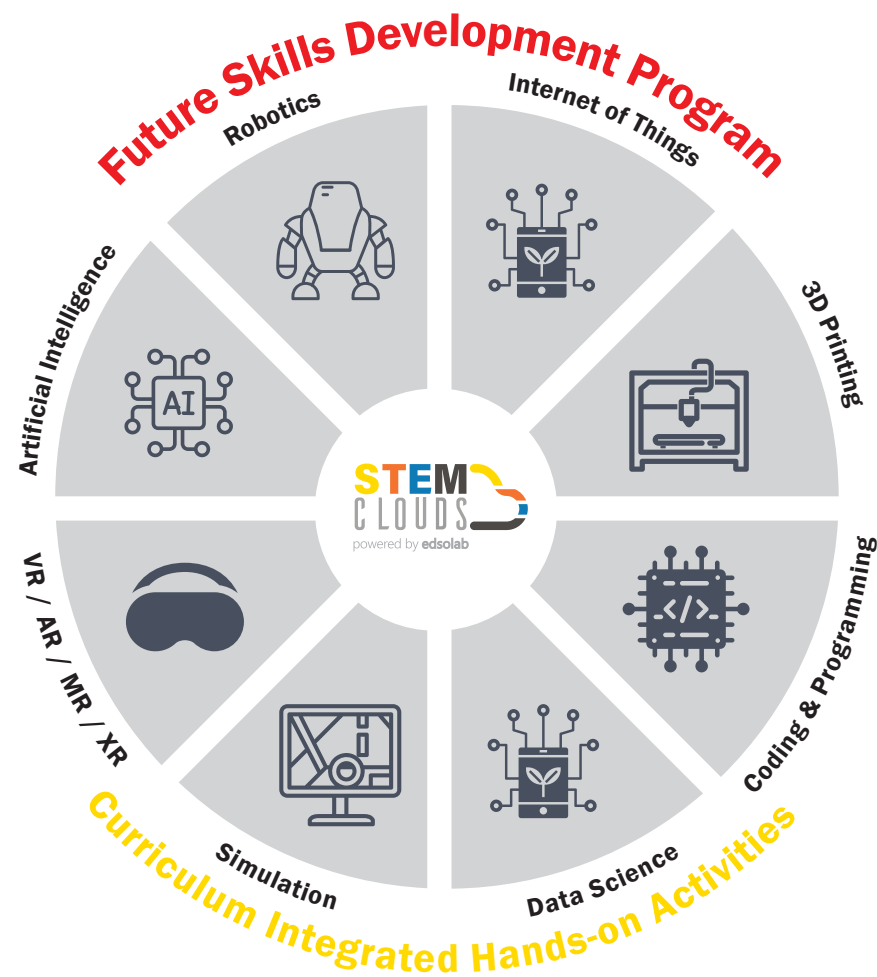
STEMClouds Future Skills Kits are at the forefront of technology education, offering an extensive array of tools and resources designed to equip students with essential 21st-century skills. Our kits cover a broad spectrum of technologies, including Digital Literacy, Robotics, Artificial Intelligence, Internet of Things, Drone Technology, Cloud Computing, and Cyber Security.

Mapped to a variety of curricula, including CBSE, IB, American, Cambridge, and Ministry of Education standards, these kits provide a seamless integration of cutting-edge technologies into the classroom, preparing students to excel in a rapidly evolving digital world.

Integrated Learning Experience: Robotics, AI, and Beyond

STEMClouds kits are designed to offer a cohesive learning experience by integrating various technologies. For instance, our Robotics and AI modules work together to provide students with practical, hands-on experience in building and programming robots with AI capabilities.

Similarly, AI and IoT applications are combined to teach students how to create smart devices and systems. All kits use a unified coding language that supports both block-based and Python-based programming, allowing students to learn coding in a versatile and accessible manner.



Innovative STEAM Education:

Bridging Science and Art for Comprehensive Skill Development

Edsolab's STEAM Education solution redefines learning by integrating Science, Technology, Engineering, Arts, and Mathematics into a cohesive educational experience. Our approach emphasizes skill development through a Design Thinking methodology, encouraging students to tackle complex problems with creativity and critical thinking. By embedding art and design into scientific inquiry, we foster a holistic understanding of how various disciplines interconnect, enhancing students' ability to innovate and apply their knowledge in practical contexts. This cross-disciplinary approach not only enriches their technical skills but also cultivates a deeper appreciation for the creative processes that drive scientific and technological advancements.

Our solution features integrated curriculum-mapped activities that support social learning and collaborative problem-solving. These activities are designed to align with educational standards while promoting a hands-on, project-based learning environment.

By blending academic rigor with artistic expression, students engage in meaningful projects that reflect real-world challenges and opportunities. This comprehensive approach ensures that learners are not only equipped with technical expertise but also develop the essential skills needed for teamwork, communication, and creative problem-solving, preparing them for success in an interconnected world.

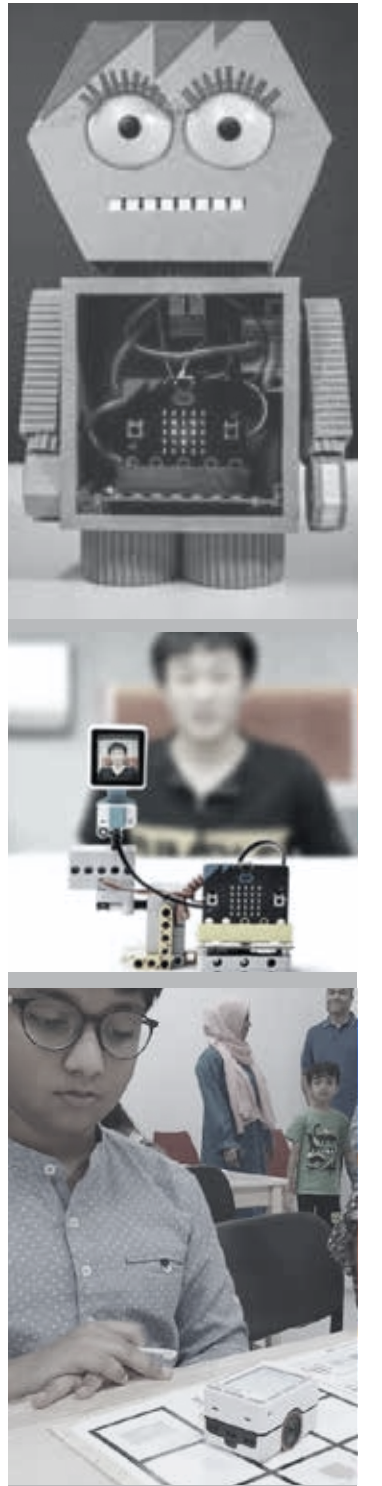
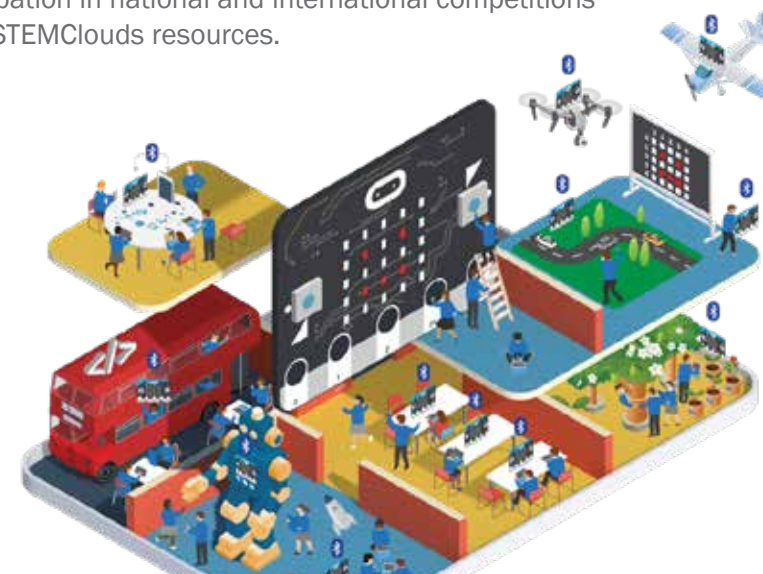
Curriculum-Aligned Activities and Support

12 Curriculum-Aligned Activities: Tailored activities for each grade level, designed to align with national and international curricula and foster practical skills.

Professional Development Program: Comprehensive training for educators to effectively implement and utilize STEMClouds kits in their classrooms.

Support Services: Ongoing support for schools, including technical assistance and resource guidance.

Competition Preparation: Assistance in preparing students and schools for participation in national and international competitions using STEMClouds resources.



Design & Technology Lab Solutions

Edsolab excels in delivering end-to-end solutions for Design & Technology (DT) Labs, tailored specifically for educational institutions. Our expertise spans the design, supply, installation, training, and support of a wide range of equipment essential for modern DT labs, including Laser Cutters, Silhouette Machines, Vinyl Cutters, CNC Machines, 3D Printers, and Carpentry tools.

Our solutions are crafted to foster creativity and technical skills among students, providing them with the tools necessary to explore and execute innovative projects. We ensure that every component of the DT lab is thoughtfully integrated to create a dynamic and effective learning environment.

Our team's extensive knowledge and experience extend beyond equipment provision to include crucial guidance on lab setup and maintenance. We offer expert advice on optimizing ventilation systems and installing extractors to manage fumes and maintain a safe working environment within schools. This is complemented by our focus on safety tools and procedures, ensuring that all equipment and lab practices adhere to stringent safety standards.

Additionally, we provide Annual Maintenance Contracts (AMC) to ensure ongoing support and the smooth operation of all lab equipment, minimizing downtime and maintaining high-performance standards.

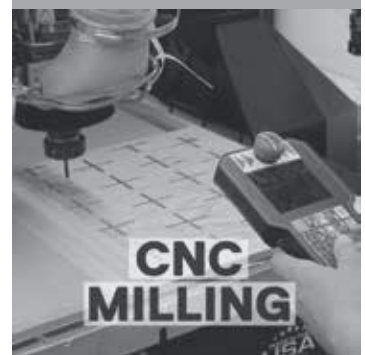
Key Offerings

Design & Technology Lab Equipment: Supply and installation of Laser Cutters, Silhouette Machines, Vinyl Cutters, CNC Machines, 3D Printers, Carpentry tools, and other essential DT lab equipment.

Ventilation and Safety Guidance: Expert advice on installing ventilation systems and extractors to manage fumes, along with comprehensive safety tool recommendations.

Training and Support: Extensive training programs for educators and technical support to ensure effective use and maintenance of DT lab equipment.

Annual Maintenance Contracts (AMC): Ongoing maintenance and support services to ensure optimal performance and longevity of lab equipment.



Campus and Classroom Solutions

Pioneering Digital Transformation

Edsolab is at the forefront of digital transformation for educational institutions, offering comprehensive campus and classroom solutions designed to integrate advanced technologies and streamline operations. Our solutions support schools and universities in their journey towards adopting AI and smart campus innovations. We provide a wide array of applications including Enterprise Resource Planning (ERP), device management, student monitoring, proctoring solutions, e-marking systems, and student information management systems. These technologies work together to create an interconnected, efficient, and responsive educational environment, enhancing both administrative processes and the overall learning experience.

Our expertise extends to implementing learning platforms and active learning solutions that foster engagement and collaboration in the classroom. We integrate sophisticated Audio-Visual Infrastructure to support dynamic teaching methods and ensure high-quality, interactive learning experiences. Additionally, our Netsupport Campus Cloud Solution provides robust cloud-based management capabilities, offering seamless access to essential tools and resources from any location. This suite of solutions is designed to improve educational outcomes, streamline institutional operations, and support the diverse needs of students and faculty.

Key Offerings

Netsupport Campus Cloud Solution: Cloud-based platform for efficient campus-wide management and resource access.

Student Monitoring and Proctoring: Tools for overseeing student performance and ensuring exam integrity.

E-Marking Solutions: Streamlined digital assessment and grading processes.

Student Information Management: Centralized system for managing student data and records.

Student Life Cycle Management: Solutions for tracking and supporting students throughout their educational journey.

Learning Platforms and Active Learning Solutions: Enhancing student engagement and interaction through advanced educational technologies.

Audio-Visual Infrastructure: High-quality AV systems to support interactive and multimedia-rich teaching.

ERP Systems: Comprehensive management of institutional resources and operations.

Lab Management Software: Centralized platform for efficient lab resource management, scheduling, and maintenance tracking.

Library Management System: Comprehensive solution for cataloging, tracking, and managing library resources with advanced search and circulation features.

RFID Solution: Real-time asset tracking and inventory management with enhanced security and streamlined check-in/check-out processes.

Classroom Instruction



Online Safety



IT Management





Professional Services

Edsolab Professional Services specializes in the comprehensive setup and management of advanced engineering laboratories, Computer-Integrated Manufacturing (CIM) facilities, and STEM labs. With a track record of successful large-scale projects for federal universities and international schools, Edsolab excels in delivering customized solutions that meet the unique needs of each institution.

Our expertise encompasses everything from the initial design and installation phases to the integration of cutting-edge technologies such as 3D printers, robotics, and automation systems, ensuring that educational environments are equipped with state-of-the-art resources that foster innovation and hands-on learning.

Edsolab proven experience extends to the deployment of educational resources across entire countries, demonstrating a capacity for handling complex, nationwide projects. Edsolab's approach involves meticulous planning and coordination to seamlessly introduce high-tech equipment and systems into diverse educational settings.

This includes tailoring solutions to fit varying curriculum requirements and infrastructure constraints, all while maintaining a focus on maximizing the impact of technology on student learning and engagement. Edsolab's extensive portfolio showcases successful collaborations with both public and private institutions, underscoring their ability to scale solutions according to project size and scope.

In addition to the installation and deployment services, Edsolab offers robust support and maintenance solutions designed to ensure the continued optimal performance of engineering and STEM labs. Their support services include regular maintenance, troubleshooting, and upgrades, which are critical for minimizing downtime and extending the lifecycle of sophisticated equipment. By providing ongoing technical assistance and training for faculty and staff, Edsolab ensures that institutions can fully leverage their technological investments and keep pace with evolving educational needs.

Support Services

Furthermore, Edsolab's support extends to comprehensive user training and resource management, equipping educational institutions with the knowledge and tools required to effectively utilize and manage their equipment. This proactive approach not only enhances the operational efficiency of labs but also empowers educators and students with the skills needed to maximize their learning experience. Through dedicated support and a commitment to excellence, Edsolab ensures that its clients can achieve long-term success in their educational endeavors.

Download our catalog of
Advanced Manufacturing Technologies

