



MAHARASHTRA SHIKSHAN PRASARAK MANDAL'S, CHANDRAPUR 4793

**SOMAYYA**

INSTITUTE OF TECHNOLOGY

Approved by AICTE New Delhi, DTE Mumbai, Govt. of Maharashtra  
& Affiliated to DBATU

SET/Committee/2024/39-(B)

DTE Code 04703

Date - 2/12/2024

**Fabrication Facility Laboratory (FABLAB) Tinkering Laboratory  
/Innovation Laboratory**

Somayya Institute of Technology (SET), located in Chandrapur, has dedicated significant resources to establish state-of-the-art laboratories aimed at fostering innovation, creativity, and hands-on learning among its students. These laboratories include the Fabrication Facility Laboratory, Tinkering Laboratory, and Innovation Laboratory, each offering unique opportunities for students to explore, experiment, and innovate in their respective fields.

**Fabrication Facility Laboratory:**

1. The Fabrication Facility Laboratory at SET is a hub for practical learning in mechanical engineering and related disciplines.
2. This laboratory is equipped with advanced machinery, tools, and equipment necessaries for fabricating prototypes, mechanical components, and experimental setups. Here's a detailed overview of the features and facilities available in the Fabrication Facility Laboratory:

**Machinery and Tools:**

The laboratory houses a comprehensive range of machining tools, including lathes, milling machines, drilling machines, grinding machines, and CNC machines. These tools enable students to perform various machining operations with precision and accuracy.

**Welding and Fabrication Equipment:**

Facilities for arc welding, gas welding, and spot welding are available, along with welding stations equipped with welding torches, electrodes, and protective gear. Students learn different welding techniques and gain hands-on experience in fabricating welded structures and assemblies.

**Sheet Metal Work Area:**

A dedicated section for sheet metal work is equipped with shearing machines, bending machines, punching machines, and other tools for cutting, bending, forming, and joining sheet metal components.

**Assembly and Testing Facilities:**

The laboratory includes assembly benches, workbenches, and testing equipment for assembling fabricated components, conducting functional tests, and evaluating the performance of mechanical systems.

**Safety Measures:**

Safety protocols are strictly enforced in the Fabrication Facility Laboratory, with safety guards on machines, personal protective equipment (PPE), fire extinguishers, and first aid kits readily available to ensure a safe working environment. The Fabrication Facility Laboratory serves as a platform for students to apply theoretical knowledge gained in classrooms to practical applications, fostering creativity, problem-solving skills, and hands-on experience in engineering fabrication.



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**Tinkering Laboratory:**

The Tinkering Laboratory, also known as the Atal Tinkering Lab (ATL), is an innovation hub established at SET with the support of the Atal Innovation Mission (AIM), Government of India. This laboratory is dedicated to promoting innovation, entrepreneurship, and experiential learning among students. Here are the key

**features of the Tinkering Laboratory:****Advanced Tools and Equipment:**

The laboratory is equipped with cutting-edge tools and equipment such as 3D printers, laser cutters, CNC routers, electronics workstations, and microcontroller kits. These tools enable students to design, prototype, and test their innovative ideas and projects.

**Hands-on Workshops and Training Programs:**

The Tinkering Laboratory organizes hands-on workshops, training programs, and innovation challenges to nurture students' creativity and technical skills. Expert mentors provide guidance and support to students in developing prototypes and refining their designs.

**Project Incubation and Support:**

The laboratory offers support for project incubation, prototype development, and validation of innovative solutions. Students have access to mentorship, funding opportunities, and networking events to transform their ideas into viable products or start ups.

**Collaborative Environment:**

The Tinkering Laboratory provides a collaborative space where students from diverse disciplines can collaborate on interdisciplinary projects, share ideas, and work together on innovative ventures.

**Industry Engagement:**

The laboratory facilitates industry partnerships, collaborations, and internships to provide students with real-world exposure, industry insights, and opportunities to commercialize their innovations. The Tinkering Laboratory at SET serves as a catalyst for innovation and entrepreneurship, empowering students to become creative problem-solvers and technology leaders in their fields.

**Innovation Laboratory:**

In addition to the Fabrication Facility Laboratory and Tinkering Laboratory, SET has also established an Innovation Laboratory to further foster a culture of innovation and research among its students. The Innovation Laboratory serves as a platform for collaborative research, technology development, and interdisciplinary projects. Here are some key features of the

**Innovation Laboratory:**

**Research Facilities:** The laboratory is equipped with state-of-the-art research facilities, including computing resources, research-grade equipment, and specialized software tools for data analysis, simulation, and experimentation.

**Interdisciplinary Research:**

The Innovation Laboratory encourages interdisciplinary collaboration among students and faculty from different departments and research areas. This collaborative approach fosters innovation and enables the development of holistic solutions to complex challenges.



### **Project Incubation:**

The laboratory provides support for project incubation, funding assistance, and mentorship to students working on innovative research projects or start up ventures. Students have access to guidance from experienced faculty mentors and industry experts.

### **Industry Partnerships:**

SET collaborates with industry partners to facilitate technology transfer, collaborative research projects, and internships for students. Industry-sponsored projects conducted in the Innovation Laboratory provide students with practical experience and exposure to real-world challenges.

### **Entrepreneurship Support:**

The Innovation Laboratory supports entrepreneurial endeavors by providing resources for technology commercialization, business incubation, and start up acceleration. Students receive guidance on business planning, market analysis, funding opportunities, and intellectual property protection.

The Innovation Laboratory at SET serves as a dynamic hub for research, innovation, and entrepreneurship, driving technological advancements and societal impact through collaborative efforts of students, faculty, and industry partners.

In summary, SET's Fabrication Facility Laboratory, Tinkering Laboratory, and Innovation Laboratory are integral components of its commitment to providing a holistic and experiential learning environment for students. These laboratories play a crucial role in nurturing creativity, innovation, and practical skills among students, preparing them to excel in their academic pursuits and contribute to the advancement of technology and society.

### **Committee Members:**

Sr.	Name of faculty	Designation
1	Dr.Padmanabh A.Gadge (Principal)	Chair-Person
2	Miss.K.D.Kudukar(CSE.Dept.)	Coordinator
3	Mr. N. Y. Ganvir	Member
4	Mr.M.T.Sheikh (Science & Humanties Dept.)	Member



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