# INNOVATION & DESIGN THINKING – 1st Sem
## A Program that inspires you to tinker!

A 12 weeks program centred around the concept of design thinking. Students are introduced to a world of tools to create functional prototypes.

## Overview

In this course students will learn how to design and prototype their ideas. Through a series of lectures and exercises students will learn and practice different prototyping techniques. This prototyping course emphasizes on rapid prototyping, using prototyping device and system user interfaces, design considerations and perspective for devices. This course has topics that include design methods, modelling and simulation, design, and customization. This course on a whole, enables student transition from ideas to prototyping.

## Outcome

- Recall and Identify essential prototyping tools and techniques.
- Demonstrate Comprehension of essential skills such as interpersonal skills, communication skills to indulge with different users of the community.
- Apply problem solving process to build prototypes.
- Design solutions to the challenges identified.
- Build a prototype using rapid prototyping tools for the ideas that can solve the identified problem.



## Course Overview (12 sessions)

1 - Getting started with Prototyping
2 - UI & UX using paper prototyping
3 - UI & UX using Figma
4 - Basic Electronics
5 - Arduino
6 - Hand tools and materials

7 - 2D CAD modelling using Onshape and Laser Cutting.
8 - 3D CAD modelling using Onshape and 3D Printing
9 - Design thinking and Design Challenge
10 - Prototype Building-1
11 - Prototype Building-2
12 - Design Challenge Expo

## Tools you will learn

- Paper Prototype
- Figma
- Power tools

- Basic electronics
- Microcontroller
- CAD Modelling

- 3D Printing
- Laser cutting
- CNC