III Year I Semester	Tinkering Lab	L	T	P	C
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Course Objective

A small unique idea can be become big changer when it gets the suitable platform and transformed into a product or re-define existing products with better enhancement.

This lab provides a platform to seed, fertilize and encourage the spirit of curiosity and innovation among young minds. It is a work place where students can give shape to their ideas.

Course Outcome:

In the tinkering lab, students able to

- Apply prior knowledge to develop and conceptualize scientific methods and engineering techniques.
- Analyze real-world problems through self-directed exploration and iterative experimentation.
- Design and develop technical experiments or prototypes with available financial and mentoring support.
- *Evaluate and refine self-initiated projects by learning from failures, feedback, and performance metrics.*
- Create innovative, application-oriented solutions by integrating technical skills, creativity, and exploratory learning.

List of Sample Projects:

- Face Recognition Door lock System
- Hand gesture recognition
- Text to speech
- Smart City
- Private chat room
- Android app controlled roboticarm
- Smart Traffic System

- Vehicle Accident Alam System
- Smart dustbin
- Surveillance BOT
- Automatic Water Gardening System
- e-Mirror
- Smart Parking System
- Service Bot
- Drone Surveillance
- Wallpaintingrobot
- Home automation
- Automated wheelchair
- AnyInnovativeIdea–RealTime application

Expectations from the Lab:

- Workshop on empathy, ideation, and identifying real-world problems.
- Understanding the basic logics with interaction as teams.
- Working Hand-on using present tools available
- Students form teams, plan their mini project and starts working with the help of the mentor
- Students do Hands-on building, troubleshooting, testing
- Finalize, document, and prepare for demonstration

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