

CAX Lab

(Room 429)

CAD, CAM, and CAE are important tools used in the field of mechatronics. The use of CAD, CAM, and CAE in mechatronics can help in the following ways:

CAD (Computer-Aided Design): CAD is used to create 2D or 3D models of products or systems. In mechatronics, CAD software can be used to design the mechanical components of a system, including gears, motors, and other parts. These models can be modified and optimized using CAD software to improve their performance.

CAM (Computer-Aided Manufacturing): CAM is used to generate machine tool paths and NC code for machining or manufacturing components. In mechatronics, CAM software can be used to generate tool paths for CNC machines, which can then be used to produce the mechanical components designed in CAD.

CAE (Computer-Aided Engineering): CAE is used to simulate and analyze the performance of products or systems. In mechatronics, CAE software can be used to analyze the behavior of mechanical, electrical, and electronic components of a system. CAE can be used to simulate the motion, forces, stresses, and other physical phenomena involved in mechatronic systems.

This lab has 20 HP i7 Machines with high end Graphic cards. Autodesk Inventor is used for CAD/CAM and CAE. Also Cofaso is used for electrical CAD.

Fused Deposition Modeling (FDM) is a 3D printing technology that melts a plastic filament and extrudes it layer-by-layer to create a 3D object. The printer heats the filament and extrudes it through a nozzle that moves in the X, Y, and Z axes, building the object layer-by-layer. This Lab has the FDM 3D Printer Guider II from Flashforge. The Guider II has a build volume of 280 x 250 x 300 mm, which is quite large for a desktop 3D printer. It is capable of printing with a wide range of materials, including PLA, ABS, PETG, TPU, PVA, and more.

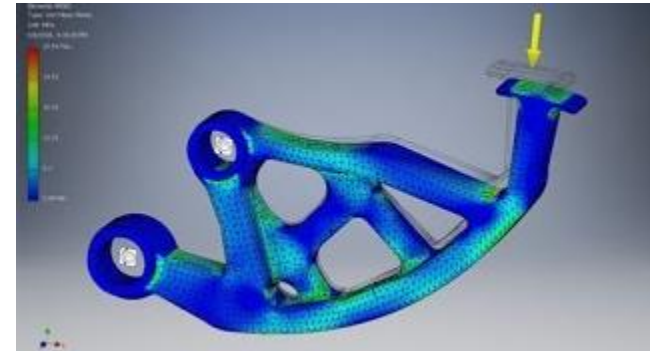
Lab cost-Rs. 12,86,637 /-
Lab Area- 60.61 Sq.m.



Available Resources Hardware & Software:

Lab is equipped with

- 1) HP 280 G3 MT Desktop, Intel core i7 7700, 7th generation
- 2) Autodesk Inventor Professional (Educational)
- 3) Flash forge Guider II
- 4) Flashforge Guider II and Flashprint software



Laboratory Pics



Other Activities In Lab

Student Projects



Other Activities In Lab

FDP on Industrial Automation

Dec 2019

