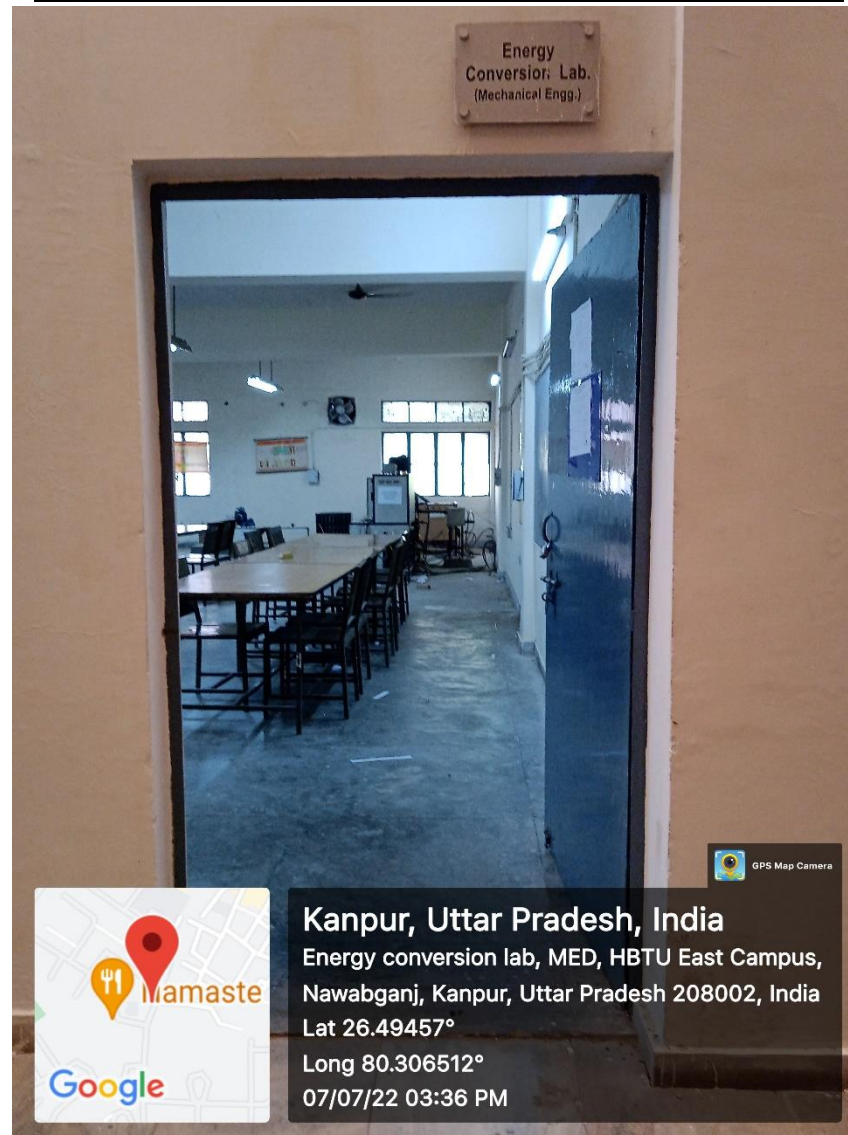


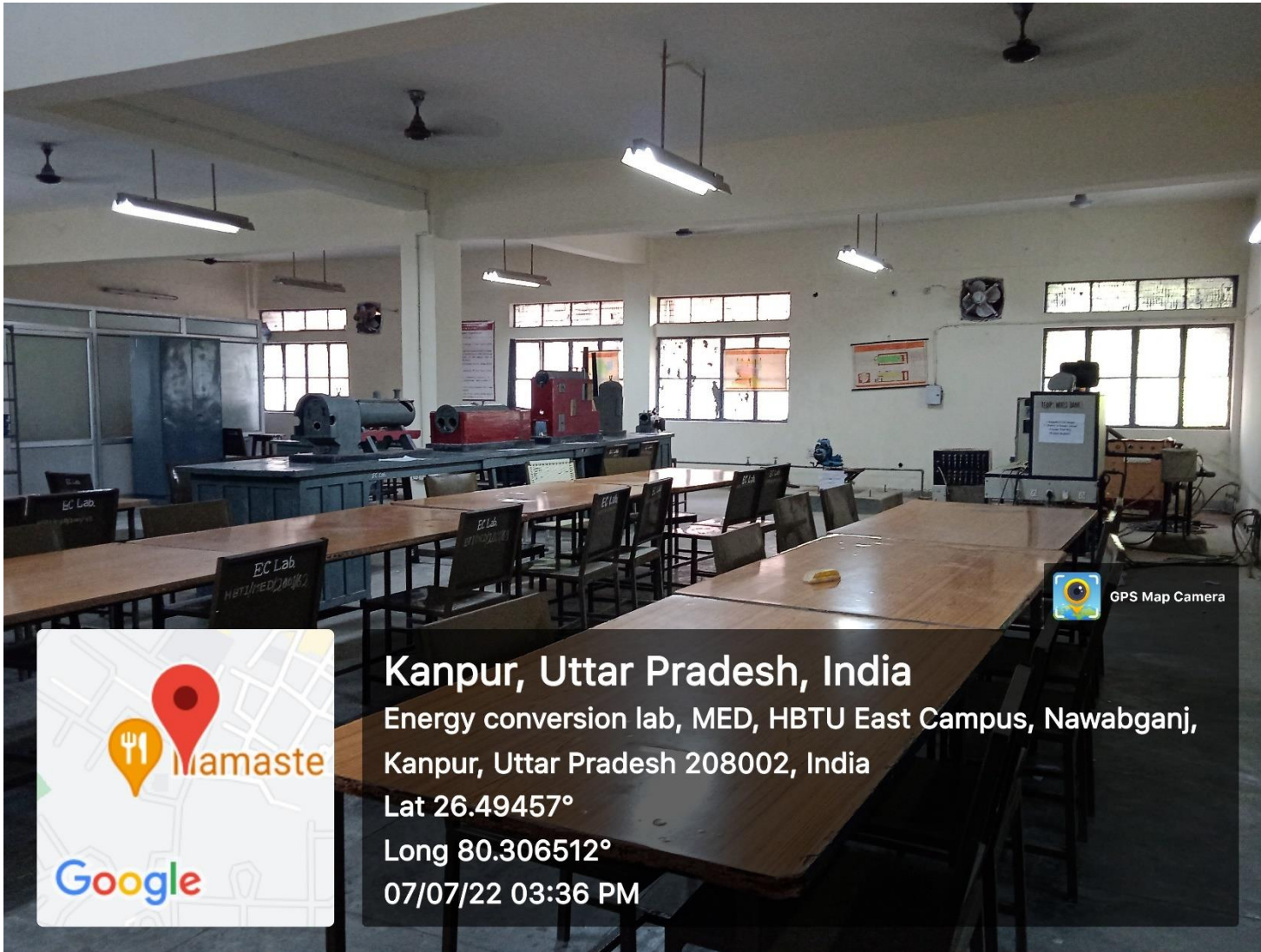
S . N o .	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the Major Equipment	Weekly utilization status (all the courses for which the lab is utilized)
1	Applied Mechanics & Materials Testing Lab.	30x2=60	UTM, Rockwell, Vicker, Torsion, Creep, Charpy / Izod Impact Test, Simple lifting machines, Screw Jack etc., Flywheel	Odd Sem: 8 AM Lab(2x2), MS Lab(2x2)
2	Machine Drawing Lab.	30x2=60	Drawing Boards (No.60)	Odd Sem: 2 M/c Dwg. Lab (2)
3	Mfg. Sc. & Engg. Lab. I	30x2=60	Lathe Machine, CNC, EDM, ECM, USM, Tool & Cutting Grinder, Power Hacksaw, Radial Drilling Machine, Grinding Machine, Hydraulic Shaper, Buffing Machine, Vertical Milling machine, Planer Machine	Even Sem: 4 Mf.Sc. Eng-I (2x2) Odd Sem: 2 Mf.Sc. Eng-II (2x2)
4	Mfg. Sc. & Engg. Lab. II	30x2=60		
5	Heat Transfer Lab.	30x2=60	Heat Pump, Natural- Convection Forced- Convection, Emissivity Vapour Compression System Air condition system Cut section model of Compressor	Even Sem: 4 HMT (2x2) Odd Sem: 4 RAC (2x2)
6	Energy Conversion Lab.	30x2=60	Different type of Boiler Model, Turbine Model, Diesel Engine / Petrol Engine	Even Sem: 4 EC lab (2x2) Odd Sem: 4 IC lab (2x2)
7	Dynamics of Machine Lab.	30x2=60	Governor, Gyroscope, Whirling of Shaft Apparatus, Cam follower, Slider crank mechanism, Brakes and clutch models, CNC Lathe, Vibration Apparatus with Laser Sensor and Accelerometer	Odd Sem: 4 TOM (2x2)
8	Computer Aided Design Lab.	30x2=60	Computer systems (No.15)- i7 / 8GB / 1TB, Computer systems (No.13)- i7 / 16GB / 1TB / 2GB AMD Graphics. Creo 2.0 Modelling software, Ansys Student License 2024R1 (25 Systems), MATLAB 14.0 (Total License 18)	Odd Sem: 8 MD-I (2x2) CAD/CAM (2x2) Even Sem: 4 MD-II (2)
9	Fluid Mechanics & Hydraulic Machines Lab.	30x2=60	Impact of Jet Streams, Bernoulli Theorem, Losses in Pipes, Reynolds Number Experiment, Metacentric Height, Venturi meter, Orifice Meter, Pelton Turbine, Francis Turbine, Kaplan Turbine, Centrifugal Pump	Even Sem: 4 FM lab (2x2)

			Test Rig, Reciprocating Pump, Oil Gear Pump, Hydraulic RAM	
10	Measurement & Metrology Lab.	30x2=60	Autocollimator, Surface Roughness Measuring Instrument Tool Maker Microscope, Profile Projector, Metallurgical Microscope, Tribology Testing Machine	<u>Even Sem: 4</u> M&M lab (2x2)
11	Automobile Engineering Lab.	30x2=60	Cut section model of mechanical brake, hydraulic brake, Worm and worm wheel apparatus, cut section models of multi cylinder petrol engine and multi cylinder diesel engine, Power steering apparatus Vacuum brake apparatus	<u>Even Sem: 4</u> AE lab (2x2)
14	Reverse Engineering and Rapid Prototyping		AMS Hyrel 3D Printer with CO <sub>2</sub> Laser, Ansys Research License (01 System), Elegoo 3D Printer DLP (Resin) set, Revopoint POP 3 plus 3D Scanner, Workstation (No.1) – i9 / 64GB / 1+2 TB / 24GB NVIDIA Graphics, Workstation (No. 2) - i7 / 32GB / 1+2TB / 8GB NVIDIA Graphics, Computer systems (No.1) - i7 / 16GB / 1TB / 2GB AMD Graphics	PhD & M. Tech Scholar use it full day. <u>Odd Sem: 8</u> MD-I (2x2) CAD/CAM (2x2)
15	Advanced Material Research Laboratory (Polymer Composites)		Hot Air Oven, Muffle Furnace, Ultrasonic Cleaner, Weighing Machine	PhD & M. Tech Scholar use it full day. <u>Even Sem: 4</u> HMT (2x2)

**Geotagging of Mechanical**  
**Engineering Department**  
**Laboratory**

## Energy Conversion Laboratory (103-B)





**Kanpur, Uttar Pradesh, India**

Energy conversion lab, MED, HBTU East Campus, Nawabganj,

Kanpur, Uttar Pradesh 208002, India

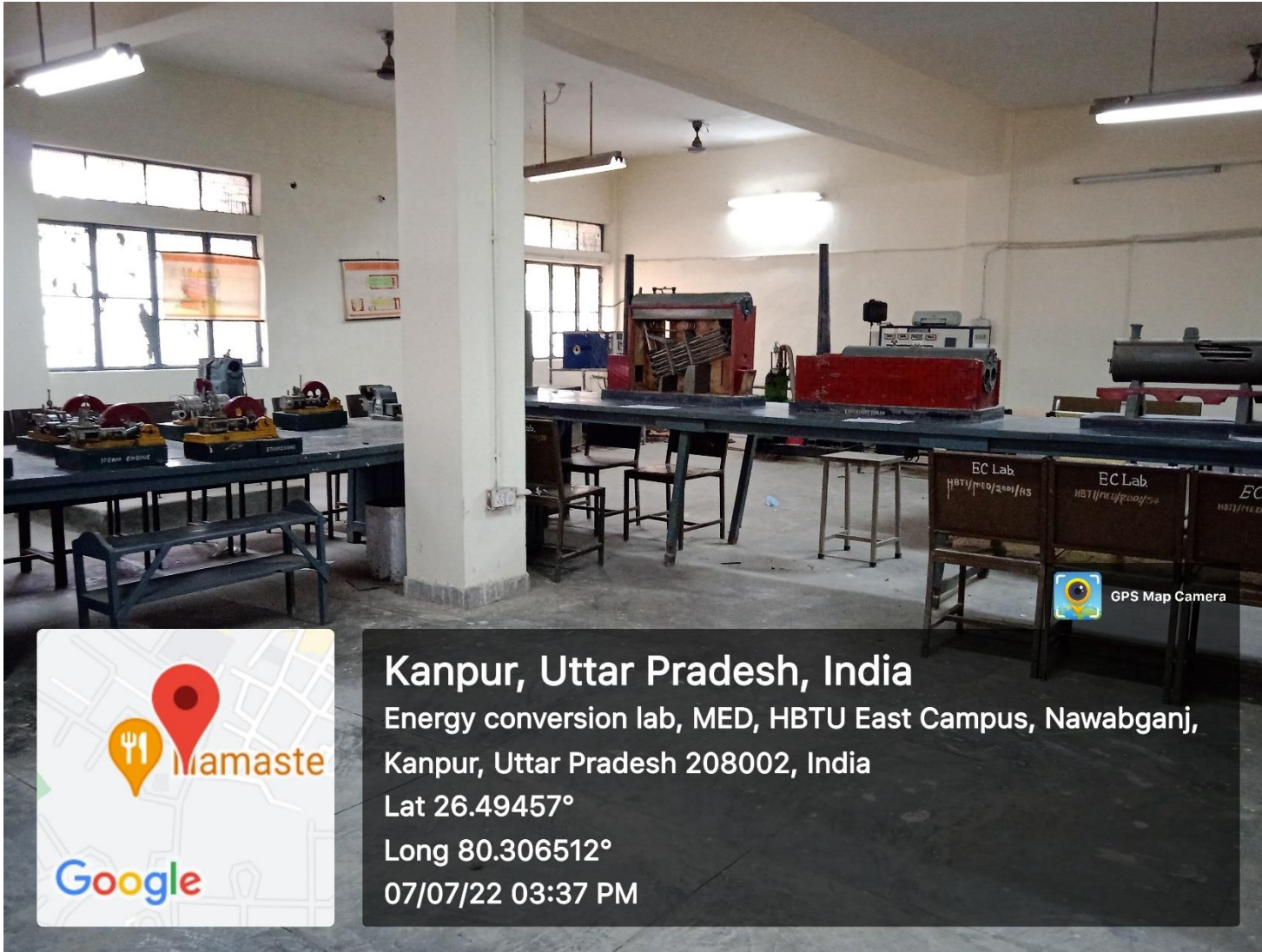
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Long 80.306512°

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GPS Map Camera



## Kanpur, Uttar Pradesh, India

Energy conversion lab, MED, HBTU East Campus, Nawabganj,  
Kanpur, Uttar Pradesh 208002, India

Lat 26.49457°

Long 80.306512°

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## Dynamics of Machine Laboratory (107-B)



GPS Map Camera



**Kanpur, Uttar Pradesh, India**  
Dynamics of Machine lab, MED, HBTU East Campus,  
Nawabganj, Kanpur, Uttar Pradesh 208002, India  
Lat 26.49457°  
Long 80.306512°  
07/07/22 03:29 PM



GPS Map Camera



**Kanpur, Uttar Pradesh, India**  
Dynamics of Machine lab, MED, HBTU East Campus,  
Nawabganj, Kanpur, Uttar Pradesh 208002, India  
Lat 26.49457°  
Long 80.306512°  
07/07/22 03:30 PM



GPS Map Camera



**Kanpur, Uttar Pradesh, India**

Dynamics of Machine lab, MED, HBTU East Campus,  
Nawabganj, Kanpur, Uttar Pradesh 208002, India

Lat 26.49457°

Long 80.306512°

07/07/22 03:31 PM

## Measurement & Metrology Laboratory (206-A, B)





**Kanpur, Uttar Pradesh, India**

Measurement and Metrology lab, MED, HBTU East Campus,  
Nawabganj, Kanpur, Uttar Pradesh 208002, India

Lat 26.49457°  
Long 80.306512°  
07/07/22 03:41 PM



GPS Map Camera



## Kanpur, Uttar Pradesh, India

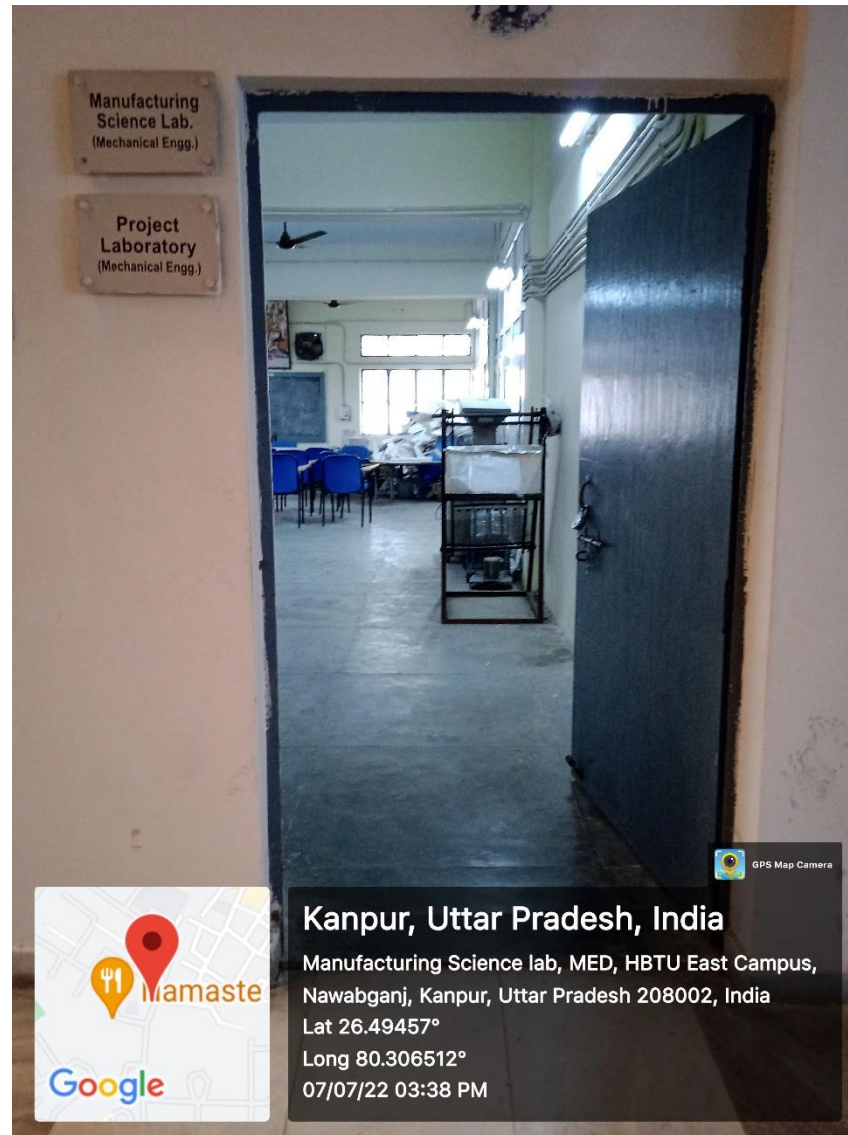
Measurement and Metrology lab, MED, HBTU East Campus,  
Nawabganj, Kanpur, Uttar Pradesh 208002, India

Lat 26.49457°

Long 80.306512°

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## Manufacturing Science Laboratory (101-B)





**Kanpur, Uttar Pradesh, India**

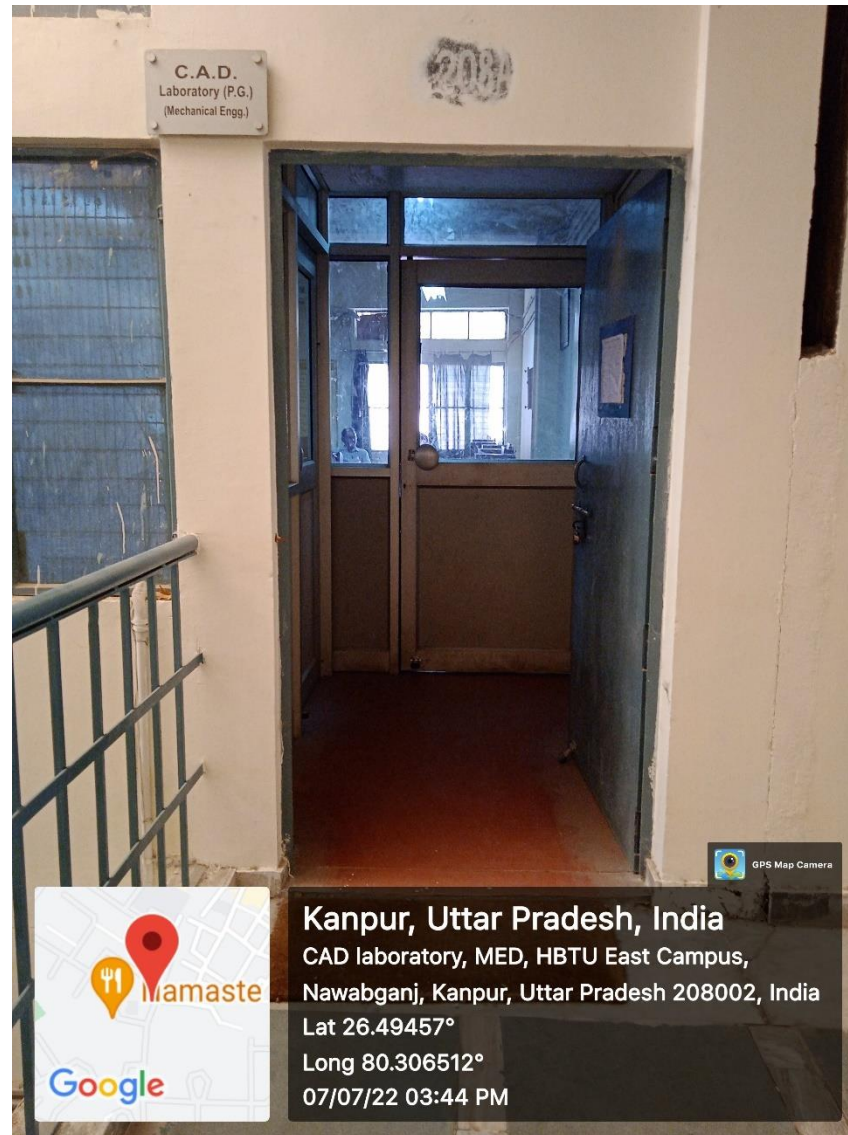
Manufacturing Science lab, MED, HBTU East Campus,  
Nawabganj, Kanpur, Uttar Pradesh 208002, India

Lat 26.49457°

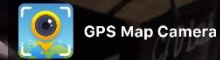
Long 80.306512°

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## CAD Laboratory (208-A, B)



**Kanpur, Uttar Pradesh, India**  
CAD laboratory, MED, HBTU East Campus,  
Nawabganj, Kanpur, Uttar Pradesh 208002, India  
Lat 26.49457°  
Long 80.306512°  
07/07/22 03:44 PM



**Kanpur, Uttar Pradesh, India**

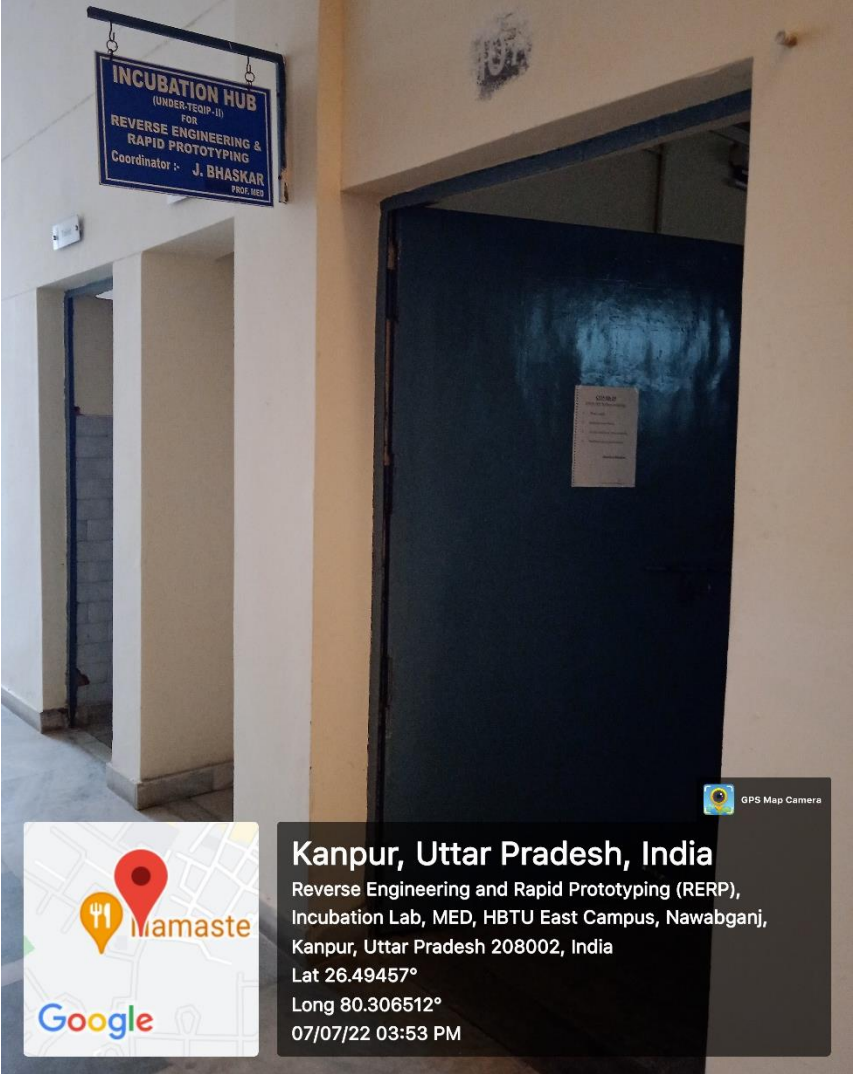
CAD laboratory, MED, HBTU East Campus, Nawabganj,  
Kanpur, Uttar Pradesh 208002, India

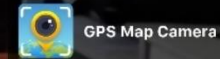
Lat 26.49457°

Long 80.306512°

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**Reverse Engineering and rapid Prototype (RERP)/Incubation Laboratory (110-A)**





## Kanpur, Uttar Pradesh, India

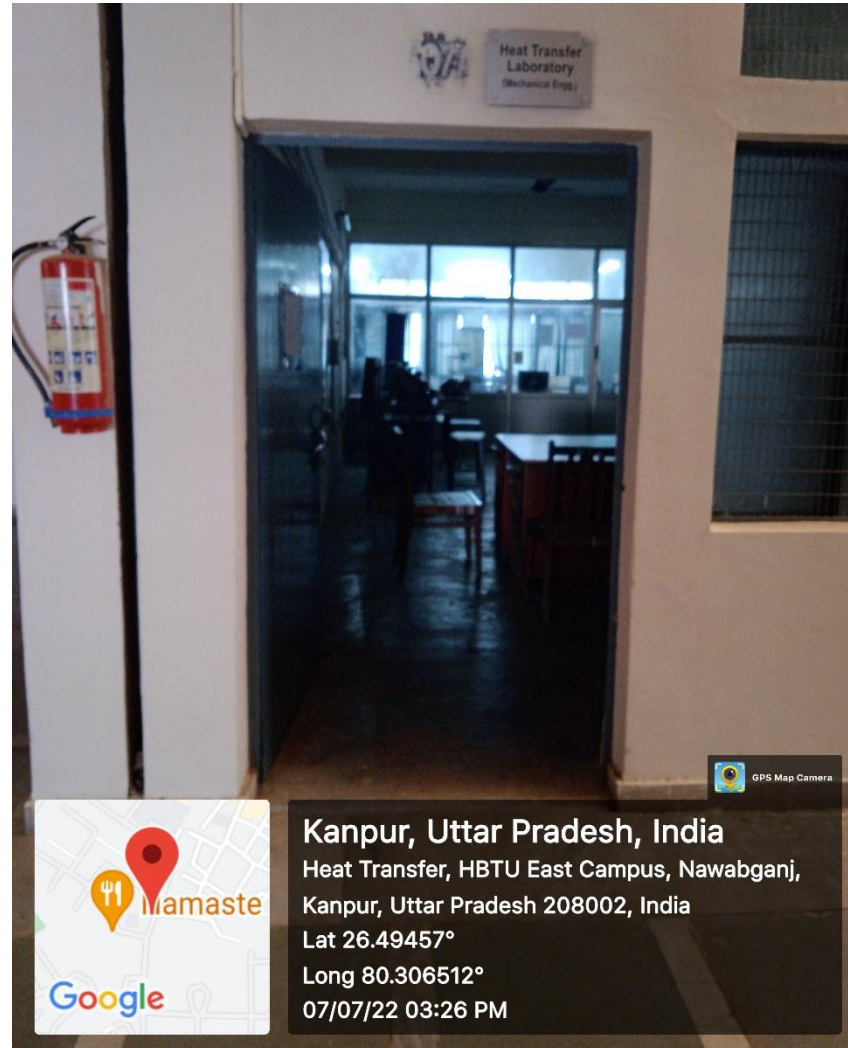
Reverse Engineering and Rapid Prototyping (RERP), Incubation Lab, MED,  
HBTU East Campus, Nawabganj, Kanpur, Uttar Pradesh 208002, India

Lat 26.49457°

Long 80.306512°

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## Heat Transfer Laboratory (107-A)





GPS Map Camera



**Kanpur, Uttar Pradesh, India**

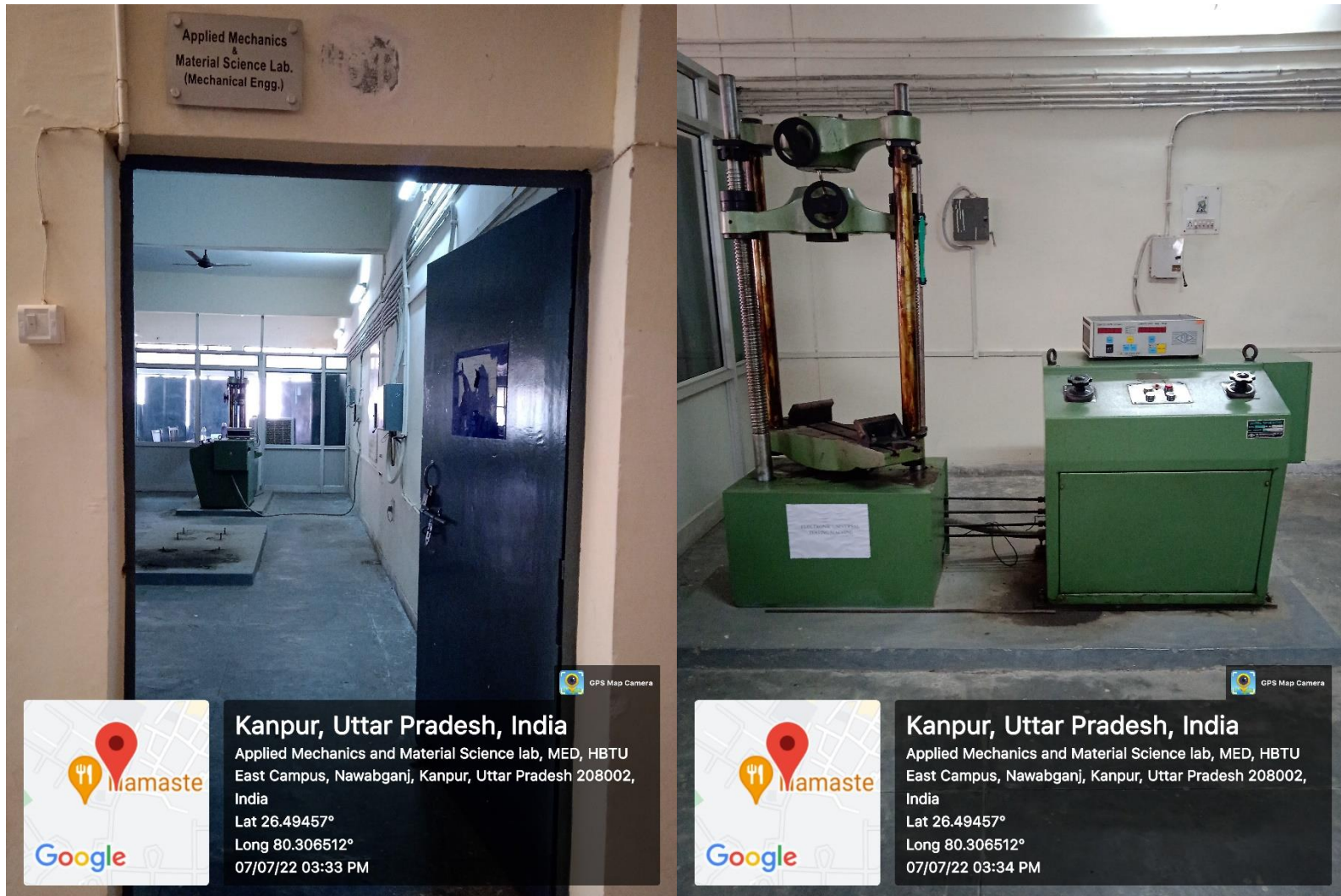
Heat Transfer, HBTU East Campus, Nawabganj, Kanpur, Uttar Pradesh 208002, India

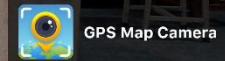
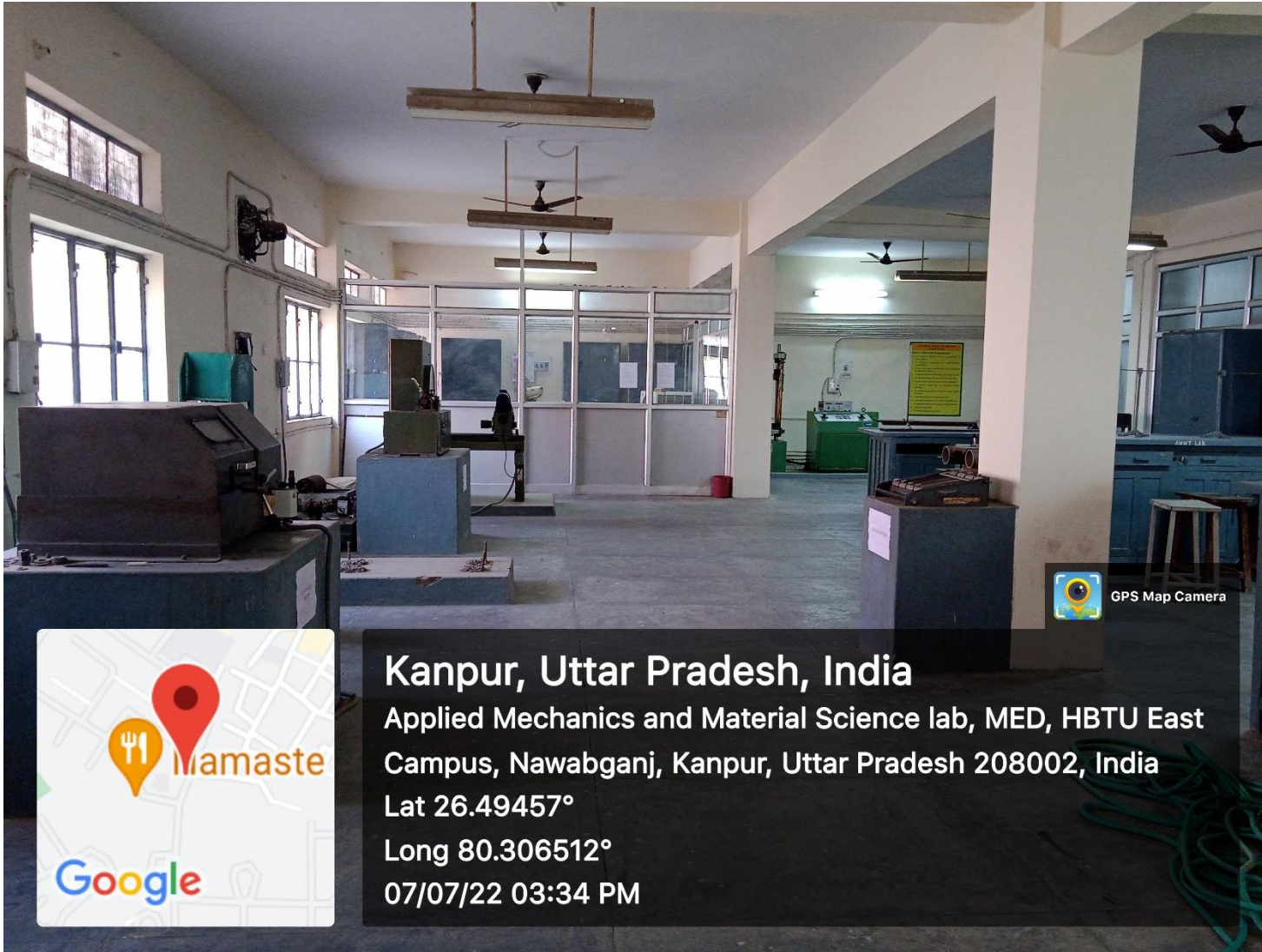
Lat 26.49457°

Long 80.306512°

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## Applied Mechanics and Material Science Laboratory (110-B)





## Kanpur, Uttar Pradesh, India

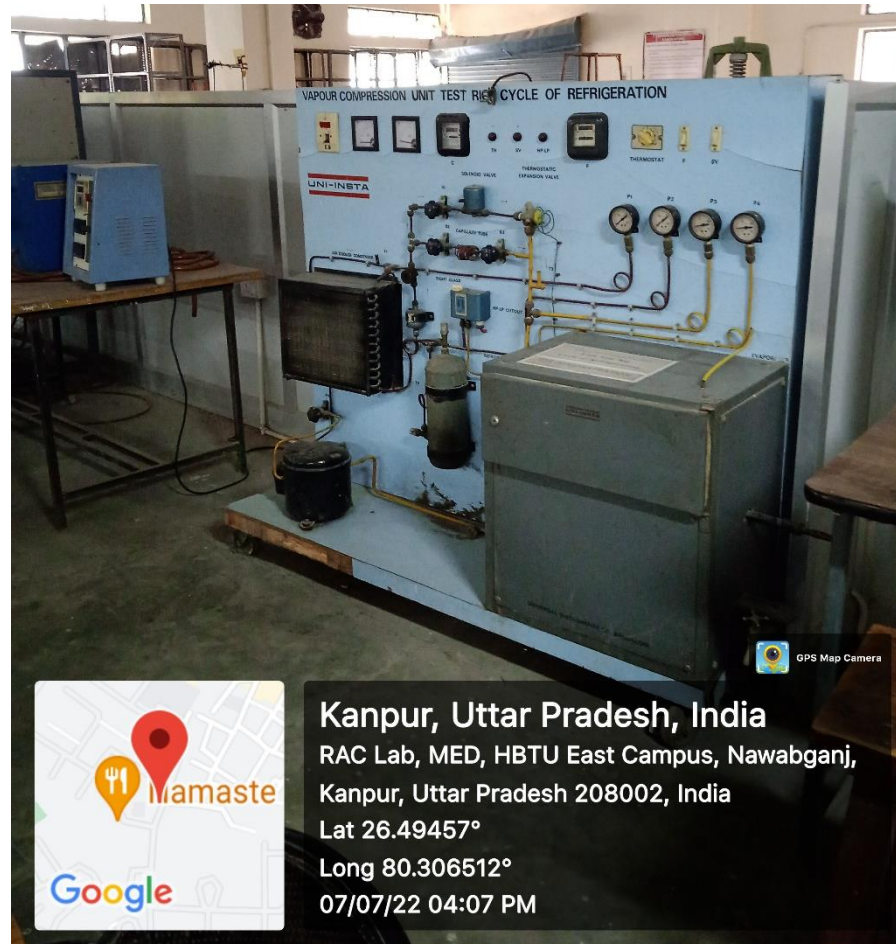
Applied Mechanics and Material Science lab, MED, HBTU East  
Campus, Nawabganj, Kanpur, Uttar Pradesh 208002, India

Lat 26.49457°

Long 80.306512°

07/07/22 03:34 PM

## Refrigeration & Air-conditioning Laboratory (107-A)





GPS Map Camera



**Kanpur, Uttar Pradesh, India**

RAC Lab, MED, HBTU East Campus, Nawabganj, Kanpur, Uttar Pradesh 208002, India

Lat 26.49457°

Long 80.306512°

07/07/22 04:08 PM

## I C Engine Laboratory (103-A)



**Kanpur, Uttar Pradesh, India**

IC engine Lab, MED, HBTU East Campus, Nawabganj, Kanpur,  
Uttar Pradesh 208002, India

Lat 26.49457°

Long 80.306512°

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GPS Map Camera



**Kanpur, Uttar Pradesh, India**

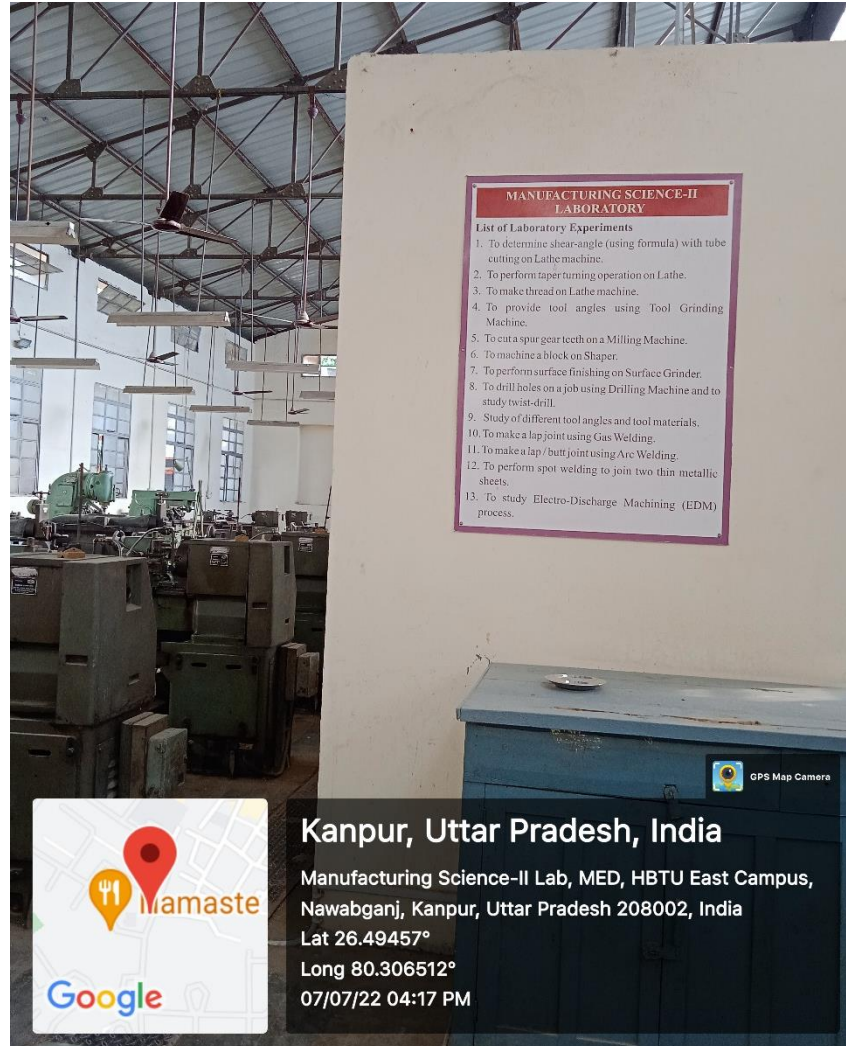
IC engine Lab, MED, HBTU East Campus, Nawabganj, Kanpur,  
Uttar Pradesh 208002, India

Lat 26.49457°

Long 80.306512°

07/07/22 04:11 PM

## Manufacturing Science -II Laboratory (Workshop)





## Kanpur, Uttar Pradesh, India

Manufacturing Science-II Lab, MED, HBTU East Campus,  
Nawabganj, Kanpur, Uttar Pradesh 208002, India

Lat 26.49457°

Long 80.306512°

07/07/22 04:15 PM



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**Kanpur, Uttar Pradesh, India**

Manufacturing Science-II Lab, MED, HBTU East Campus,

Nawabganj, Kanpur, Uttar Pradesh 208002, India

Lat 26.49457°

Long 80.306512°

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