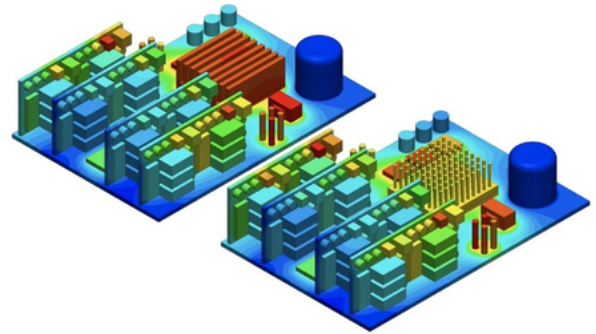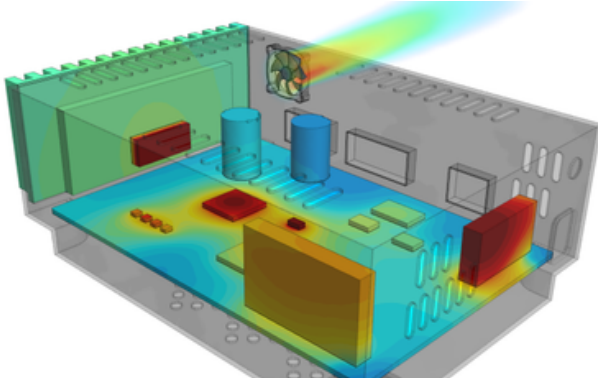# BMS Institute of Technology and Management
An Autonomous Institute under VTU Accredited by NBA and NAAC ('A' Grade)

Department of Mechanical Engineering

Open Course on
Electronics and PC Cooling Simulation and Analysis Using CFD Tool

Electronic device like Sensors, Actuators, Battery, Microcontrollers and Computers are the core elements of todays automated and sophisticated applications and processes. Performance density (work efficiency per size) of these devices have been increased extensively from day-to-day. Due to the compact and miniature size and extensive efficiency, they are tending to generate excessive heat during their working. While designing such components thermal analysis for their functionality and stability is most essential. Computational Fluid Dynamics is the technique used for non-destructive testing and simulation of such systems. The course is intended to provide the knowledge and hands-on skill on application of Ansys -FLUENT a popular industrial tool used for such simulations and analysis.

Venue: CAMD Lab, 2nd Floor, Academic block
Date: 12th to 16th June 2023
Time: 8.30 am to 4.30 pm

Open Course to enhance analytical skills with Computational Fluid Dynamics and Electronics Cooling

COORDINATORS
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CONVENER
Dr. H K Govindaraju
Professor and HoD

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1. Login into: https://bmsitm.gnums.in
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3. Select the Fee Head as Open Course fee and pay

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

AVALAHALLI, YELAHANKA, BENGALURU-560064

Department of Mechanical Engineering

Electronics and PC Cooling Simulation and Analysis Using CFD Tool

2022-2023

Sl No.	Date	Topics Covered 8:30 to 10:30 PM	10:30 to 10:50 PM	Topics Covered 10:50 to 12:50 PM	12:50 to 1:50 PM	Topics Covered 1:50 to 4:00 PM	Assessment and Feedback 4:00 to 4:30 PM
1	12.06.2023	Inauguration, keynote address		Introduction to CFD Technique		Introduction to Ansys-Fluent tool	Heating and Cooling Problems in Electronic Devices and Applications
2	13.06.2023	Basics of Thermodynamics and Heat Transfer applied in cooling mechanism	TEA BREAK	Hands-on learning on 3D modelling of Electronic System	LUNCH BREAK	Hands-on learning on 3D modelling of a Battery Pack	Preparing Mesh/Grid by creating solid/fluid domain
3	14.06.2023	Simulation and Cooling Analysis of Electronics PCB - Part 1		Simulation and Cooling Analysis of Electronics PCB - Part 2		Simulation and Cooling Analysis of Electronics PCB - Part 3	Simulation and Cooling Analysis of Electronics PCB - Part 4
4	15.06.2023	Simulation and Cooling Analysis of Battery Pack - Part 1		Simulation and Cooling Analysis of Battery Pack - Part 2		Simulation and Cooling Analysis of Battery Pack - Part 3	Simulation and Cooling Analysis of Battery Pack - Part 4
5	16.06.2023	Passive Cooling Simulation using Phase Change Material – Part 1		Passive Cooling Simulation using Phase Change Material – Part 2		Valedictory	