



Karunya INSTITUTE OF TECHNOLOGY AND SCIENCES

(Declared as Deemed to be University under Sec.3 of the UGC Act, 1956)

A CHRISTIAN MINORITY INSTITUTION

AICTE Approved & NAAC Accredited

Department of Mechanical Engineering

Mechanical Design Laboratory

The Computer Aided Design (CAD) provides a designer to conceptualising the idea in to a virtual model. The CAD also used as an interface for performing Multiphysics Analysis, generating NC codes for CNC Machines and for creating prototypes using Additive Manufacturing (3D Printing). The students will learn about Design, Drafting and Analysis.

Our Design lab is a well-established facility has 72 students seating capacity (Two 36-seater labs) with high configuration workstations & the latest software's (Design and Analysis Software's) and LCD projectors installed in each lab. A highly professional training is provided with industry trained faculty members which makes the students industry ready. The students are allowed to work in the consultancy projects along with the faculty members and also utilising the lab facility for their project works.

Lab course objectives:

1. Modeling products of the industrial system.
2. Analysis of structural and thermal application.
3. Solving a variety of flow situations.

Lab course outcomes:

1. Preparing 3D models using Solid Modeling & Surface Modeling and drawing for various mechanical components.
2. Building the Assembly model and create a bill of materials.
3. Developing STL file for CAD models with appropriate support structures and Orientation
4. Solving structural, thermal, modal and dynamics problems.
5. Conducting flow analysis using Ansys Fluent.

List of Software's:

1. Creo 7.0
2. Solid works 2021
3. Catia V5
4. Ansys 20.1
5. Fluid and Gambit
6. Adams
7. Msc Nastran
8. AutoCAD

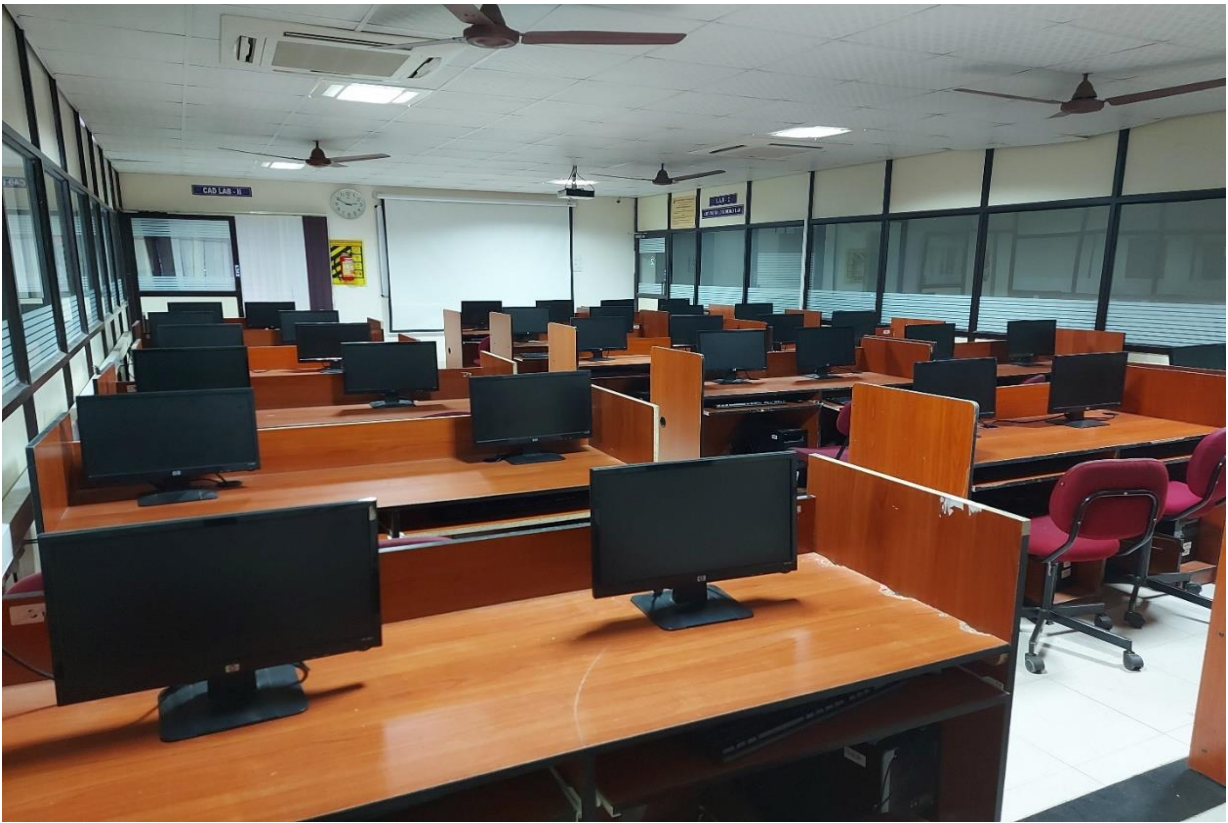
Workstation Configuration:

- Processor - Intel® Core™ i5 10th generation
- Operating System - Windows 10 Pro (64-bit) English
- Graphic Card – 2 GB Nvidia Quadro P620
- RAM Memory - 8GB (2x4GB) DDR4
- HDD - 1TB 7200rpm SATA 3.5"

Major (latest) equipment's with photos (minimum of 7 photos):









Lab In-Charge

Dr. S. Mohanasundaram
Assistant Professor



Lab Technician

Mr. J. Jeyasingh
Lab Technician Gr. I

