



(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

S.P.G.Chidambara Nadar - C.Nagammal Campus

S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near **VIRUDHUNAGAR**).




## DEPARTMENT OF MECHATRONICS ENGINEERING

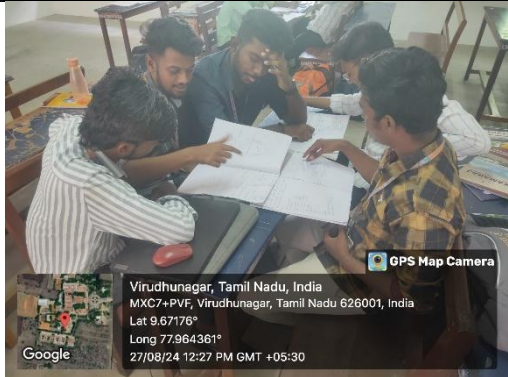
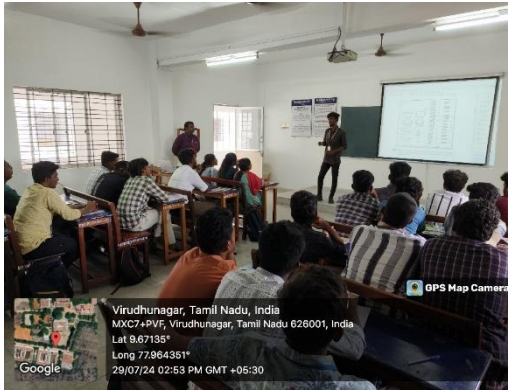
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Academic Year 2024-2025 ODD & EVEN Semester




### Innovations and ICT Tools/Activity Based Learning following in Class Room Teaching

S. No.	Year/ Sem	Name of the Subject	Name of the faculty	Name of the Topic	Type of activity (group activity/ Quiz/models/etc)	Proof(photos)
2024-2025						
1	IV/VI I	OMT703-Sensors and Actuators	Mr. A. Arulkumar	Load Cell & Strain Gauge	Hands on Practice	




2	IV/VI I	OMT703-Sensors and Actuators	Mr. A. Arulkumar	Displacement Measurement using LVDT & Characteristics of Load Cell	Demo	 <p>Tennamanallur, Tamil Nadu, India MXF7+6V6, Tennamanallur, Tamil Nadu 625701, India Lat 9.673175° Long 77.964798° 23/09/24 04:10 PM GMT +05:30</p>
3	IV/VI I	OMT703-Sensors and Actuators	Mr. A. Arulkumar	Hydraulic actuators & Pneumatic actuators	Field Visit	 <p>Chittoor, Tamil Nadu, India MXC7+WVM, Chittoor, Tamil Nadu 625701, India Lat 9.672302° Long 77.964572° 30/09/24 04:08 PM GMT +05:30</p>
4	III/ V	MT2302- Kinematics and Dynamics of Machinery.	Dr. P. Balasundar	Seminar on Force Analysis	Seminar Presentation	 <p>Virudhunagar, Tamil Nadu, India MXC7+PV5, Virudhunagar, Tamil Nadu 626001, India Lat 9.671622° Long 77.964418° 31/07/24 10:37 AM GMT +05:30</p>



5	III/ V	MT2302- Kinematics and Dynamics of Machinery.	Dr. P. Balasundar	Gears and Gear Trains	Peer Learning	 <p>Virudhunagar, Tamil Nadu, India MXC7+PVF, Virudhunagar, Tamil Nadu 626001, India Lat 9.67176° Long 77.964361° 27/08/24 12:27 PM GMT +05:30</p>
6	III/ V	VMT325- Advanced Manufacturing.	Dr. P. Balasundar	Seminar on Design and Selection of Grinding Wheel & CNC Programming	Seminar Presentation	 <p>Virudhunagar, Tamil Nadu, India MXC7+PVF, Virudhunagar, Tamil Nadu 626001, India Lat 9.67135° Long 77.964361° 29/07/24 02:53 PM GMT +05:30</p>

7	III/ V	VMT325- Advanced Manufacturing.	Dr. P. Balasundar	Laminated Object Manufacturing	Virtual Lab Demonstration	 <p>Virudhunagar, Tamil Nadu, India MXC7+PVE, Virudhunagar, Tamil Nadu 626001, India Lat 9.871547° Long 77.964445° 14/10/24 02:49 PM GMT +05:30 Google</p>
8	II/III	ME2201- Engineering Mechanics	Dr. S. MuthuNatarajan	Problem Solving	Think Pair Share	 <p>Madurai, TN, India Kalligudi, Madurai, 625701, TN, India Lat 9.521667, Long 77.954954 09/13/2024 10:18 AM GMT+05:30 Note: Captured by GPS Map Camera</p>
9	II/ IV	MA2254 - Probability, Statistics and Numerical Methods.	Mrs. M. Geetha	Latin Square Design	Seminar Presentation	

10	II/ IV	MT2252 – Manufacturing Technology.	Dr. P. Balasundar	Green Sand Molding Process	Seminar Presentation	 <p>Virudhunagar, Tamil Nadu, India Mxc7+pvf, Virudhunagar, Tamil Nadu 626001, India Lat 9.671767° Long 77.964368° 06/01/2025 10:39 AM GMT +05:30</p>
11	II/ IV	MT2252 – Manufacturing Technology.	Dr. P. Balasundar	Injection Molding Machine & Compression Molding Machine	Demonstration of machines	 <p>Tennamanallur, Tamil Nadu, India Mxc7+6v6, Tennamanallur, Tamil Nadu 625701, India Lat 9.673039° Long 77.964631° 11/04/2025 03:03 PM GMT +05:30</p>
12	II/ IV	MT2252 – Manufacturing Technology.	Dr. P. Balasundar	Metal Forming	Industrial Visit	



13	II/ IV	MT2252 – Manufacturing Technology.	Dr. P. Balasundar	Non-traditional Machining Processes	Peer learning	 <p>Virudhunagar, Tamil Nadu, India Mxc7+pvf, Virudhunagar, Tamil Nadu 626001, India Lat 9.671922° Long 77.964414° 28/04/2025 10:23 AM GMT +05:30</p>
14	III/ VI	MT2351 – Fluid Power Systems.	Dr. P. Balasundar	Cascade method	Seminar Presentation	 <p>Virudhunagar, Tamil ... Mxc7+pvf, Virudhunagar, Tamil Nadu 626001, India Lat 9.671737° Long 77.964477° 26/03/2025 10:29 AM GMT +05:30</p>
15	III/ VI	MT2351 – Fluid Power Systems.	Dr. P. Balasundar	Valve symbols. 3/2 DCV, 4/2 & 5/3 DCV	Demo	 <p>Virudhunagar, Tamil Nadu, India Mxc7+pvf, Virudhunagar, Tamil Nadu 626001, India Lat 9.671888° Long 77.964444° 19/02/2025 10:11 AM GMT +05:30</p>

16	III/ VI	MT2351 – Fluid Power Systems.	Dr. P. Balasundar	Hydraulic Power Pack	Industrial Visit	
17	III/ VI	MT2351 – Fluid Power Systems.	Dr. P. Balasundar	Design of Pneumatic Circuits	Peer learning	

# KAMARAJ

## COLLEGE OF ENGINEERING & TECHNOLOGY

S.P.G. Chidambara Nadar - C. Nagammal Campus,  
S.P.G.C. Nagar, K.Vellakulam - 625 701, Near Virudhunagar, Madurai District.

Accredited by NAAC with "A" Grade



### OMT703-Sensors and Actuators

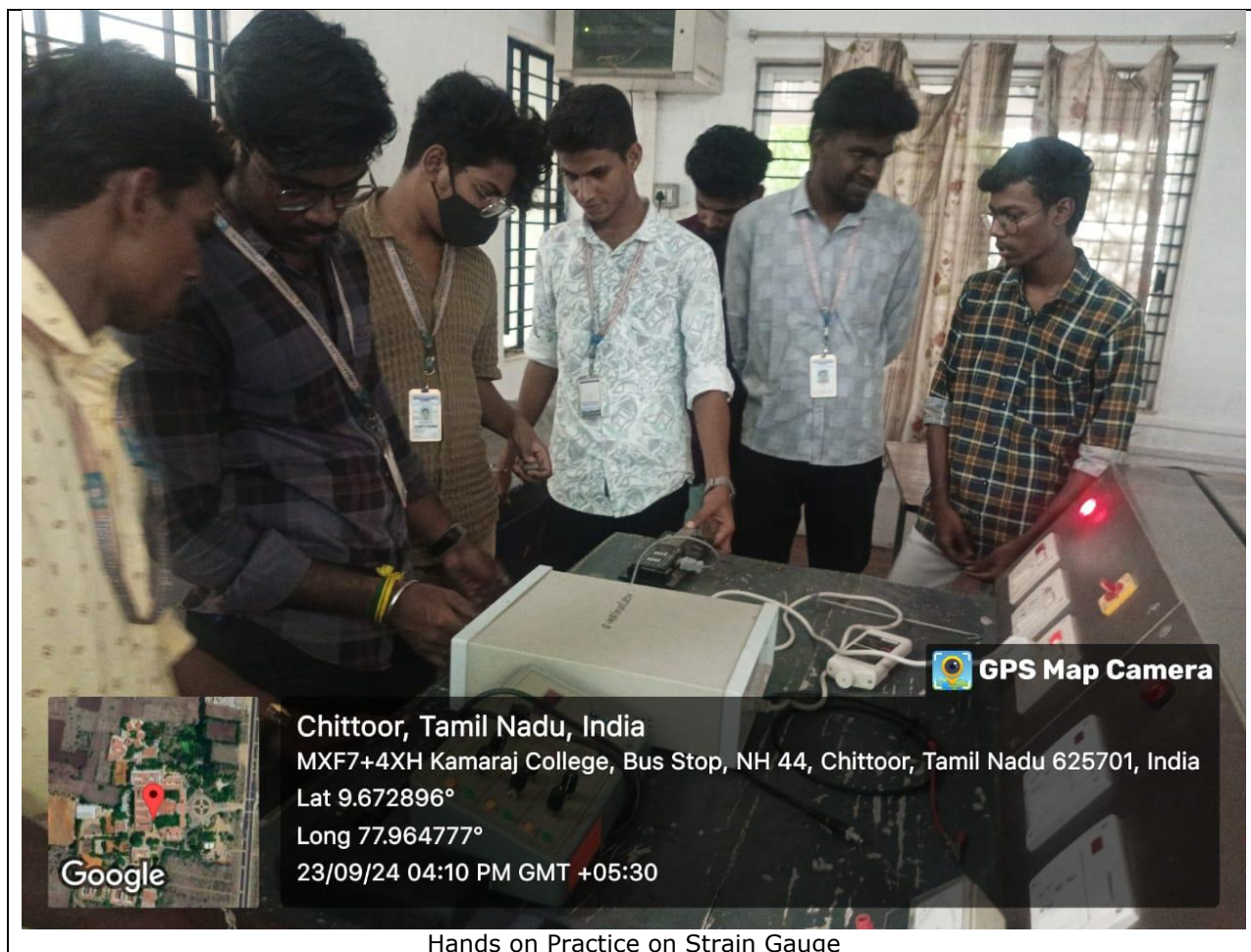
#### Teaching Learning Methods Followed in Class Room Teaching

#### DEPARTMENT OF MECHATRONICS ENGINEERING

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Hands on Practice on Strain Gauge





(Demo on – Characteristics of Load Cell )





Field Visit to Kamaraj SMC Pneumatics Lab – Hydraulic actuators



Field Visit to Kamaraj SMC Pneumatics Lab – Pneumatic actuators

outlook.office365.com/mail/d/AAQkAGZyZl5NTE3LWU5MmltNDIxNC1zUyUyTlYmQxMzNmZTRmNgAAQAGRI1bXZe2RKj5npWqSE%2Fio%3D?vd=mail

Sent Items 2 To: 21UEC

Home View Help

New mail Quick steps Read / Unread To Me Mentions me Flagged

Favorites Folders

- Inbox 3
- Drafts 5
- Sent Items
- Scheduled
- Deleted Items 215
- Junk Email 2232
- Notes 2
- Archive
- Archive1 1
- Conversation History
- Search Folders
- Go to Groups

21UCSB; 21UCSA; 21UEC; 21UIT: ...  
Internship Students ... 20-10-2024  
Dear Students, He... Sent Items

21UCSB; 21UCSA; 21UAD; 21UEC...  
OMT703 - Sensors a... 30-09-2024  
Dear Students, He... Sent Items

21UCSB; 21UIT; 21UEC  
OEE701-Disaster Ma... 30-09-2024  
Dear Students, He... Sent Items

21UCSB; 21UEC; 21UIT  
Unit -V - OEE 701 Di... 24-09-2024  
Dear Students, Ma... Sent Items

Unit 5 Disaster ...

21UCSB; 21UEC; 21UIT  
Unit -IV - OEE 701 D... 24-09-2024  
Dear Students, Ma... Sent Items

Unit 4 Disaster ...

21UCS; 21UIT; 21UEC  
OEE701 Disaster Ma... 03-09-2024  
Dear Students, He... Sent Items

OMT703 - Sensors and Actuators Assignment -I -Reg

ARULKUMAR.A  
To: 21UCSB; 21UCSA; 21UAD; 21UEC; 21UIT  
Mon 30-09-2024 11:52

Dear Students,  
Here with I have attached the OMT703 - Sensors and Actuators Assignment-I topic along with rubrics for evaluation.  
Kindly submit it before the deadline.

Assignment Topics:

Sl. No.	Topic	K Level	CO Mapped	Tentative Date of Submission
1	CASE STUDY ON AUTOMATIC TEMPERATURE CONTROL and AIR CONDITIONING SYSTEM	K2	CO5	1st Week of October, 2024

Rubrics for Assignment Assessment:

Category - Other than Problem Oriented Assignment					Marks
Submission on time	Submission on date-10	Submission with 1 days delay-8	Submission with 2 day's delay-6	Submission with 3 day's delay-4	Submission with 4 day's delay-2
			All	Four	Two

Windows 10

(Soft Copy of Text book and Unit wise PPT Materials shared with the Students)




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**ACADEMIC YEAR: 2024 – 2025 (ODD)**

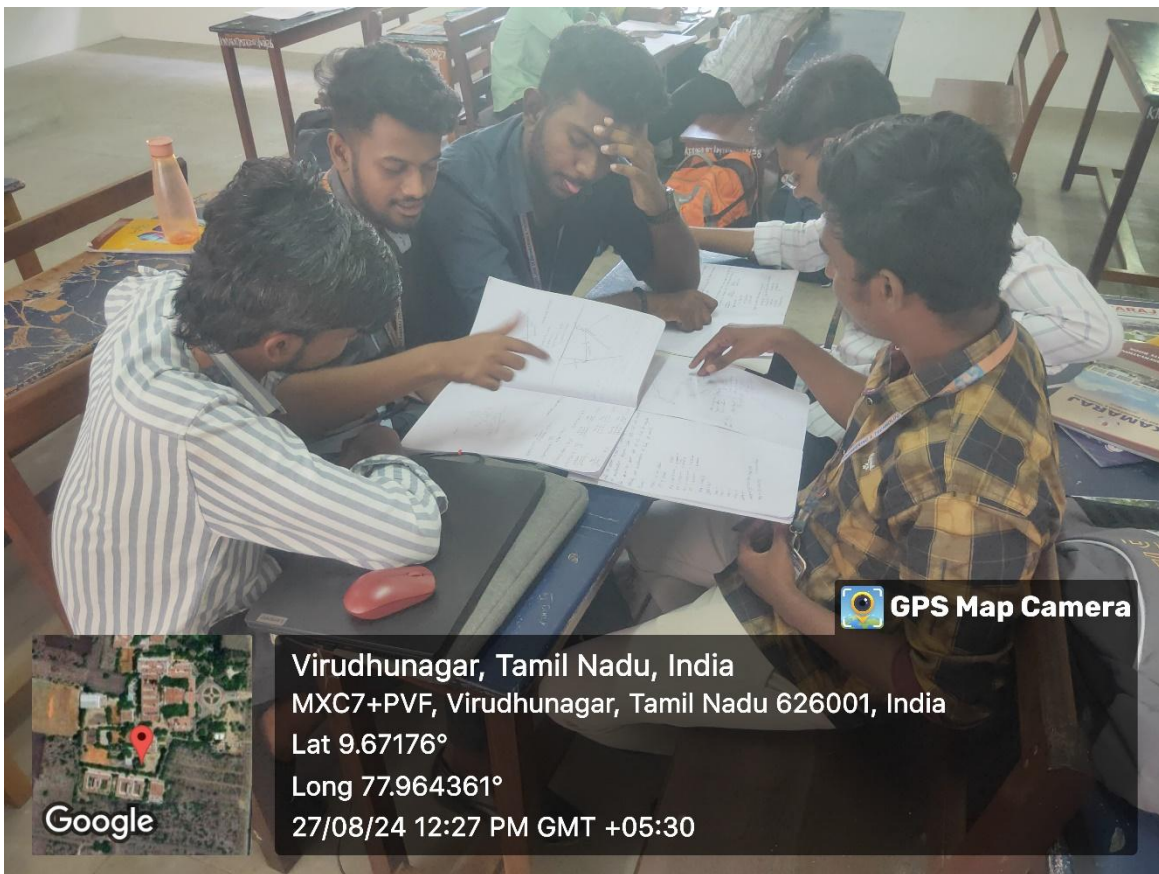
### ACTIVE LEARNING METHODS FOLLOWED IN CLASS ROOM TEACHING

Name of the Faculty	Dr. P. Balasundar
Sub Code / Name	MT2302 Kinematics and Dynamics of Machinery
Year / Branch	III MTRE
Pedagogic Tool used	Seminar, <b>Peer learning</b> and Additional Coaching Classes for Problem solving
Purpose of the Tool used	To encouraging them to articulate orally in the class & providing more chances for classroom participation and to recall the important working of Mechanisms.
Remarks	The students are eagerly participated and explained their topics in the Seminar and easily understanding the construction and working of Mechanisms and improve their presentation and communication skills.
Topic: Force Analysis	 <p>Virudhunagar, Tamil Nadu, India MXC7+PVF, Virudhunagar, Tamil Nadu 626001, India Lat 9.671522° Long 77.964418° 31/07/24 10:37 AM GMT +05:30</p>



Virudhunagar, Tamil Nadu, India  
MXC7+PVF, Virudhunagar, Tamil Nadu 626001, India  
Lat 9.671696°  
Long 77.96459°  
26/07/24 10:36 AM GMT +05:30

## PEER LEARNING

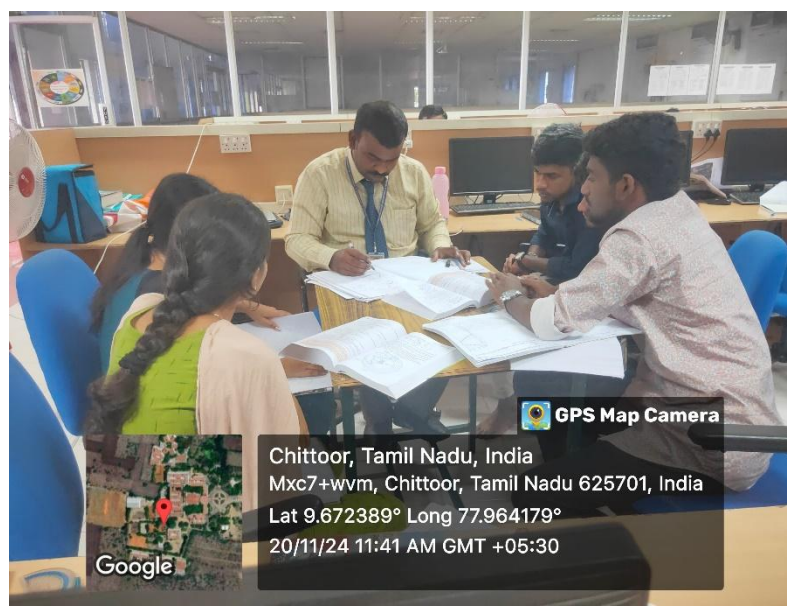
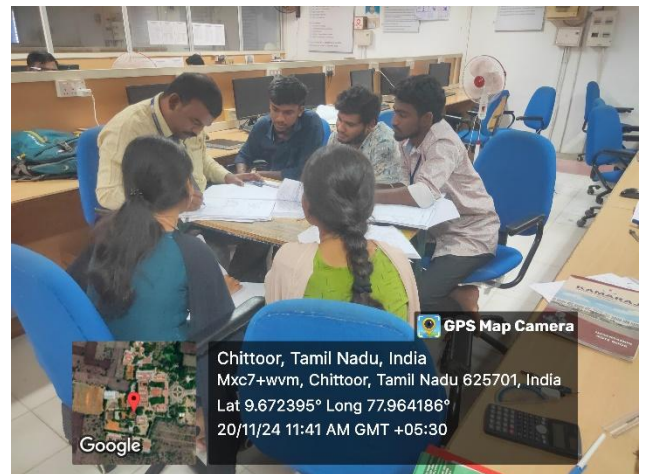


Virudhunagar, Tamil Nadu, India  
MXC7+PVF, Virudhunagar, Tamil Nadu 626001, India  
Lat 9.67176°  
Long 77.964361°  
27/08/24 12:27 PM GMT +05:30





## **Additional Coaching Classes for Effective Problem solving**




## DEPARTMENT OF MECHATRONICS ENGINEERING

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**ACADEMIC YEAR: 2024 – 2025 (ODD)**

### ACTIVE LEARNING METHODS FOLLOWED IN CLASS ROOM TEACHING

Name of the Faculty	Dr. P. Balasundar
Sub Code / Name	VMT325 Advanced Manufacturing
Year / Branch	III MTRE
Pedagogic Tool used	Seminar and Additional Coaching Classes for Effective Learning
Purpose of the Tool used	To encouraging them to articulate orally in the class & providing more chances for classroom participation and to recall the important working of Mechanisms.
Remarks	The students are eagerly participated and explained their topics in the Seminar and easily understanding the construction and working of Mechanisms and improve their presentation and communication skills.
Topic: Design and Selection of Grinding Wheel	 <p>Virudhunagar, Tamil Nadu, India MXC7+PVF, Virudhunagar, Tamil Nadu 626001, India Lat 9.67135° Long 77.964351° 29/07/24 02:53 PM GMT +05:30</p>



Topic: CNC  
Programming

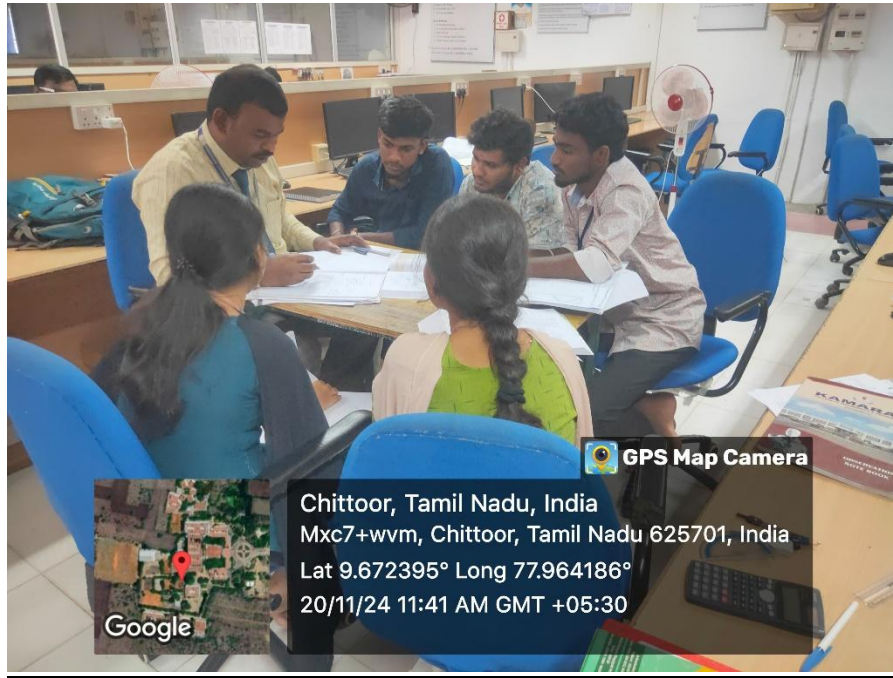


## **Virtual Lab Demonstration – Laminated Object Manufacturing (LoM)**





## Additional Coaching Classes for Effective Learning





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### ACTIVITY BASED LEARNING REPORT

Activity Conducted : Think Pair Share

Name of the course instructor : Dr.S.Muthu Natarajan

Subject Name : Engineering Mechanics

Subject Code : ME2201

Academic Year : 2024-2025

Class & Sec : II<sup>nd</sup> Mtre

Proof (Photo\document\any Other)

Conducted Date: 13.09.2024



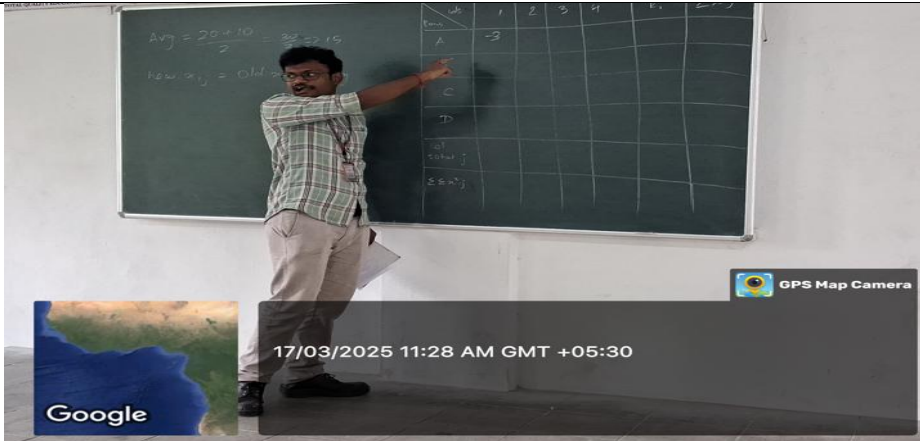



### Summary:

- The students were grouped into a team consisting of 4 to 5 members and each team has been assigned with specific problems.
- Each team members were discussed among themselves and solved their assigned problems.
- Then one member from each team was made to change into another team and explain their solved problem to the new team, so that the remaining team can also learn other problems.



**DEPARTMENT OF MATHEMATICS**  
**ACADEMIC YEAR: 2024 – 2025 (EVEN)**  
**ACTIVE LEARNING METHODS FOLLOWED IN CLASS ROOM**  
**TEACHING**



Name of the Faculty	Mrs. M. Geetha
Sub Code / Name	MA2254 / Probability, Statistics and Numerical Methods
Year / Branch	II MECH & II MTR
Date	17.03.2025
Number of Participants	47
Pedagogic Tool used	Student Seminar on “Latin Square Design”
Purpose of the Tool used	To create interest towards the subject
Remarks	The students carefully listened and asked their doubts with full involvement
Proof	 

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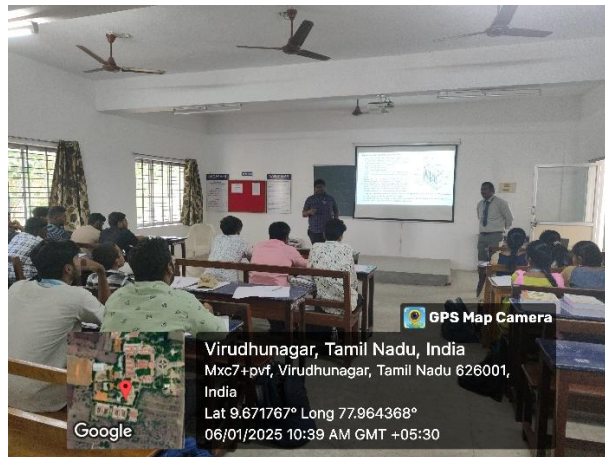
**ACADEMIC YEAR: 2024 – 2025 (EVEN)**

### ACTIVE LEARNING METHODS FOLLOWED IN CLASS ROOM TEACHING

Name of the Faculty	Dr. P. Balasundar
Sub Code / Name	MT2252 / Manufacturing Technology
Year / Branch	II MTRE
Pedagogic Tool used	Seminar presentation, Demonstration of machines, Industrial Visit and Additional Coaching Class for <b>Peer learning</b> .
Purpose of the Tool used	These active learning tools foster deeper understanding, practical exposure and collaborative engagement among students. They enhance academic performance by bridging the gap between theory and application.
Outcomes	Students gain conceptual clarity, improved technical communication, practical knowledge and industry awareness. Peer interaction enhances confidence, teamwork and deeper engagement with the subject.
Seminar Presentation. Topic: Green Sand Molding Process	 



**Seminar Presentation.**  
Topic: Tools used in  
Green Sand Molding  
Process



**Demonstration of  
machines.**

Injection Molding  
Machine



**Demonstration of  
machines.**

Blow Molding Machine



**Demonstration of  
machines.**

Compression Molding  
Machine



## Demonstration of machines.

Green Sand Molding Process



## Industrial Visit.

R. R. Industries,  
Madurai.  
Manufacture and Supply  
of Pressed Metal  
Components and  
Precision Machined  
Components like  
Industrial Engine  
Mountings, Engine  
Mounting Brackets,  
Industrial Engine Oil  
Seals, Automotive  
Pressed Components and  
Anti-vibrating Mounting  
Components.





## Peer learning.

Additional Coaching  
Class for **Peer learning**.







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**ACADEMIC YEAR: 2024 – 2025 (EVEN)**

### ACTIVE LEARNING METHODS FOLLOWED IN CLASS ROOM TEACHING

Name of the Faculty	Dr. P. Balasundar
Sub Code / Name	MT2351 / Fluid Power Systems
Year / Branch	III MTRE
Pedagogic Tool used	Seminar presentation, Demonstration of ANSI Symbols, Industrial Visit and Additional Coaching Class for <b>Peer learning</b> .
Purpose of the Tool used	These active learning tools foster deeper understanding, practical exposure and collaborative engagement among students. They enhance academic performance by bridging the gap between theory and application.
Outcomes	Students gain conceptual clarity, improved technical communication, practical knowledge and industry awareness. Peer interaction enhances confidence, teamwork and deeper engagement with the subject.
Seminar Presentation. Topic: Cascade method	
Topic: Programmable Logic Circuits	

**Seminar Presentation.**  
Topic: Fluidics



**Demonstration of  
Valve symbols.**  
  
3/2 DCV, 4/2 & 5/3  
DCV





### Industrial Visit.

R. R. Industries,  
Madurai.  
Manufacture and Supply  
of Pressed Metal  
Components and  
Precession Machined  
Components like  
Industrial Engine  
Mountings, Engine  
Mounting Brackets,  
Industrial Engine Oil  
Seals, Automotive  
Pressed Components and  
Anti-vibrating Mounting  
Components.



### Peer learning.

Additional Coaching  
Class for **Peer learning.**





